

GAO

Report to the Chairman, Subcommittee  
on Energy and Power, Committee on  
Energy and Commerce, House of  
Representatives

April 1993

# ENERGY POLICY

## Changes Needed to Make National Energy Planning More Useful



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Resources, Community, and  
Economic Development Division

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April 27, 1993

The Honorable Philip R. Sharp  
Chairman, Subcommittee on Energy  
and Power  
Committee on Energy and Commerce  
House of Representatives

Dear Mr. Chairman:

This report examines the extent to which National Energy Policy Plans submitted to the Congress between 1979 and 1991 conform with the provisions of title VIII of the Department of Energy Organization Act. We also assessed whether changes in the planning requirements are warranted. The report contains a matter for consideration by the Congress aimed at adjusting the timing and frequency of energy policy plans to give administrations time to develop their own comprehensive plans, allow for public participation, and integrate the plans with the additional requirements of the Energy Policy Act of 1992.

As arranged with your office, unless you publicly announce its contents earlier, we will make no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the appropriate congressional committees and the Secretary of Energy. We will make copies available to others on request.

This work was performed under the direction of Victor S. Rezendes, Director, Energy and Science Issues, who can be reached at (202) 512-3841. Other major contributors are listed in appendix I.

Sincerely yours,

J. Dexter Peach  
Assistant Comptroller General

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# Executive Summary

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## Purpose

The oil price and energy supply shocks of the early 1970s prompted the Congress to enact legislation in 1977 creating a permanent mechanism for developing and implementing a national energy policy. This legislation requires the President to submit a comprehensive national energy plan to the Congress every 2 years. As requested by the Chairman, Subcommittee on Energy and Power, House Committee on Energy and Commerce, GAO (1) assessed the extent to which the national energy plans submitted since 1979 met the provisions of the act, (2) identified the reasons for the differences among the plans submitted, and (3) evaluated changes that may be warranted in the energy planning process.

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## Background

Title VIII of the Department of Energy Organization Act requires the President to submit a comprehensive biennial energy plan that includes information on a variety of energy issues. GAO focused its review on the plans' most prominent elements: setting energy objectives, developing strategies to achieve these objectives, estimating energy supplies and evaluating energy trends, providing supporting data and analysis, and holding public hearings.

The Energy Policy Act of 1992 modified title VIII by requiring that future plans include a "least-cost energy strategy." Creating such a strategy entails developing, among other things, inventories of and cost estimates for energy resources, a program to ensure adequate supplies of energy, and estimates of the life-cycle costs of existing energy production facilities. The act also requires this strategy to take into account the results of a separate report that assesses the feasibility of reducing greenhouse gases and evaluates the social and economic impacts of policies needed to comply with relevant international agreements on reducing greenhouse gases.

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## Results in Brief

The six national energy plans submitted by three administrations since 1979 have varied significantly in their attention to title VIII's provisions. While most plans set objectives and outlined strategies to achieve them, no plan fully addressed the five principal provisions of the act. For example, no plan established the 5- and 10-year objectives specified in title VIII. Most plans included only general goals, and only three plans provided analysis supporting these goals.

The administrations' differing views on the federal role in energy as well as new energy developments influenced the content of the plans and the

degree to which they addressed title VIII's provisions. The administration in office during the late 1970s, for example, believed in strong federal leadership on national energy policy, and its plans reflected this philosophy. However, subsequent administrations believed market forces should drive energy pricing and supplies, and their plans reflected this belief. During periods of heightened concern about the nation's oil dependence and vulnerability to dramatic price changes, energy plans tended to be more comprehensive, as in 1979, 1987, and 1991. In the absence of these concerns, plans were less comprehensive, often varying little from plan to plan, as in 1981, 1983, and 1985.

