

November 9, 1995

HOW TO CLOSE DOWN THE DEPARTMENT OF ENERGY

INTRODUCTION

The U.S. Department of Energy (DOE) was created as a Cabinet-level department in 1977 by President Jimmy Carter as part of the federal effort to address the energy crisis of the late 1970s. Fearing that international energy shortages were the wave of the future, the President felt a highly visible national agency was necessary to promote energy conservation, control federal supplies of power, and develop alternative sources of energy. However, the OPEC oil embargo then collapsed—without any assistance from the DOE—and international oil supplies stabilized.

And yet, the department remains. In fact, DOE has grown in tax dollars spent and functions performed—the result of 15 years of searching for something to do. As Victor Rezendes of the General Accounting Office has testified, “DOE’s mission and priorities have changed dramatically over time so that the Department is now very different from what it was in 1977. While energy research, conservation and policy-making dominated early DOE priorities, weapons production and now environmental cleanup overshadow its budget.”¹ Thanks to this continual empire-building, the department’s budget has increased by 235 percent, and 85 percent today is spent on activities other than energy resources. For instance, nearly \$12 billion is budgeted annually for environmental quality and nuclear waste disposal, with close to another \$3 billion earmarked for fundamental science research.

The Department of Energy not only has strayed from its original mission of energy oversight, but also has failed to conduct efficiently the services it now provides. Vice President Al Gore’s National Performance Review reported that due to inefficiencies as

¹ Victor S. Rezendes, “Department of Energy: Need to Reevaluate Its Role and Missions,” statement before Subcommittee on Energy and Water, Committee on Appropriations, U.S. House of Representatives, January 18, 1995.

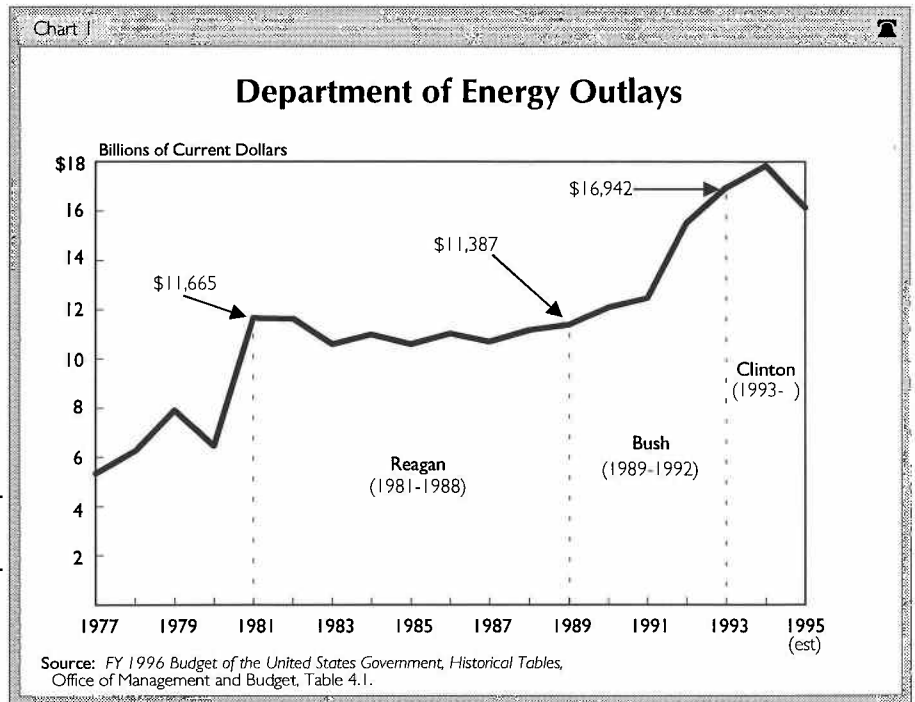
high as 40 percent within DOE's Environmental Management program, more than \$70 billion could be lost over the next 30 years.² Victor Rezendes testified that "DOE suffers from significant management problems, ranging from poor environmental management...to major internal inefficiencies rooted in poor oversight...."³

These manage-

ment problems and the inefficiencies that flow from them have been caused largely by DOE's continual efforts to re-align itself and justify its existence.

It is time to close the Department of Energy. Senator Rod Grams (R-MN) and Representative Todd Tiahrt (R-KS) have developed legislation that would dismantle the department.⁴ Title I of both bills redesignates the Department of Energy as the "Energy Programs Resolution Agency," modeled after the Resolution Trust Corporation, created by Congress to dispose of the assets of failed thrift institutions closed in the late 1980s. Both bills would establish a three-year limit for closing DOE, privatize Energy's valuable oil reserves and other assets, establish a commission to recommend DOE laboratory privatizations, set new guidelines for toxic waste disposal, and transfer control over the nuclear weapons stockpile to the Department of Defense.

Under a plan developed by analysts at The Heritage Foundation, DOE's defense-related programs would be transferred to an agency under the jurisdiction of the Department of Defense, and its primary research functions would be transferred to universities or the National Science Foundation.⁵ Federal funding for commercially oriented energy supply, research, and development projects would be terminated, and the research responsibility would be transferred to the private sector. All commercial energy functions, in-



- 2 Department of Energy, *Accompanying Report of the National Performance Review* (Washington, D.C.: U.S. Government Printing Office, September 1993), p. 5.
- 3 Rezendes statement, *op. cit.*
- 4 H.R. 1993, introduced on June 30, 1995, with 49 cosponsors. As of publication of this study, Senator Grams's bill was still in a "discussion" format and did not have an official bill number.
- 5 See Scott A. Hodge, ed., *Rolling Back Government: A Budget Plan to Rebuild America* (Washington, D.C.: The Heritage Foundation, 1995).

cluding the Power Marketing Administrations (PMAs), Petroleum Reserves, and Uranium Enrichment activities, would be denationalized and sold to the private sector.

Specifically, under the Heritage Plan, Congress would:

- ✓ **Transfer** all defense-related nuclear weapons functions to a new agency within the Department of Defense. This new agency would have primary management and oversight responsibility for environmental cleanup activities.
- ✓ **Decrease** the Department of Energy's environmental management budget by 30 percent and adopt as the program's objective the maximum overall reduction in risk to the populace for every dollar spent.
- ✓ **Establish** the Office of Civilian Radioactive Waste Management as a federal corporation with the ultimate goal of full privatization.
- ✓ **Terminate** all Energy Supply Research and Development programs and privatize the government-owned laboratories engaged in this research.
- ✓ **Terminate** all Energy Conservation funding, including state grants and research programs.
- ✓ **Phase out** federal funding for General Science and Basic Research and transfer the laboratories conducting this research to the universities currently operating them.
- ✓ **Sell** the Strategic Petroleum Reserves to the private sector.
- ✓ **Sell** the Naval Petroleum Reserves to the private sector.
- ✓ **Sell** the U.S. Uranium Enrichment Corporation to the private sector.
- ✓ **Sell** the five Power Marketing Administrations to the private sector, using a variety of stock sale approaches.
- ✓ **Make** the Federal Energy Regulatory Commission an independent agency.
- ✓ **Close down** or privatize the Energy Information Administration.

