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DO WE NEED A DEPARTMENT OF ENERGY?

INTRODUCTION

"Abolish the Department of Energy," urged Ronald Reagan during his presidential campaign. Citing it as a signal example of bureaucratic waste, inefficiency, and ineptitude, Reagan made DOE's termination a symbol for the new direction he hoped to bring to Washington. To Reagan, DOE was archetypical of the sort of federal interventionism he was pledging to stop.

Created from components of existing agencies on October 1, 1977, the Department of Energy had a first-year operating budget of \$6.9 billion. By Fiscal Year 1982, projected DOE outlays are expected to rise to \$13.7 billion. In addition to its 20,000-person bureaucracy, DOE has between 100,000 and 130,000 contract employees on the payroll. These "Gold Check" workers, so named because their paychecks are colored gold instead of the green used for regular federal paychecks, are employed even for such routine tasks as filing. While unusual, this arrangement might not raise eyebrows if the Department were widely viewed as efficient and well-run. This, however, is not the case. In fact, the Department's most serious problem is that there is widespread doubt that it is doing its job well. Although the Department has spent tens of billions of dollars and its ranks teem with experts, the agency has made little if any headway in solving U.S. energy problems. In a number of instances, it is actually blamed for making the problems worse.

The Department, however, has its backers. Some key Senators, for example, feel that the agency's failure to perform well is not due to any inherent flaw in the Department but to the policies it has been given to implement. The agency's supporters believe that it is in the national interest to concentrate all energy-related programs and functions of the federal government in a single organization and that the organization should be of Cabinet

rank. They claim that the dispersal of energy programs among a variety of federal agencies led to a lack of coordination during past emergencies, thus weakening national security. They also believe that the lack of a point of focus for energy programs led to duplication and waste.

In truth, the Department of Energy undermines America's ability to achieve its energy goals. As stated in The Heritage Foundation's Mandate for Leadership:

The central problem is not found in any specific deficiency of the agency, but rather in the concept that such an agency is needed in the first place. This concept has its basis in the contention that the government can and should play a major if not dominant role in the management of the energy market; a contention we flatly reject....Given this point of view, it may be said that the major deficiency of the Department of Energy is found in the fact of its existence.

The message of this passage is that the market provides the best solution to America's energy problems if only the market is allowed to function. The existence of a federal agency solely concerned with the energy sector of the economy virtually assured that market imperfections would be created.

Perhaps the most serious Department interference with the normal functioning of the market is its distortion of how Americans view the energy sector. The agency views energy in isolation and thus often overestimates energy problems. This leads to policies which overreact, often creating new problems or making problems worse than they would have been.

Typical is the way the Department dealt with the effects of the Iranian revolution. By coercing refiners into producing far more heating oil and diesel fuel than they normally would have, DOE caused a reduction in gasoline production immediately prior to the summer peak driving season. This and the gross misallocations of supplies are widely recognized as being directly responsible for the gasoline lines which plagued the nation in the summer of 1979. The nominal loss of 5 percent of U.S. crude oil supplies was translated in many cases into local shortages of as much as 30 percent at the gasoline pump.

Had the market been allowed to function so that supplies could move to where they were needed and refiners could adjust their product mix to meet customers' demands, the results would have been quite different. This point was underlined in 1979 at the start of the war between Iran and Iraq, when a similar drop in world crude oil supplies was hardly noticed. The key difference was that the market was allowed to function without regulation-inspired panic buying to artificially drive up prices.

Another inherent flaw is that a Department of Energy provides a focal point for public pressure on Washington to intervene in the marketplace. It was the pressure to "do something" about the 1973 embargo, for example, that resulted in the price and allocation controls on petroleum products that now are widely acknowledged as having failed dismally. In fact, the failure of these rules supplied much of the initial impetus for creating the DOE. Having a Department of Energy makes it easier for sentiment favoring greater market intervention to coalesce.