GAO believes that while title VIII provides a useful framework for developing an energy policy, the frequency and timing requirements have not contributed to effective planning. As a result, plans are unlikely to involve the comprehensive planning exercise the Congress intended in title VIII. Once an administration prepares a comprehensive plan setting forth its goals and strategies, little is gained by repeating the full planning exercise 2 years later unless a new administration takes office or energy developments warrant a new plan. In fact, past administrations have chosen not to address all of title VIII's provisions every 2 years. In 1989 the administration was unable to meet title VIII's provisions immediately after taking office; it eventually submitted its first plan almost 2 years after the 1989 deadline. As of mid-April 1993, the current administration had not made a decision about the timing of its first energy plan but will not be submitting a plan in April 1993—just 3 months after taking office.

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## GAO's Analysis

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### National Energy Plans Varied Significantly

Although three administrations submitted six separate energy plans in response to title VIII, the plans varied significantly in their scope and attention to the act's provisions. For example, none set specific 5- and 10-year objectives, but most plans presented general energy goals and strategies. The 1991 plan focused more than other plans on presenting these strategies, and both the 1979 and the 1991 plans were followed by legislative proposals to implement the strategies. All plans projected future trends in prices, supply, and demand for the major energy sources as well as the effects of these trends on the economy. But only the 1991 plan discussed the environmental impacts of energy trends. The 1979, 1985, and 1991 plans provided the required data and analysis to determine future

outcomes should the plans' proposals be adopted; the 1991 plan provided the most analysis to support its proposals. Public hearings were held in connection with all plans except the one submitted in 1987.

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### Attitudes and Energy Developments Influenced Energy Plans

Administrations' differing attitudes about the federal role in energy substantially influenced their approaches and adherence to title VIII's provisions. The 1979 plan, for example, reflected an active approach to energy policy and contained energy objectives similar to those specified in title VIII. The plan sought to reduce dependence on foreign oil by developing alternative energy supplies and emphasizing conservation. It built upon many legislative initiatives the administration had proposed 2 years earlier. Plans submitted between 1981 and 1987 reflected a new administration's opposition to setting energy goals with specific timetables. This opposition was based on the belief that energy choices were best left to consumers, not the Department of Energy—an entity the administration proposed to dismantle. In addition, world oil prices had dropped beginning in 1981, lessening concerns about the need for an aggressive energy policy. Oil prices were decontrolled during the 1980s, and funding for energy research and development programs was reduced. In 1989 and 1990, attention focused again on oil vulnerability, and the 1991 plan reflected this renewed interest by attempting to reconcile the need to reduce vulnerability to oil price shocks with economic growth and environmental protection.

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### Title VIII Can Provide an Effective Framework for Energy Planning

On the basis of an analysis of past plans and discussions with energy experts, agency officials, and congressional staff familiar with energy planning, GAO believes that title VIII provides a framework within which energy policy can be effectively developed and debated. However, title VIII's required reporting frequency—every 2 years—has not contributed to more effective planning. Plans prepared in 1979 and 1991 were substantial efforts, met most of title VIII's provisions, and either proposed legislation or prompted congressional action. The 1987 plan met few of title VIII's provisions, but it was a valuable and objective report on energy security. However, other plans were less comprehensive, influenced not only by attitudes toward energy planning but also by stability in current energy conditions. The plans were prepared largely to meet title VIII's 2-year requirement rather than to provide a framework for national energy policy, and they were largely ignored. GAO believes that the 2-year reporting requirement does not reflect planning needs and has not led to more effective planning.

GAO further believes that once an administration prepares a comprehensive plan setting forth its basic energy goals and strategies, subsequent planning efforts need only focus on updating information or adjusting strategies to meet changing conditions. Under this approach, comprehensive plans addressing title VIII's provisions would be developed only when a new administration took office or when significant energy, economic, environmental, or national security developments warranted comprehensive energy planning.