Closing the department and making the related reforms would save American taxpayers more than \$41 billion over the next five years, including \$16 billion in asset sales. By contrast, Secretary Hazel O'Leary's "re-invention" plan would save only \$14.1 billion over five years, including \$5.7 billion in asset sales. The proposals to close the department developed by Senator Grams and Representative Tiahrt would save more than \$17 billion over five years.

There are two ways to close down a federal department. The first is simply to shift the department's responsibilities to other agencies and throw the old letterhead into the trash. The alternative is to eliminate, devolve, or privatize responsibilities whenever possible, and transfer only essential responsibilities to other departments. This latter approach is the one that should be used with the Department of Energy. DOE's history of failure and ineffectiveness demands nothing less.

CHANGING MISSIONS AND BUREAUCRATIC GROWTH

Created in 1977, the Department of Energy has changed missions numerous times over its almost two decades. Its original mission—administering the complex set of regulations, price controls, and allocation laws established in response to the OPEC oil embargo of 1973-1974—was a dismal failure that actually resulted in higher energy costs and increased dependence on foreign oil.⁶

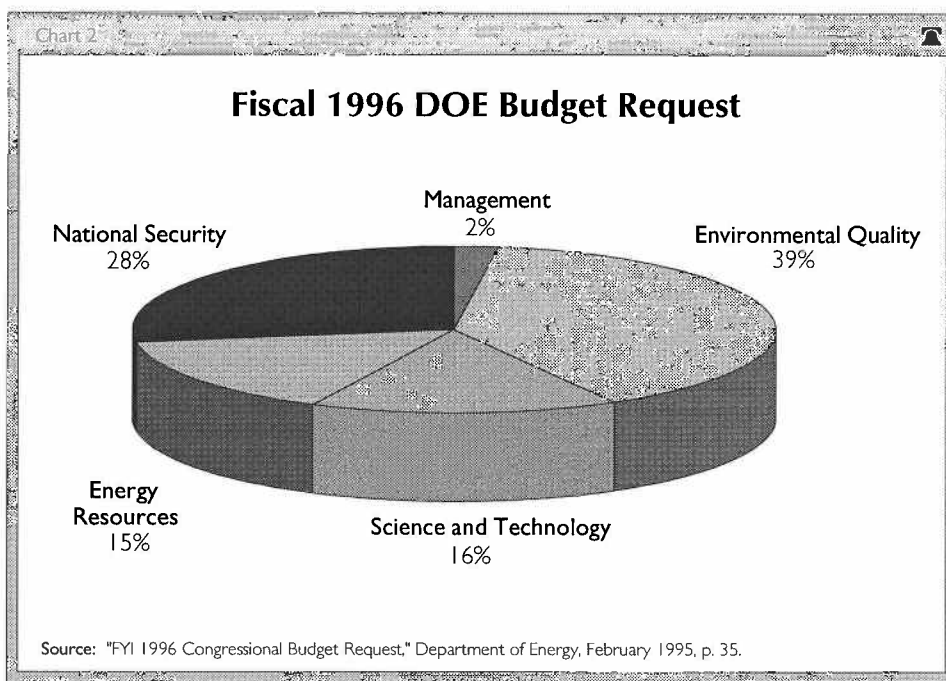
Ronald Reagan promised during his 1980 campaign to eliminate the Department of Energy. Instead, he changed its mission from energy conservation, imposed through a centralized structure of regulations, to energy promotion by means of market mechanisms. The department also gained responsibility for the production of nuclear weapons during the 1980s because of a belief that production and stockpile management should be controlled by a civilian agency.

DOE's central mission changed once again with the end of the Cold War. The high level of weapons production was no longer necessary, and world energy supplies remained constant. Ever

vigilant about finding a purpose, DOE began to concentrate on environmental remediation of past actions, including cleaning up its own contaminated weapons facilities.

DOE's fiscal 1996 budget request makes this change in

mission clear. Thirty-nine percent of the \$17.8 billion budget request is earmarked for "Environmental Quality," while only 15 percent is for "Energy Resources."⁷ Another large portion of Energy's budget is dedicated to research and development of alternative-source energy supply, including solar, wind, geothermal, and nuclear power generation (see Chart 2). Despite this massive effort, petroleum and coal remain the dominant sources of power in America.



6 For more information on DOE's failed efforts during the late 1970s, see Milton R. Copulos, "The Department of Energy," in Charles Heatherly, ed., *Mandate for Leadership* (Washington, D.C.: The Heritage Foundation, 1981).

7 U.S. Department of Energy, *FY 1996 Congressional Budget Request*, February 1995, p. 35.

DOE's newest initiative, the fourth change in mission, is the creation of Cooperative Research and Development Agreements (CRADAs). These "agreements" are contracts whereby the Department of Energy allows individual companies to use federal laboratories, and even conducts research and development, all at taxpayer expense. CRADAs are meant to increase the competitiveness of American companies and support quality jobs at a time when much of the defense-related work completed at DOE's laboratories in the past is no longer seen as necessary. CRADAs thus offer the dual advantage of providing private companies with free research while preventing the closing of federal facilities—or so proponents argue.

The Department of Energy's CRADA initiatives are among the most egregious examples of corporate welfare that benefits individual companies at tremendous expense to American taxpayers. According to a recent series on "High-Tech Handouts" in the *Philadelphia Inquirer*, researchers who once worked for a private company are now employed by DOE but continue to do the same work. The only thing that has changed is that taxpayers are picking up the tab.⁸ Moreover, when this research is successful, individual companies can earn protected trade secrets or patents that often are not available even to the federal government. Millions of American taxpayers thus may be underwriting a single company's market position.

The results of most efforts are both disappointing and expensive. For example, the *Philadelphia Inquirer* notes that DOE has spent some \$792 million on CRADAs between 1992 and 1995. The result has been 46 new companies at a cost of \$17 million per company.⁹ Even more disappointing, many recipients of DOE assistance are reducing their research and development budgets and trimming their workforces. General Electric, which earned \$4.7 billion in profits in 1994, received \$25.4 million in federal assistance between 1990 and 1994. Over the same period, GE cut 80,000 positions from its payroll. Clearly, DOE's CRADA program is not meeting its stated goal of job creation.