A final basic flaw in the notion that the U.S. should have a Department of Energy is that it creates a perceived need for an energy "policy." In the minds of the public and much of the Congress an energy policy can only exist through a continuing flow of legislation mandating federal programs to do everything from regulating the price of gasoline to subsidizing solar energy. This impression is further reinforced by the electronic and print media.

In a new study of television news coverage of the 1973-74 and 1978-79 oil interruptions, the Washington-based Media Institute found that nearly fifty percent of those solutions considered by the networks were rationing and conservation. Only eight percent of the time did the discussion focus on domestic oil. In discussing the possible solutions, government was consulted 77 percent of the time. Such media focus on government intervention as a solution to energy problems certainly reinforced greatly the public's tendency to equate energy policy with an activist federal role in energy. So long as DOE exists, the media will look to it for information and answers.

Some functions performed by DOE, of course, are necessary and even desirable. This is why proposals to dismantle the Department focus on transferring rather than eliminating components. This will allow government to fulfill its historic role, without unwarranted and burdensome interference in the market's normal operation.

THE HISTORY OF FEDERAL ENERGY POLICY

During the latter half of the 19th and early 20th century, the federal role in energy evolved in parallel to the evolution of the domestic petroleum industry. In the preceding quarter century, America's population had doubled and a network of factories rose along a network of some 9,000 miles of railroads. As the nation's industrial base grew, so did America's need for energy.

In 1859, Edwin L. Drake, a former railroad conductor, drilled in Titusville, Pennsylvania, what was to be the nation's first oil well and ushered in the age of petroleum. While the output of Drake's first well was less than a barrel a day, by the end of the century the United States was producing more than 60 million barrels of oil a year.

As the oil industry expanded, so too did government involvement in this industry. At first, government regulation was mainly state agencies setting product standards for the infant industry. By the end of the century nearly every state had laws covering such things as minimum quality standards for refined products sold within their borders and minimum safety standards for handling and storage of petroleum products. Producing states generally had additional regulations governing capping of wells, handling of natural gas, and other safety-related aspects of production.

The federal role was limited initially to matters concerned with the leasing of land in the public domain and the collection of royalties. Toward the end of the century, though, a new element began influencing federal energy activities: the antitrust movement. In 1906, oil pipelines were brought under the jurisdiction of the Interstate Commerce Commission, and a suit was filed in Missouri alleging that Standard Oil of New Jersey was violating the Sherman Antitrust Act. Three years later, the Supreme Court ruled against Standard, forcing the breakup of the company in what was the most sweeping antitrust decision in U.S. history.

Except for the antitrust actions, however, the federal role in energy remained minimal, essentially limited to regulating oil pipelines and leasing land. During the mid-1920s, however, fears grew that oil reserves were being exhausted. The Teapot Dome Scandal and investigations by Wisconsin Senator Robert La Follette fueled these fears, prompting President Calvin Coolidge to create the federal Oil Conservation Board.

While the incipient shortage was ended by the discoveries of the huge Oklahoma and Texas oilfields, the Oil Conservation Board made a number of important contributions to improving oilfield efficiency and identifying wasteful production techniques. The Board's findings sparked state and regional regulatory efforts which remain in effect today.

It was Franklin Roosevelt's New Deal, however, that initiated significant federal involvement in the energy sector. Petroleum production was extensively regulated for the first time during the early 1930s under section 9c of the National Recovery Act; TVA, the Rural Electric Cooperatives, and the Regional Power Authorities were created; and the jurisdiction of the Federal Power Commission was extended. The New Deal initiatives represented a sudden departure from the laissez-faire tradition which had guided federal actions in the energy sector.

Even FDR's unprecedented intervention in the energy sector did not represent a total rejection of the free market as the optimum way to manage energy resources. Many of the energy related projects were actually designed as much to stimulate jobs for unemployed Americans as to produce power.