Past incoming administrations have had difficulty addressing title VIII's provisions in their first year of office. For example, in 1981 the new administration's plan was a limited effort and was submitted after the deadline. In response to the 1989 deadline, another new administration prepared only a summary of its public hearings, choosing instead to work toward developing a comprehensive plan in time for the 1991 deadline. As of mid-April 1993, the new administration, also expected to deliver an energy plan with the level of specificity and the public hearings called for in title VIII by April 1, had not decided when its first energy plan will be developed. This administration's plan must also include additional analysis required by the Energy Policy Act of 1992.

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## Matter for Congressional Consideration

GAO believes it is an opportune time for the Congress to reevaluate the frequency and timing requirements of plans submitted under title VIII. For example, to permit administrations sufficient time to develop comprehensive plans of their own, allow for public participation, and integrate the plans with the additional reporting requirements of the new energy act, the Congress could require that the plans be submitted every 4 years instead of every 2 years, with plans due April 1 of an administration's second year in office. Plans could be supplemented by annual or other updates as warranted by changing energy trends or other developments.

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## Agency Comments

GAO provided a draft of this report to DOE's Office of the Assistant Secretary for Domestic and International Energy Policy. The former Associate Deputy Under Secretary for Policy Analysis in that office generally agreed with GAO's findings and conclusions. As requested, GAO did not obtain written agency comments on a draft of the report.

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## Abbreviations

DOE	Department of Energy
GAO	General Accounting Office
NEP	National Energy Plan
NEPP	National Energy Policy Plan
NES	National Energy Strategy
OPEC	Organization of Petroleum Exporting Countries





# Introduction

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For decades, the federal government has attempted to develop a national energy policy. However, until 1977 when the Department of Energy (DOE) was established, the federal government did not have a framework for consolidating its efforts on energy matters. By the end of the decade, the executive branch's authority over energy and natural resources had expanded, and analytic and forecasting capabilities had been introduced. In addition, the first national energy plan had been developed, and a formalized biennial process for planning energy policy had been established under title VIII of the Department of Energy Organization Act.<sup>1</sup>

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## Objectives of the National Energy Policy Plan

The Department of Energy Organization Act, which created the Department of Energy, also provided a mechanism through which a coordinated national energy policy could be formulated and implemented. This mechanism, in title VIII of the act, requires that the President submit a National Energy Policy Plan (NEPP) to the Congress by April 1 every 2 years, beginning in 1979. Title VIII called for the use of more than 50 kinds of information in developing the plan. The 5 most prominent elements, which incorporate many of these 50 provisions, are

- holding public hearings to seek the views of a range of interests, including regional, state, and local governments and the private sector;
- establishing 5- and 10-year energy production, utilization, and conservation objectives that pay particular attention to the need for full employment, price stability, energy security, economic growth, environmental protection, and nuclear nonproliferation as well as special regional needs and the efficient utilization of public and private resources;
- identifying strategies to be followed to achieve the objectives and outlining the appropriate policies and actions of the federal government to maximize private production and investment in each significant energy supply sector;
- estimating the domestic and foreign energy supplies on which the United States will be expected to rely and evaluating current and foreseeable trends in the price, quality, management, and utilization of energy resources and the effects of those trends on the social, economic, environmental, and other requirements of the nation; and
- submitting whatever data and analyses are necessary to support the objectives, resource needs, and policy recommendations of the plan.

By calling on administrations to set objectives; identify the strategies needed to achieve the objectives; project energy supply, demand, and

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<sup>1</sup>Department of Energy Organization Act, P.L. 95-91, Aug. 4, 1977.

prices; provide the data and analyses to support goals and strategies; and invite public input throughout, the Congress sought a comprehensive approach that uses the most timely and relevant information available. At the time DOE was created, the federal government was not required by law to develop a comprehensive energy policy, nor was much of the information needed to achieve such a task available. In total, there have been six submissions under title VIII: one by the Carter administration (in 1979), four by the Reagan administration (in 1981, 1983, 1985, and 1987), and one by the Bush administration in 1991.