HOW TO CLOSE DOWN THE DEPARTMENT

There is no legitimate rationale for a Department of Energy. Centralized planning of energy production and distribution, including operation of the Power Marketing Administrations, has proven ineffective and expensive. Mass-scale nuclear weapons production is no longer needed with the end of the Cold War. Environmental remediation efforts have been inefficient and often impractical. And efforts to bolster private industry through CRADAs are expensive, ineffective, and fast becoming a primary source of congressional earmarking and corporate welfare. All defense-related functions now being administered by DOE, including environmental remediation, should be transferred to the Department of Defense. All assets that are commercially viable should be privatized. Whatever remains should be terminated (see Table 1).

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- 8 Gilbert M. Gaul and Susan Q. Stranahan, "How Billions in Taxes Failed to Create Jobs," *The Philadelphia Inquirer*, June 4, 1995, p. 1. The series dramatically demonstrates the inefficiency of government-sponsored research and industry cooperatives.
- 9 Gilbert M. Gaul and Susan Q. Stranahan, "The Price of Keeping Labs Busy," *The Philadelphia Inquirer*, June 9, 1995, p. 18.

Table 1

Savings from the Elimination of the Department of Energy						
	1996	1997	1998	1999	2000	5 year total
053 Cut DOE environmental cleanup costs by 30 percent						
Outlay Savings	\$930	\$1,650	\$1,950	\$2,010	\$2,070	\$8,610
251 Eliminate over 3 years funding for DOE General Science and Basic Research						
Outlay Savings	\$176	\$384	\$622	\$834	\$959	\$2,975
271 Sell the power marketing administrations						
Outlay Savings	\$0	\$6	\$23	\$168	\$185	\$382
Revenues Foregone	\$0	(\$11)	(\$196)	(\$636)	(\$636)	(\$1,479)
Sales Receipts	\$85	\$909	\$3,475	\$0	\$0	\$4,469
Net Savings	\$85	\$904	\$3,302	(\$468)	(\$451)	\$3,372
271 Terminate all DOE Energy Supply R&D; privatize labs						
Outlay Savings	\$178	\$815	\$1,776	\$1,451	\$3,331	\$8,751
271 Sell the Naval Petroleum Reserves						
Outlay Savings	\$0	\$103	\$159	\$182	\$182	\$626
Revenues Foregone	\$0	(\$477)	(\$470)	(\$445)	(\$424)	(\$1,816)
Sales Receipts	\$0	\$1,500	\$0	\$0	\$0	\$1,500
Net Savings	\$0	\$1,126	(\$311)	(\$262)	(\$241)	\$312
271 Sell the U.S. Enrichment Corporation						
Outlay Savings	(\$150)	(\$8)	\$10	\$88	\$159	\$99
Sales Receipts	\$400	\$1,000	\$0	\$0	\$0	\$1,400
Net Savings	\$250	\$992	\$10	\$88	\$159	\$1,499
272 Terminate all DOE Conservation Research & Grant Programs						
Outlay Savings	\$179	\$233	\$409	\$616	\$711	\$2,148
274 Sell the Strategic Petroleum Reserve						
Outlay Savings	\$113	\$216	\$262	\$276	\$286	\$1,153
Sales Receipts	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$12,000
276 DOE: close EIA & departmental administration						
Outlay Savings	\$20	\$47	\$76	\$103	\$120	\$366
Total Savings From Closing the Department of Energy						
Outlay Savings	\$1,447	\$3,416	\$5,287	\$6,929	\$8,003	\$25,112
Revenues Foregone	\$0	(\$488)	(\$666)	(\$1,081)	(\$1,060)	(\$3,294)
Sales Receipts	\$2,885	\$5,309	\$5,875	\$2,400	\$2,400	\$19,369
Net Savings	\$4,332	\$8,767	\$10,496	\$8,249	\$9,343	\$41,187

Environmental Cleanup

The Department of Energy was responsible for the production of nuclear weapons during the Cold War, and the pressure of competing with the Soviet Union prevented environmental protection from being a top priority at weapons production facilities. Today, although production has ceased, the environmental remediation of DOE's facilities remains. The vast majority of contamination problems at the department's nuclear weapons plants involve some level of radioactivity. Since 1989, the department has managed, stored, and cleaned up hazardous wastes produced at the plants under the Environmental Management (EM) program, which has three basic components: Environmental Restoration, Waste Management, and Facility Transition and Management (created in 1992).

What Congress Should Do:

- ✓ **Move** the Department of Energy's environmental management responsibilities to a new independent agency within the Department of Defense.
- ✓ **Adopt** as the program's objective the maximum overall reduction in risk to the populace for every dollar spent.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$930	\$1,650	\$1,950	\$2,010	\$2,070	\$8,610

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: Since its inception in 1989, DOE's Environmental Management program has almost quadrupled its budget to a fiscal 1996 request of \$6.6 billion. The General Accounting Office estimates that the total cost of remediation at federal nuclear waste disposal sites will run as high as \$200 billion.¹⁰ However, given DOE's poor performance in the past, this could be only a fraction of the eventual total. DOE also should re-evaluate its original goals and strategies for dealing with this problem. This is not to imply that contamination of these sites is insignificant. To the contrary, the amount of radioactive and hazardous waste at the Department of Energy's nuclear weapons complex is so great that more effective action is absolutely essential.

The Environmental Management program was supposed to clean up all sites within 30 years. Agreements signed by DOE, the Environmental Protection Agency (EPA), and state regulatory agencies specify requirements and set milestones for achieving those requirements. Unfortunately, however, the costs of cleanup have escalated rapidly, breakthroughs in technology have not occurred at the pace originally estimated, and the nature and scope of the contamination problem simply are not known. "As a result," notes the General Accounting Office, these cleanup "agreements taken together do not reflect a national strategy of targeting resources based on the highest risks to human health and the environment."¹¹ It is now clear that DOE will not be able to clean up the sites either within the 30-year time frame or any time soon thereafter.

Much of the problem lies with the assumptions that were made in setting these goals. The focus has been on timelines for reducing contamination rather than on the more sensible goal of reducing risk to human health and safety to the maximum extent possible for any given level of funding. This "biggest bang for the buck" approach would save far more lives at far less cost. For instance, if a site poses little threat to the local population, it may be better to delay cleanup until it becomes a higher priority. This would allow funds to be spent on sites that pose a more likely threat. Additionally, since the value of money is a function of time (how far in the fu-

10 U.S. General Accounting Office, *Energy Issues*, Transition Series, GAO/OCG-93-13TR, December 1992.

11 U.S. General Accounting Office, *Addressing the Deficit: Budgetary Implications of Selected GAO Work for Fiscal Year 1996*, GAO/OCG-95-2, March 1995, p. 80.

ture it is spent), cleanups would cost relatively less in the future—especially if new technologies are invented. Alternative strategies such as land use controls also might encourage more effective cleanup decisions.