After the initial New Deal flurry of intervention, federal encroachment in energy slowed but did not stop completely. Perhaps the most significant federal action during the period before 1970 was the extension of the Federal Power Commission's authority to regulate the interstate sale of natural gas. In 1971, federal intervention expanded enormously when President Richard Nixon imposed federal wage and price controls. Included among the commodities subject to regulation was the wellhead price of crude oil. Although it was not anticipated at the time, these controls would be extended in 1973 and would remain in effect until President Reagan took office in 1981. Coupled with the earlier controls on natural gas prices, the crude oil controls were the most important causes of the decline in domestic oil and gas exploration which led to U.S. dependency on foreign oil for a significant amount of its needs. These rules also provided the primary rationale for the creation of the Federal Energy Administration, the predecessor of the Department of Energy. It is the elimination of the regulatory morass which grew out of these moves that dismantling DOE seeks to achieve.

DOE did not just inherit programs from the Federal Energy Administration. Most of its nuclear energy programs, for example, actually began under the Manhattan Project of World War II fame and were further developed by the Atomic Energy Commission and its successor, the Energy Research and Development Administration. The programs in DOE's Fossil Energy Division came largely from the Interior Department. Many of the Fossil Energy division's alternate energy programs were funded by the National Science Foundation. In every case, however, programs took on a very different tenor when transferred to DOE. Whereas previous federal efforts were relatively limited and allowed the market to determine the U.S. energy mix, DOE frequently disturbed the market through subsidies, regulations, and federal fiats.

Many of the programs were initiated for good reason. The task facing the Congress thus is to determine which programs should be saved and where those programs should ultimately be placed. Making this determination will not be easy; many entrenched interests will resist changes in the status quo. The most difficult problem facing the Congress, however, is how to reduce the task of evaluating the programs to manageable proportions. Perhaps the best course is to begin by establishing broad criteria which would outline the appropriate role for government in the energy market in a general sense. Then specific programs could be measured against them. A good point to start such an assessment would be with the programs that address energy regulation.

ENERGY REGULATION

Prior to the 1973 Arab oil boycott, it was generally accepted that energy was best left to the economy's private sector. Although federal controls were instituted for the interstate sale

of natural gas in 1954, the rest of the energy market was essentially free of government interference. Even the 1971 imposition of price controls by the Nixon Administration was viewed as a temporary and extraordinary action. What few government activities there were focused primarily on the leasing of federal lands and some research and development projects. The Arab embargo, however, changed public perceptions of the appropriate federal role.

Americans long had been accustomed to cheap plentiful energy supplies. Therefore, the gasoline lines and shortages that followed in the embargo's wake came as a profound and bitter shock. Its faith in the private sector shaken, the public pressed the government to "do something" about the energy crisis.

Congress responded by enacting a complex set of price and allocation rules for crude oil and refined products, and a so-called entitlements program intended to equalize the price refiners paid for crude oil. In practice, the entitlements program caused refiners using domestic oil to subsidize those who did not. While intended as a "temporary" measure, the regulations became a permanent fixture, until Reagan ended them by Executive Order on January 28, 1981.

During the intervening period, the price ceilings seriously distorted the energy market, hindering efforts to bring about a greater reliance on domestic energy sources. Yet controls on crude oil and refined products were not the only federal impediment to energy development in the 1970s. Congress also extended federal price controls to the interstate natural gas market under the Natural Gas Policy Act (NGPA) and severely limited access to federal lands for energy development.

The result of these federal measures was to prevent an early end to America's energy crisis, for they blocked America's ability to capitalize on its rich energy endowment. The U.S. has nearly half of the free world's known coal resources; it is now the free world's largest oil producer. America has huge natural gas reserves and substantial uranium deposits. The problem was that federal regulations prevented full utilization of these resources.

The lesson to be learned from the experience of the 1970s is that the market provides the best means for ensuring adequate energy supplies. The market for energy is so large and complex that no individual or group of individuals can manage it efficiently.