In late 1992, the Congress enacted the Energy Policy Act of 1992 (P.L. 102-486). The act modified title VIII to require that future plans also include a "least-cost energy strategy." This new provision entails developing, among other things, inventories and estimates of the costs of energy resources, preparing a program to ensure adequate supplies of energy, and estimating the life-cycle costs of existing energy production facilities. The act also requires the Secretary of Energy to prepare a report that assesses, among other things, the feasibility of stabilizing and/or reducing greenhouse gases; the extent to which the United States is responding, compared with other countries, to recommendations made by the National Academy of Sciences in its 1991 report Policy Implications of Greenhouse Warming; the feasibility of complying with recent international agreements on reducing greenhouse gases; and the potential impacts of policies needed to comply with these agreements. As part of the least-cost energy analysis, the Secretary is required to consider this new report in connection with the plan submitted under title VIII.

## Energy Planning Before 1977

Comprehensive national energy planning had been considered by the federal government for 40 years. However, it was the oil price and supply shocks of the 1970s that prompted the most concerted planning and government reorganization efforts regarding energy in this century—efforts designed largely to reduce the nation's dependence on imported oil through consideration of all energy sources and through conservation. These events eventually led to the title VIII provisions in the 1977 act.

As early as 1939, a report by an Energy Resources Committee, formed as part of the Temporary National Economic Committee, noted that all energy resources are closely interrelated and require the systematic

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attention of government.<sup>2</sup> The report recommended that a “national energy resources policy” be prepared that would address these interrelationships rather than focusing on a fuel-by-fuel approach. Other comprehensive efforts followed, including those by the Department of the Interior and the National Security Resources Board from 1947 to 1949, the 1950-52 Materials Policy Commission (known as the Paley Commission), the 1955 Cabinet Committee on Energy Supplies and Resources Policy, the U.S. Senate’s 1961 National Fuels and Energy Study, and the Johnson administration’s 1964 Resource Policies for a Great Society: Report to the President by the Task Force on Natural Resources.

Those who interacted with the federal government on energy matters found a lack of cohesion in the federal structure. For example, an oil executive said in 1972 that “the present dispersion of effort among some 61 different government agencies creates delays and confusion and will inevitably tend to accentuate whatever energy shortages may lie ahead.”<sup>3</sup> While complaining about fragmentation and inefficiency, this executive acknowledged a strong energy policy role for the executive branch. In response to growing concerns about the dispersion of energy functions, President Nixon outlined a “comprehensive, integrated national energy policy” in April 1973 and in June established an Energy Policy Office to consolidate energy policy planning in the White House.

By the early 1970s, energy policy had crossed a watershed when, for the first time, supplies were inadequate to meet demand at prevailing energy prices. The role of the federal government shifted from support for energy-production industries to the regulation of increasingly (and temporarily) scarce and costly resources, particularly oil. By the spring of 1974, the Arab oil embargo that followed the November 1973 Arab-Israeli war had caused oil prices to climb to four times their level at the beginning of 1973. In early 1974, the Nixon administration launched “Project Independence,” a research and development plan aimed at greater energy self-sufficiency for the nation.

During the same decade, increased concern about whether the nation would have adequate energy supplies at affordable prices to meet growing demand also prompted interest in employing economic and engineering analysis to forecast future energy needs and assist with policy decisions.

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<sup>2</sup>Craufurd D. Goodwin, “The Truman Administration: Toward a National Energy Policy,” in Craufurd D. Goodwin, editor, Energy Policy in Perspective: Today’s Problems, Yesterday’s Solutions (Washington, D.C.: The Brookings Institution, 1981), pp. 6-7.

<sup>3</sup>Richard H.K. Vietor, Energy Policy in America Since 1945: A Study of Business-Government Relations (Cambridge, England: Cambridge University Press, 1984), p. 320.

In 1974, the Federal Energy Administration was created. Economic modelers at the Federal Energy Administration developed an 800-page draft Project Independence Report, using an analytical approach that “marked a turning point in the assessment of policy options.”<sup>4</sup> Later that year, President Ford created an Energy Resources Council charged with developing a “single national energy policy and program.” In November 1974, the final Project Independence Report was released.