Both the Grams and Tiahart bills contain solid provisions for prioritizing remediation actions at the various contamination sites. First they would transfer cleanup responsibilities to a civilian office within the Department of Defense. Then clear goals for reducing overall risks to public health would be adopted to ensure that the most dangerous sites are cleaned up first. These sensible reorganization and prioritization plans would ensure an efficient yet effective process of remediation.

Office of Civilian Radioactive Waste Management

The Office of Civilian Radioactive Waste Management (OCRWM) is charged with constructing a permanent repository for the nuclear waste generated at civilian nuclear power plants. In the past, this material has been stored “on-site.” Realizing the danger to residents of surrounding areas, Congress in 1982 passed the Nuclear Waste Policy Act (NWPA), which mandated the construction of a single storage site that could hold all of the nation’s nuclear waste beginning in 1998.

What Congress Should Do:

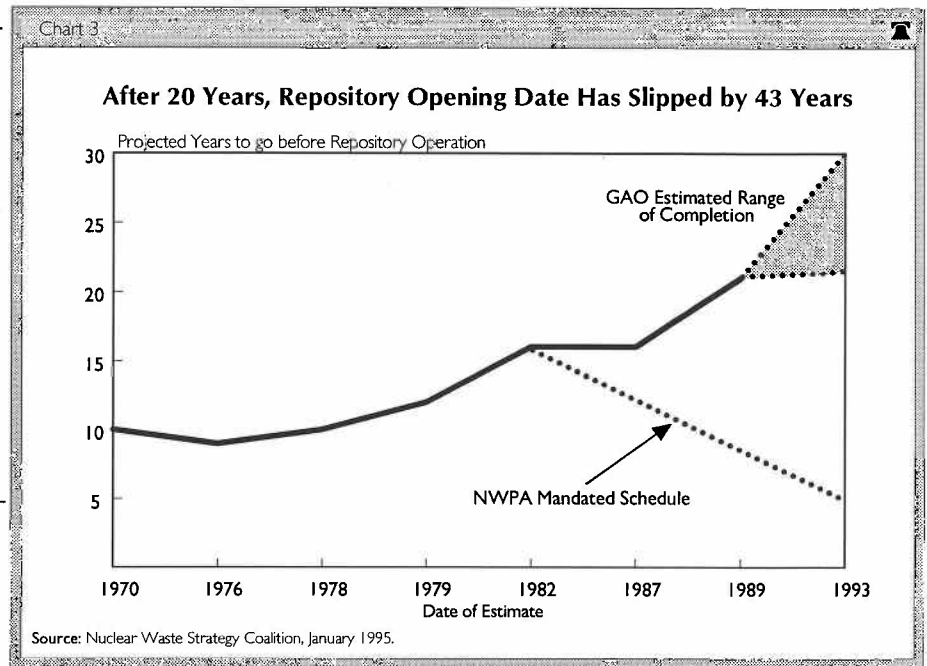
- ✓ **Reconstitute** OCRWM as a mixed government-private corporation as a first step toward full privatization.¹²
- ✓ **Redefine** the new corporation’s mission to concentrate on interim rather than permanent storage.
- ✓ **Establish** concrete goals leading to the commencement of storage in 1998.

Rationale: The Department of Energy’s efforts to create a safe and permanent repository have been dismal from the start. DOE has spent more than \$4 billion just to study the viability of the proposed Yucca Mountain repository in Nevada and estimates that another \$2.3 billion will be necessary over the next 15 years. The construction, maintenance, and operation of the future repository will cost an estimated \$30 billion. Meanwhile, the General Accounting Office now estimates that storage cannot begin until 2023.¹³ In other words, for every year OCRWM has been in existence, it has fallen a year behind schedule.

12 The Civilian Nuclear Waste Management program is financed by the Nuclear Waste Fund (NWF). The NWF is financed by a per-kilowatt tax on nuclear power producers. There currently is more than \$10 billion in the NWF (of which \$4 billion has already been spent). The Heritage Foundation proposal assumes that funding for a corporatized OCRWM will continue to be derived from the NWF. Any savings achieved through corporatization should be returned to energy providers as a tax reduction or credit. Once OCRWM is privatized, the complete balance of the NWF would be returned to the energy producers, who then would pay OCRWM directly through disposal prices.

13 Michael E. McCarthy and Ronald C. Callen, “Redesigning the U.S. High Level Nuclear Waste Disposal Program for Effective Management,” prepared on behalf of the Nuclear Waste Strategy Coalition, January 1995, p. 3.

These inefficiencies are attributable primarily to two factors. First, the National Waste Policy Act specifically requires the permanent, rather than temporary, storage of nuclear wastes. This has added great costs to the investigation



process and will add even more to the future cost of storage and maintenance. Several proposals over the years, including Senator Grams's legislation and this year's House-passed appropriations bill, require the federal government to consider interim storage.¹⁴ This would allow storage and waste consolidation to begin in the near future. It also would allow for more detailed research and development into viable options for permanent storage.

Second, the program's organizational structure reflects many of the inefficiencies that haunt the Department of Energy in general: excessively high expenses, scheduling lapses, poor contractor management, and a politically charged environment. Numerous studies over the past decade have commented on these problems and suggested that their cause is OCRWM's position within the Department of Energy. As early as 1984, only two years after the office was created, a report to the Secretary of Energy found that "Location of OCRWM within the Department of Energy makes it vulnerable to changes of policy and senior management as Administrations come and go."¹⁵ Studies generally have suggested that OCRWM be moved out of the Department of Energy and given the freedom to operate without political constraints.¹⁶

- 14 Representative Tiahrt's proposal simply transfers OCRWM's responsibilities to the Army Corps of Engineers. Unfortunately, it does not mention either the need for temporary storage or the possibility of privatization.
- 15 "Managing Nuclear Waste—A Better Idea," report to the U.S. Secretary of Energy by the Advisory Panel on Alternative Means of Financing and Managing Radioactive Waste Facilities, December 1984, p. IX-2.
- 16 "Managing Commercial High-Level Radioactive Waste," Office of Technology Assessment, April 1982; "Building the Institutional Capacity for Managing Commercial High-Level Radioactive Waste," National Academy of Public Administration, May 1982; "Managing Nuclear Waste—A Better Idea," report to the U.S. Secretary of Energy Advisory Panel on Alternative Means of Financing and Managing Radioactive Waste Facilities, December 1984; "Managing the Nation's Commercial High-Level Radioactive Waste," Office of Technology Assessment, March 1985; and "Redesigning the U.S. High Level Nuclear Waste Disposal Program for Effective Management," Nuclear Waste Strategy Coalition, January 1995.