Take gasoline as an example. There are currently about 140 million privately owned vehicles in the U.S. which use 260.4 million gallons of gasoline per day. Since the average automobile has a 20-gallon tank capacity, motorists typically purchase gasoline when the tank is half empty. This means that about 9.5 billion individual transactions each year result from retail gasoline sales alone. To this must be added additional transac-

tions at the wholesale level, home heating oil sales, and so forth. The magnitude of the market becomes clear. As such, the notion that any federal agency or combination of agencies could direct it efficiently seems absurd. Those aspects of the Department of Energy concerned with regulating the energy market are thus among its least desirable components.

Some federal regulatory role, however, is necessary, mainly relating to health and safety rather than market operations. For instance, the government needs to regulate the safety-related aspects of the nuclear power industry and maintain some control over the production of nuclear fuels. Activities such as these are justified because they involve what economists call "externalities." These are effects caused by an activity whose costs are difficult to assign to a particular individual or sector of the economy. The costs, however, must be borne, and government becomes the only efficient mechanism to bear them. The classic example of "externality" is national defense: a need which no individual or small group could afford on its own.

Few of DOE's regulatory activities fall into this category. Rather, they are aimed at attempting to impose a bureaucrat's judgment on the market. Among the worst offenders in this regard are the Economic Regulatory Administration and the Office of Hearings and Appeals. Both of these organizations are primarily concerned with enforcing the price and allocation rules, and played major roles in interfering in the operation of the free market. DOE also has intervened in the market through its program to set federal leasing targets for coal and through its efforts to mandate conservation. The particular irony of all of these programs is that for the most part, they undermine the very goals they were intended to achieve. Given this fact, they should certainly be abandoned.

ENERGY SUPPLY

While regulatory aspects of the Department's activities hinder energy development, other government programs are intended to foster the creation of additional supplies. Here too, however, it would seem that the market would have performed far better.

The federal government's role in ensuring adequate energy supplies was initially confined to issuing leases on federal lands. With the New Deal, though, the government became involved in the direct production of energy through the Regional Power Authorities and Tennessee Valley Authority. Still, the goal of the programs establishing these entities was more to employ the unemployed of the Depression than to produce energy.

During World War II, the government moved into energy research and development through the Manhattan Project. Again, the program's energy aspect was secondary to its main objective. The Manhattan Project and the establishment of the Regional Power Authorities,

however, defined the areas in which the federal government later would be most closely associated with energy: the direct production of supplies and the research and development of new energy sources.

The Regional Power Authorities and TVA have faced the same problems confronting the private utility industry. Since federally-run facilities need not justify their operations to stockholders or make a profit, they have been slower than the rest of the utility industry in seeking solutions. This particularly is the case involving new facility construction; both TVA and the Regional Power Authorities have persisted in embarking on costly construction projects though electricity demand has been decreasing. The result has been the recent announcements of plant cancellations by the Washington State Power Supply System and the Tennessee Valley Authority -- cancellations made well after projects were started and huge sums of money invested. Were these utilities required to meet the criteria of profitability, however, it is likely that the cancellations would have occurred much earlier and at far less cost to the taxpayer.

What then should be done about the plants? Ideally, they should be sold to private investors. In the case of the Regional Power Authorities, however, this may prove particularly difficult, as their source of power is primarily the system of federal dams constructed for flood control. What could be done is to sell the transmission system over which the federal power flows. There would be an added benefit, in that this move would create an experiment in deregulating the electric utility industry. Some economists who specialize in the utility industry suggest that the current structure of the utility industry, in which the same firms generate and transmit electric power, leads to inefficiency. They believe that separating these activities would lead to greater competition and allow power generation to be deregulated. Selling the transmission system for federal power would allow a demonstration of its feasibility on a broader scale.