It is widely felt that the dangers presented by the transportation and storage of nuclear waste justify both stringent federal oversight of OCRWM and the timely and cost-effective construction of a nuclear waste repository. In the short term, both goals can be accomplished by creating a mixed government-private corporation. Such an organization would retain government oversight to ensure safety while allowing for efficiencies associated with private-sector incentives. In the long run, full privatization will encourage the most efficient waste disposal by eliminating government interference in day-to-day operations. Safety standards could still be enforced through stringent congressional oversight.

Neither congressional proposal addresses the future of OCRWM privatization. Instead, control over civilian nuclear waste disposal is given to the Army Corps of Engineers. Given the long history of failure within the Army Corps,¹⁷ it is disturbing that both Senator Grams and Representative Tiahrt would give it such a sensitive responsibility. It also does not seem likely that simply transferring its responsibilities to another government organization will solve the office's structural deficiencies.

High-Energy Science Research¹⁸

The Department of Energy spends over \$1.1 billion per year on basic research in high-energy physics, nuclear physics, and other general science programs. Many of these projects, such as the recently terminated Superconducting Super Collider, are considered "big science" because they require large and expensive facilities and teams of researchers.

The department owns nearly 30 research facilities around the country, nearly all of them managed and operated under contract by universities and private organizations. Of these facilities, 17 direct most of their programming to basic science and technology, high-energy physics, or nuclear physics research. Five are multi-program laboratories like Argonne near Chicago; Brookhaven in Upton, New York; and Lawrence Livermore in Berkeley, California. Another 12 are specialized, or "program-dedicated." These include Fermilab near Chicago; the Stanford Linear Accelerator Center near Stanford, California; and the Structural Biology and Molecular Medicine Laboratory (formerly known as the Laboratory of Biomedical and Environmental Sciences) at the University of California at Los Angeles.

What Congress Should Do:

- ✓ **Phase out** over three years all federal funding for general science and basic research.
- ✓ **Transfer** the federal laboratories conducting this research to the universities currently operating them or sell them to private-sector operators.

¹⁷ For a brief discussion of the record of the Army Corps of Engineers, see Hodge, *Rolling Back Government*, pp. 103-104.

¹⁸ For general background information on the DOE national labs, see William C. Boesman, "Department of Energy Laboratories: Capabilities and Missions," Congressional Research Service, 93-752 SPR, July 30, 1993, and Secretary of Energy Advisory Board: Task Force on Alternative Futures for the Department of Energy National Laboratories, *Alternative Futures for the Department of Energy National Laboratories*, February 1995.

- ✓ **Shift** any remaining funding for basic research to the National Science Foundation.
- ✓ **Award** all funds based on competitive bids.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$176	\$384	\$622	\$834	\$959	\$2,975

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: Many of the laboratories now owned by the Department of Energy were established during World War II in conjunction with the Manhattan Project, which resulted in the world’s first atomic bomb. Since then, they have “expanded their missions to encompass civilian research and development in many disciplines—from high-energy physics to advanced computing,” reports the GAO; but because of DOE mismanagement, “the multi-program laboratories—both individually and as a group—do not have either clearly defined missions or specific implementation strategies that bring together laboratory resources to focus on accomplishing departmental objectives or national goals.”¹⁹ With no defined mission, other analysts report, these laboratories often compete directly with the private sector.

More surprising is the amount of money DOE has spent subsidizing private companies. For instance, the department has spent more than \$5.2 billion on “technology transfer” programs. Secretary of Energy Hazel O’Leary defends this by stating, “It’s about jobs; it’s about creating jobs. If we don’t create jobs, then it’s a failure.” As two *Philadelphia Inquirer* reporters note, “By O’Leary’s own measure then, it’s a flop.”²⁰ Between 1990 and 1994, for example, the federal government, largely through the DOE laboratories, transferred \$293.1 million to eight large companies with annual revenues of \$700 billion. Yet, over the same four-year period, these eight firms reduced their U.S. payrolls by 329,438 positions and their research and development budgets by \$516 million (two dollars for every dollar of government subsidy).²¹

Numerous studies, including the recent Galvin Commission report, have made recommendations to DOE on how to focus the work of these laboratories, but the department has failed to do so. Indeed, many laboratory managers report that the Energy bureaucracy often stands in the way of scientific progress. These managers “view DOE’s day-to-day management as costly and unproductive in meeting the laboratories’ missions.”²²

19 U.S. General Accounting Office, “National Laboratories Need Clearer Missions and Better Management,” GAO/RCED-95-10, January 1995, p. 16.

20 Gaul and Stranahan, “The Price of Keeping Labs Busy.”

21 The eight companies mentioned are Amoco Corporation, AT&T, Citicorp, DuPont, General Electric, General Motors, IBM, and Motorola.

22 GAO, “National Laboratories Need Clearer Missions and Better Management,” p. 4.

The only way to free these laboratories from DOE's bureaucratic micromanagement is to sell them to private research firms or transfer them at nominal charge to the universities currently operating them. This would allow these facilities to forge partnerships with other private technology interests or to pursue basic research independent of the political or budgetary process.

Federal funding should be phased out over a three-year period to give these facilities time to find other sources of funding. One option would be to use the \$1.6 billion realized from selling the Naval Petroleum Reserve to establish an endowment for university basic research facilities, freeing them permanently from the uncertainties of the budget process.

Both the Grams and Tiahrt proposals would establish a laboratory closure commission, similar to the present military base closure commission, to study the problem and recommend which DOE laboratories (except for those engaged in defense-related activities) should be closed, privatized, or downsized. It is important that Congress establish strict guidelines for the commission so that facilities which remain within the structure of the federal government engage solely in research directly applicable to federal functions. Such guidelines would mandate that all laboratories, regardless of stated mission, are investigated for inefficiencies and wasteful programs.

Power Marketing Administrations

The Department of Energy operates five Power Marketing Administrations (PMAs) which sell wholesale electricity generated by 131 dams built and maintained by the Army Corps of Engineers and the Bureau of Reclamation. These PMAs (Alaska, Bonneville, Southeastern, Southwestern, and Western Area) sold nearly \$3 billion worth of electric power in 1994—just under 8 percent of all power generated in the United States.

What Congress Should Do:

- ✓ **End** all federal assistance to the PMAs, including direct appropriations and the authority to borrow from the Treasury.
- ✓ **Sell** the Power Marketing Administrations to private investors through a variety of privatization schemes by the end of 1998.
- ✓ **Sell** the hydroelectric power plants by the turn of the century.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$0	\$6	\$23	\$168	\$185	\$382
Revenues Foregone	\$0	-\$11	-\$196	-\$636	-\$636	-\$1,479
Sales Receipts	\$85	\$909	\$3,475	\$0	\$0	\$4,469
Net Savings	\$85	\$904	\$3,302	-\$468	-\$451	\$3,372

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: After nearly 50 years of taxpayer subsidies, it is time for the five Power Marketing Administrations to become fully private enterprises. Customers have enjoyed hidden subsidies for years because these government-owned utilities have been able to borrow from the Treasury at below-market interest rates and take as long as 50 years to pay back the loans. Of the more than \$16 billion lent to the PMAs by the Treasury, only about 25 percent has been repaid.²³

PMA electricity is not sold to the highest bidder. Instead, it is sold at varying rates to municipal utilities, cooperatives, industrial users, other government facilities, and investor-owned utilities. Municipal utilities and rural cooperatives are “preference customers,” which means they pay for electricity at cost—often as little as half the rates paid by customers in other parts of the country. Industrial users have a different rate schedule. Aluminum companies, for example, consume as much as one-third of Bonneville’s power, and “the rate they pay is, by contract, tied to aluminum prices.” Thus, when aluminum prices fell over the past five years, Bonneville was buying power “for as much as 3.5 cents a kilowatt hour, [but] it had to sell it to those utilities for 1.8.”²⁴

Selling the PMAs is the only way to bring sound business practices to these government-owned utilities. Congress should follow the example of countries around the world that are moving to privatize their state-owned utilities. In 1993, for instance, Argentina, Germany, and the United Kingdom raised a total of \$4.4 billion by selling state-owned electric utilities to private investors—including U.S. investors.

The British experience is particularly relevant to the United States. In 1991, the British government restructured its government-owned electricity-generating facilities into four regional corporations and sold them to the public in a stock offering. These companies compete to offer electricity through a national grid system. They also compete with various small producers. The stock offering included preferential pricing for employees as well as discounts and incentives for electricity customers and small investors. Stock also was offered for purchase on foreign exchanges. This strategy of building support for the sale among employees, customers, and small investors made the sale very popular. The stock offering was heavily oversubscribed and yielded over \$6 billion for taxpayers.

When the Reagan Administration failed to get Congress to act on its 1987 proposal to sell the Alaska and Southeastern PMAs, it tried unsuccessfully to reform the PMAs’ debt repayment schedules. This effort has continued under the Bush and Clinton Administrations. This year, the Clinton Administration also is renewing the effort to sell four of the PMAs (excluding Bonneville) for a total of about \$3.7 billion. The White House says it will work with Congress to develop specific proposals to privatize these assets. President Clinton’s fiscal 1996 budget projects that the Alaska

23 This figure has been calculated based on Office of Management and Budget records on the level of outstanding debts of the five Power Marketing Administrations.

24 Joan Laatz, “BPA: How Does It Rate?” *The Oregonian*, June 20, 1993.

sale could generate \$83 million. This sale has been in negotiation for more than six years and could be completed quickly if Congress acts to authorize it.

The Office of Management and Budget (OMB) estimates that the relatively small Southeastern and Southwestern PMAs could be sold for \$500 million each.²⁵ The Southeastern PMA, which sells less than 2 percent of the power in its region, could be sold swiftly to regional utilities because it does not own or operate any transmission facilities. It simply pays a fee to various utilities to market power through their transmission lines. The Southwestern PMA, which accounts for 4 percent of the energy sold in its region, also could be sold to regional investor-owned utilities.

OMB estimates that selling the much larger Western Area PMA (WAPA) headquartered in Golden, Colorado, could generate some \$2.6 billion. According to the Department of Energy, while WAPA markets about 9 percent of the power in its region, its service area covers 1.3 million square miles, and its wholesale customers provide power to 16 million consumers in 15 central and western states. Because of its large distribution area, WAPA should be broken up and sold in manageable pieces to investors.

Selling Bonneville (BPA) would be more complicated because of its size and the fact that it provides about 65 percent of the electric power in the Northwest. One method, used successfully by such countries as Britain, would be to sell through a broad-based stock option plan in order to neutralize opposition from the interests served by Bonneville and win popular support from public investors. Stock could be sold at favorable prices to employees, residential customers, environmentalists, fishing and agricultural interests, or others who may feel they stand to lose from privatization. Such a move also might bring support from the many investor-owned and public utilities in the region which reportedly have threatened to build their own power generators to free themselves from BPA's near-monopoly status.²⁶

Both the Grams and Tiahrt proposals call for immediate sale of the Alaskan, Western, Southwestern, and Southeastern Power Marketing Administrations. This would result in savings of roughly \$3 billion over the next five years. In addition, both plans transfer control of the Bonneville Power Marketing Administration to the Department of the Interior and direct the Secretary of Interior to conduct a study outlining future courses for Bonneville.

Energy Supply Research and Development

The Department of Energy spends nearly \$3.7 billion per year on research designed to develop or improve sources of energy. Initiated in response to the OPEC oil embargo to free U.S. consumers from dependence on foreign oil, these projects involve research on renewable energy sources, such as wind, solar, and nuclear power, and such non-renewable sources as fossil fuels. Appropriations approved by Congress for fiscal 1995 include, among others, \$442 million for fossil energy R&D, \$288 million for solar energy

25 Office of Management and Budget, *Budget of the United States: Fiscal Year 1996* (Washington, D.C.: U.S. Government Printing Office, 1995), p. 148.

26 Laatz, "BPA: How Does It Rate?"

research, \$37 million for geothermal research, \$293 million for nuclear energy research, and \$49 million for wind energy systems.

What Congress Should Do:

- ✓ **Terminate** all federal funding for energy supply research and development, including fossil fuel R&D.
- ✓ **Privatize** all government-owned laboratories engaged in this research.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$178	\$815	\$1,776	\$2,651	\$3,331	\$8,751

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: In today’s dollars, the federal government has spent over \$70 billion on energy research programs since the Department of Energy was created in 1977 and has little or nothing to show for it. The United States imports 30 percent more petroleum now than before the oil shock of 1973, and alternative energy supply methods account for only one percent of all energy produced in this country.²⁷

Much of this DOE-funded research is already conducted by private firms or simply irrelevant to market needs. Electric utilities, for instance, voluntarily fund the \$240 million-per-year Electric Power Research Institute at no government expense. Moreover, “the major new technologies for enhanced oil recovery...have come from private industry, not DOE,” according to the Congressional Budget Office, and DOE’s \$9 billion investment in nuclear fission research has gone to waste because the private sector has no interest in building new nuclear power plants. Thus, Energy “has little in the way of commercial applications to show for its investment.”²⁸ All the federal government’s attempts to outguess the energy market have produced are such expensive failures as the Synthetic Fuels Corporation and the Clinch River Breeder Reactor.²⁹ Federal funding for renewable and non-renewable energy research and development should be halted immediately.