One area of government involvement in the direct production of energy supplies should remain in federal hands. This is the Uranium Enrichment program. In addition to providing fuel for nuclear power reactors, the enrichment facilities provide material for nuclear weapons. Since national security interests require close supervision of this activity and strict controls on access to enriched uranium, continued federal intervention in this area is appropriate. The enrichment program, moreover, pays for itself through sales to the utility industry and even turns a profit for the government.

The second broad area of federal involvement in the energy supply sector is research and development. While the public is most familiar with nuclear energy development under the Atomic Energy Commission and its successor, the Energy Research and Development Administration, the federal government was involved in energy research as early as the 1920s when it launched initial

demonstration projects to prove the feasibility of extracting oil from shale.

There can be significant benefits to society from public investment in high-risk, long-term research and development. In many instances, as, for example, the development of fusion energy, the eventual payoff of a research program is so far in the future that no private firm could justify the necessary investment. At the same time, however, the potential benefits to society from successful development of a new energy resource such as fusion are so enormous that the research is warranted. It therefore follows that a federal role is appropriate.

In recent years, however, the focus of federal efforts in research and development has not been on such long-term, high-risk endeavors. Especially since the creation of the Department of Energy, federal programs have been concentrating on the near to intermediate term. Examples include various solar energy programs, the massive outlays for synthetic fuels (now an agency of its own, the Synthetic Fuels Corporation), and the alcohol fuels programs. By and large, these initiatives constituted congressional responses to the threat of a Middle East embargo. None has contributed to U.S. domestic energy supplies.

The near-term focus has diverted resources from long-term issues. The recent pattern, therefore, should be reversed and federal research should return to that for which it is best suited: the long-run. "Crash programs" seldom pay off; often they fail. Said Werner Von Braun about such endeavors: "A crash program is based on the assumption that if nine women become pregnant simultaneously, one of them will have a baby in a month."

ENERGY CONSERVATION

The third category of activity at DOE is little disputed in principle: energy conservation. What is questioned is the extent to which the Department's programs have helped Americans conserve. Since 1973, great strides have been made in reducing energy waste and improving efficiency. The private sector took the conservation lead, but in the last three years the general public has begun to follow suit. The result has been a reduction in oil imports (excluding those for the Strategic Reserve) to their lowest level since 1971. The question remains nonetheless: Did the government have anything to do with these impressive conservation accomplishments?

Between 1947 and 1979, the U.S. increased its average oil consumption each year except 1970 and 1974. More important, the share of U.S. oil needs furnished by imports increased every year between 1973 and 1979. This in spite of federal regulations, exhortations, and subsidies. Yet, following the price increases triggered by the Iranian revolution, demand has fallen precipitously, dropping 11.8 percent since 1980 alone. In the latest report-

ing period, demand averaged nearly 21 percent less than the same month in 1979.

What these figures demonstrate is that only when prices were allowed to rise did real conservation begin to take place. None of the measures enacted before the price increase appears to have had any effect on demand.

The change in the public's attitude toward conservation is underscored by data developed at General Motors regarding automobile fuel efficiency. Prior to the 1979 price increases, GM was afraid that their fleet would not meet the 1985 fleet efficiency standard of 27.5 miles per gallon required by law. The reason: the public seemed uninterested in buying efficient cars. In the aftermath of Iran, however, the public's buying habits changed radically. Prior to the Iranian revolution, GM projected an average mileage rating of 26 mpg for its 1985 fleet. This figure has been revised to 30.5 mpg, an improvement of more than 17 percent. By contrast, in Canada, where controls have kept prices relatively low compared to the U.S., GM expects its fleet mileage to average 26 mpg in 1985.

Put simply, conservation cannot be mandated by the government as long as the U.S. remains a free society. Conservation entails too many individual decisions and involves too many different elements to be neatly enshrined in a program or set of programs. On the other hand, the market induces conservation -- with dispatch. The highly touted goal of federal conservation programs was to reduce demand for oil by 2.5 million barrels per day in 1985. The marketplace already has taken care of this, achieving and surpassing the target. The moral is clear: to encourage conservation, impediments to the market's operation must be eliminated.