There are seven federal laboratories engaged in Energy Supply R&D research: one multi-program laboratory (the Idaho National Engineering Laboratory) and six program-dedicated laboratories like the National Renewable Energy Laboratory. These facilities consume over \$1 billion of total Energy Supply R&D funds. Congress should move to sell all seven to the private firms which currently operate them or transfer them to the universities with which they are affiliated. Private firms then

27 Susan Q. Stranahan and Gilbert M. Gaul, “Billions Spent, but Alternative Energy Remains out of Reach,” *The Philadelphia Inquirer*, June 9, 1995, p. 18.

28 Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options*, August 1994, pp. 109-113. See also Boesman, “Department of Energy Laboratories: Capabilities and Missions.”

29 Linda R. Cohen and Roger G. Noll, *The Technology Pork Barrel* (Washington, D.C.: The Brookings Institution, 1991).

can choose to continue funding for any research they decide is commercially relevant.

Both the Grams and Tiahrt bills include a review of these research and development activities by a laboratory closure commission. The Tiahrt plan is bolder because it establishes specific spending reductions for each of the next five fiscal years (a 25 percent reduction in fiscal 1997 and 50 percent reductions in each following year); Senator Grams proposes to leave any reductions to the discretion of the commission. The problem with allowing a commission to review DOE's research activities is that, while it helps remove political pressures from the process, it also fails to take into account the dismal record of these activities. DOE's energy supply research and development should be terminated, immediately and completely.

Naval Petroleum Reserves

Established in 1912, the federally owned Naval Petroleum Reserve (NPR) is comprised of two commercial oil fields at Elk Hills (near Bakersfield, California) and Teapot Dome (near Casper, Wyoming) and oil-shale reserves (near Rifle, Colorado).

What Congress Should Do:

- ✓ **Sell** the Naval Petroleum Reserves to the highest bidder.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$0	\$103	\$159	\$182	\$182	\$626
Revenues Foregone	\$0	-\$477	-\$470	-\$445	-\$424	-\$1,816
Sales Receipts	\$0	\$0	\$0	\$0	\$1,500	\$1,500
Net Savings	\$0	\$1,126	-\$311	-\$262	-\$241	\$321

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: There is no longer any compelling national, strategic, or commercial reason for the federal government to own the Naval Petroleum Reserve. These oil fields were set aside by Presidents William Howard Taft and Woodrow Wilson to assure fuel for the Navy as it converted from coal to oil. By and large, they sat idle until the Arab oil embargo of 1973-1974, when Congress decided that NPR oil should be pumped and sold and the proceeds used to ready the Strategic Petroleum Reserve. The Department of Energy owns 78 percent of the Elk Hills facility, and a private oil company (Chevron) owns the remaining 22 percent. Overall, the NPR is the equivalent of less than one percent of total U.S. domestic output—hardly enough to be vital to national security interests.

Although the NPR generates more than \$400 million per year in revenue to the government, studies have found that these fields are operated far less efficiently than comparable privately owned oil fields. The NPR was targeted for privatization by the Reagan Administration in a proposal endorsed by the President's Commission on Privatization in 1988. The Clinton Administration's fiscal 1996 budget also proposes selling the NPR, but Congress so far has failed to act. The Office of Manage-

ment and Budget estimates that the government's interest could be sold for some \$1.5 billion, netting roughly \$321 million after deducting the more than \$400 million in revenues the NPR produces each year.³⁰ Congress should embrace this effort and remove any legislative obstacles to selling these assets as quickly as possible.

The Tiahrt bill would transfer responsibility for the Naval Petroleum Reserves to the Department of the Interior and mandate the sale of a significant portion of the reserves to the private sector. The Secretary of Interior would then conduct a study to determine the best course of action concerning the remaining reserves. The Grams proposal, on the other hand, calls for sale of the entire reserve. This approach is preferable because it would result in much larger savings and serve taxpayers better.

Strategic Petroleum Reserve

Created by the Energy Policy and Conservation Act of 1975, the nearly 600 million barrel Strategic Petroleum Reserve (SPR) is a government-owned stockpile of crude oil available for release in the event of market disruptions such as the Arab oil embargo of 1973-1974. The Department of Energy operates six underground salt dome storage sites on the Gulf Coast of Louisiana and Texas.

What Congress Should Do:

- ✓ **Sell** the Strategic Petroleum Reserve immediately.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$113	\$216	\$262	\$276	\$286	\$1,153
Sales receipts	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$12,000

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: The Strategic Petroleum Reserve has become an expensive and obsolete vestige of the regulated oil markets that existed before the Reagan Administration deregulated them in 1981. Over the past 20 years, according to the Congressional Budget Office (CBO), the United States has spent about \$4 billion constructing the SPR storage facilities and another \$17 billion to fill the reserves. Although Congress has not approved funds to expand the reserve beyond its current level of 592 million barrels, the annual cost of operating these facilities is some \$200 million.

Since deregulation, the oil market has become increasingly diversified and the futures market, which hedges against price fluctuations, has become highly sophisticated. As a result, interruptions in the world oil supply of the sort that occurred during the Persian Gulf crisis in 1990 and 1991 do not have the same impact on the economy they once did. Moreover, the CBO notes, while the market responded efficiently to the Gulf War interruption, "both the process of deciding to use the SPR

30 OMB, *Budget of the United States: Fiscal Year 1996*, p. 148.

and the mechanism for selling the oil may have actually contributed to market uncertainty at the time.”³¹

The CBO estimates the SPR’s current market value at \$10 billion, or about \$17 per barrel. However, the sales value may be less because the SPR is suffering water leakage as well as heat and gas buildups, which may present difficulties in extracting the oil. But even a more reasonable purchase price of \$7 to \$10 per barrel would generate revenues of \$4 billion to \$6 billion.

Both congressional plans to terminate DOE call for partial sale of the Strategic Petroleum Reserves, principally those held at Weeks Island, Louisiana. Representative Tiahrt proposes to transfer control over the other portions to the Interior Department, with the Secretary of Interior responsible for determining whether there is justification for selling further reserves. Senator Grams proposes to transfer responsibility for the SPR to the Department of Defense. The Secretary of Defense then would be responsible for determining what portion of the reserves should be maintained and what portion sold. Whoever is responsible, the goal should be to privatize the maximum amount of SPR possible. The final bill should set strict guidelines to ensure this.