EMERGENCY PREPAREDNESS

A fourth area in which the Department of Energy has been active is Emergency Preparedness. Here again, the question is not so much whether there is a federal role, but rather how well that role has been executed to date.

By and large, the emergency preparedness function of the Department has been associated with protecting the nation from the potentially disastrous impact of a cutoff of oil imports. The Strategic Petroleum Reserve is the cornerstone of any emergency preparedness program. Although this view is widely accepted in Congress and among the general public, the program to establish the SPR had been one of DOE's greatest failures prior to the Reagan Administration.

Horror stories told of oil stored in facilities from which it could not be removed, of the mixing and thus ruining of different types of crude oil, and of excessive foot dragging in oil

purchases. The rate of acquisitions of oil for the reserve was so slow that Congress even mandated a minimum level of purchases.

During 1981, though, the situation improved markedly as Energy Secretary James B. Edwards made filling the Strategic Reserve a high priority. The SPR is not the only potential tool for dealing with oil supply interruptions. Members of Congress seem, regrettably, ever tempted to toy with price and allocation controls.

Perhaps the irony of price and allocation controls is that they do not solve the problem they are intended to address: the sharp price increases that normally accompany an embargo. This is because they cannot be applied to imports. And by encouraging overconsumption during times of shortage and reducing the incentives for the development of additional domestic supplies, the controls actually tend to strengthen the position of those nations imposing the embargo.

There are, of course, other areas of emergency preparedness that ought to be a federal responsibility. The problem with their remaining in a Department of Energy is that emergency measures tend to be triggered prematurely. A solution may be the transfer of this function to an adjunct of the National Security Council. This would allow for a broader view of energy questions and ensure that all Cabinet agencies affected by an energy emergency could coordinate their efforts. Since White House staffs are relatively small, the potential for bureaucratic empire building in non-emergency times would be minimized. Though the emergency preparedness function focused largely on interruptions of the flow of imported oil is appropriate for government, it does not warrant a full-scale cabinet level department.

ENERGY INFORMATION

Under the Carter Administration, "energy information" was one of the most rapidly growing portions of the energy budget. This was in part due to the proliferation of outreach efforts on energy conservation, but was also in part the result of an explosive growth in the amount of data government required of industry. While some of the information gathered and disseminated by DOE has served useful purposes, a substantial amount was designed to publicize and popularize the sociopolitical views of the agency's political appointees.

The literature, by and large, has tended to promote what were termed "soft path" technologies and to condemn more traditional energy forms. Attacks on nuclear energy have been frequently implicit in the texts of documents prepared by DOE, so much so that a congressional committee issued a report condemning the practice.

The Department's data collection requirements are also the source of growing controversy. Firms are gravely concerned over the security of proprietary data demanded by the Department and have questioned the need for the detailed information DOE required.

Although it is clear that there is some need for information to be gathered and disseminated, the Department's efforts in this are clearly excessive. What data collection is necessary could be performed by the Department of Commerce. Of all the functions DOE performs, this would be the most readily eliminated.

CONCLUSION

Continued existence of a Department of Energy may actually impede America's ability to provide itself with adequate energy supplies. Though it deals with a specific sector of the economy, as do the Departments of Commerce, Labor, and Agriculture, unlike them DOE has an adversary relationship with the interests it is supposed to represent.

Among the Department's worst failings, though, is attitude. It teems with a regulatory mentality, exactly the opposite of that needed to promote domestic energy production. Although the new energy secretary James Edwards is committed to the free market, no individual or group of individuals can redirect the agency toward the free market. A dispersal of DOE functions would remove them from bureaucrats with a regulatory mentality.

The central difficulty of the Department lies in its very existence -- by which it encourages an activist federal role in the energy market. If one lesson has been learned from the last decade, it is that the free market provides the best means of ensuring America's future energy security. For this market to operate, the Department of Energy must disappear.

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