Uranium Enrichment Facilities

For some 40 years, the U.S. government ran two uranium enrichment facilities, one at Portsmouth, Ohio, and the other at Paducah, Kentucky. In 1992, the Energy Policy Act transformed this federal program into a wholly owned government corporation (similar to Amtrak) called the United States Enrichment Corporation. The USEC currently produces and markets uranium enrichment services to more than 60 private utilities that own and operate commercial nuclear power plants in this country and abroad. The corporation generates revenues of approximately \$1.5 billion annually and, after expenses, returns a “dividend” of roughly \$30 million to the Treasury.

What Congress Should Do:

- ✓ **Sell** the U.S. Enrichment Corporation to the private sector in FY 1996.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	-\$150	-\$8	\$10	\$88	\$159	\$99
Sales Receipts	\$400	\$1,000	\$0	\$0	\$0	\$1,400
Net Savings	\$250	\$992	\$10	\$88	\$159	\$1,499

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: There is no reason for the U.S. government to operate a commercial business, especially one that returns only a small profit to the Treasury while maintaining effective market control over the industry. According to its own promotional material,

31 Congressional Budget Office, *Rethinking Emergency Energy Policy*, December 1994.

the USEC serves “approximately 90 percent of the domestic market and about 40 percent of the world market.”³² Its annual revenues of \$1.5 billion would rank it 286th on the *Fortune* 500 list of industrial firms.

Congress should remove the many needless obstacles and impediments placed on the corporation by the 1992 Act so that it can be made more attractive to private buyers and investors and sold in FY 1996 for top dollar. A businesslike enrichment corporation could bring bids of at least \$1 billion if freed from oppressive congressional restrictions. Ideally, the two facilities should be sold to different buyers to avoid creating a private monopoly.

The House already has passed legislation to privatize the U.S. Enrichment Corporation. Similar legislation is pending in the Senate.

Energy Conservation Research and Grant Programs

The Department of Energy spends nearly \$800 million per year for energy conservation and research. This research is targeted toward improving energy efficiency in various sectors of the economy, such as transportation, industry, private and public buildings, and utilities.

What Congress Should Do:

- ✓ **Terminate** all DOE conservation research and grant programs.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$179	\$233	\$409	\$616	\$711	\$2,148

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: This program funds research and grants that should be financed by the private sector and state or local governments. For FY 1995, for example, Congress approved over \$430 million for research targeted toward private industry. This funding includes some \$20 million for building systems, \$2 million for heating and cooling technology, over \$25 million for industrial co-generation, \$22 million for materials and metals processing, over \$50 million for alternative fuels utilization, \$1.2 million for “engine optimization in alternative fuels utilization,” \$1 million for vehicle systems materials, \$1.5 million for light duty engine development, and some \$3 million for international market development.

Congress also earmarked \$226 million for state-based weatherization programs, \$22 million for state conservation programs, and an additional \$29 million for the “institutional conservation program.”³³ However important these conservation measures may be, they are not properly a function of the federal government. Congress

³² United States Enrichment Corporation, *1993 Annual Report*.

³³ Congress of the United States, *Conference Report on Appropriations for Interior and Related Agencies*, September 22, 1994.

should get out of the business of funding and micromanaging purely private research and purely local responsibilities.

Energy Information, Policy, Regulation, and Departmental Administration

Some \$400 million of the Department of Energy's \$18 billion-per-year budget is dedicated to departmental administration, the Federal Energy Regulatory Commission, the Energy Information Administration, and the Office of Economic Regulation.

What Congress Should Do:

- ✓ **Make** the Federal Energy Regulatory Commission an independent agency similar to the Federal Communications Commission or the Securities and Exchange Commission.
- ✓ **Close down** or privatize the Energy Information Administration.
- ✓ **Terminate** all funding for non-defense departmental administration while closing down the Department of Energy.

Savings from the Heritage Proposal:

\$ millions	1996	1997	1998	1999	2000	5-year total
Outlays	\$20	\$47	\$76	\$103	\$120	\$366

Source: Estimates by The Heritage Foundation based on Congressional Budget Office data.

Rationale: In testimony before a congressional subcommittee earlier this year, the General Accounting Office warned that "DOE suffers from significant management problems, ranging from poor environmental management of the nuclear weapons complex to major internal inefficiencies rooted in poor oversight of contractors, inadequate information systems, and work force weaknesses."³⁴ Although the department has reorganized many times over the years to correct these deficiencies, those efforts have failed. The only recourse for Congress is to close the agency.

To dismantle the Department of Energy, Congress will have to complete various housekeeping duties such as eliminating over \$400 million per year in departmental overhead funding and spinning off entities which can stand alone. The Federal Energy Regulatory Commission (FERC), which is charged with regulating certain interstate aspects of the natural gas, oil pipeline, hydropower, and electric industries, easily could be made an independent agency like the Federal Communications Commission. FERC is basically self-financed by the fees paid by regulated industries. Congress should begin a serious debate, however, over the extent to which the federal government should continue to regulate the private energy sector.

The Energy Information Administration (EIA) is a quasi-independent agency within the Department of Energy intended to collect and disseminate data on petroleum, natural gas, coal, nuclear power, electricity, alternate fuel sources, and energy

34 Rezendes statement, *op. cit.*

consumption. All of the activities and functions performed by the EIA are carried out by private firms, newsletters, trade magazines, and industry associations. The EIA should be privatized and all federal funding eliminated.

CONCLUSION

The proposals by Senator Grams and Representative Tiahrt would close down DOE, not just re-invent or re-organize it. This is important because it would prevent future Congresses from simply re-inflating the department's funding. In contrast, Secretary O'Leary's re-invention plan maintains DOE's inefficient bureaucracy and perpetuates some of the department's most unnecessary functions. And, although O'Leary's plan would "save" a reported \$14.1 billion over five years, a significant portion of these savings are from asset sales. Once these sales are complete, the Department of Energy—re-invented or not—will continue to exist at little or no savings to taxpayers. The two congressional termination plans, on the other hand, ensure large savings well beyond the next five years.

Cabinet-level status should be reserved only for departments that provide core national activities of the federal government. The Department of Energy does not fit this description. There is no role for DOE in energy supply or regulation with the fall of OPEC and a stable international flow of oil. There is no need for massive nuclear weapons production with the end of the Cold War. All that remains of the Department of Energy's core missions are environmental remediation and research and development. The first could be managed more efficiently by the Department of Defense. The second should be the responsibility of private-sector energy providers. Thus, while DOE still performs a few functions that are likely to continue as federal responsibilities, these functions in no way justify continuing the U.S. Department of Energy as an independent department with Cabinet-level status.

John S. Barry
Research Assistant