In an April 1977 speech, President Carter declared the policies necessary for increasing energy self-sufficiency to be the “moral equivalent of war.” Within 3 months of taking office, his administration had prepared the “National Energy Plan,” (often referred to as “NEP I”).<sup>5</sup> The plan was developed by a presidential team of economists, public administrators, and attorneys and was accompanied by the legislation to implement it.

In August of 1977, the Congress enacted the Department of Energy Organization Act, creating a single cabinet-level department responsible for overall coordination of energy programs. The act also established, in title VIII, a governmental planning function as a permanent mechanism for developing and implementing a national energy policy.

Under title VIII, the biennial energy plan is submitted by the President, while the Secretary of Energy is the principal adviser on formulating the plan and the principal agency head who defends the plan before the Congress. The Senate report explaining title VIII’s planning provisions said that the plan should integrate the many disparate viewpoints within the executive branch. For all title VIII submissions, the Department of Energy has played a leading role as the integrator of views within the executive branch.

The 1977 National Energy Plan served as a kind of model for title VIII because it incorporated many of the criteria and exercises later codified in the statute. For example, it set the following goals for 1985: to reduce the annual growth rate of energy demand to below 2 percent, reduce gasoline consumption by 10 percent, cut U.S. oil imports from 16 to 6 million barrels a day, establish a 1-billion barrel Strategic Petroleum Reserve in the United States to protect against supply disruptions, increase coal production by two-thirds, insulate to minimum energy efficiency standards

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<sup>4</sup>Neil de Marchi, “Energy Policy Under Nixon: Mainly Putting Out Fires,” in Goodwin, p. 395.

<sup>5</sup>The National Energy Plan, Executive Office of the President, Office of Energy Policy and Planning (Washington, D.C.: Apr. 29, 1977).

90 percent of American homes and all new buildings, and use solar energy in more than 2.5 million homes.

This strategy reflected a time when many in the administration and the Congress believed that energy policy needed greater federal planning and control. Domestic oil production had been steadily declining from 1972 to 1976, while imports as a percent of consumption had risen from almost 29 percent to almost 42 percent during the same period. Two weeks before the 1977 plan was submitted to the Congress, the President had declared that the "energy crisis" was the "greatest challenge that our country will face during our lifetime." The administration's centralized approach to energy problems set the tone for the title VIII provisions that were subsequently enacted.

## Objectives, Scope, and Methodology

As requested by the Chairman, Subcommittee on Energy and Power, House Committee on Energy and Commerce, this report (1) assesses the extent to which the national energy policy plans met the provisions of the act, (2) identifies the reasons for differences among the plans submitted, and (3) evaluates changes that may be warranted in the energy planning process.

To assess the extent to which the reports submitted met title VIII's provisions, we compared each report and its supporting documentation with what we believed to be several of title VIII's major elements. Because of the numerous policy plan objectives in the law and the diverse ways each administration chose to interpret and implement them, we did not measure each plan against every objective. Instead, we selected what we believe are five of the most essential elements—described earlier—and looked for general conformity with them. We selected these five because they were the most prominent of the provisions in the legislation and were emphasized by the Senate committee report accompanying the legislation (title VIII was a Senate provision). In addition, these five incorporate many of the more than 50 separate kinds of information specified in title VIII. For the provision on public participation, we did not judge whether public comments were reflected in the plans, because it was difficult to establish a causal relationship between the views expressed and the final plans.

Throughout our analysis, we tried to provide a historical context for each process that the administrations undertook in addressing title VIII. To clarify the factors that influenced the plans' conformity with title VIII, we interviewed current and former officials responsible for developing the

plans in addition to reviewing the plans themselves. The interviews, along with an examination of current and historical literature on energy policy formation, assisted our understanding of the obstacles to forming comprehensive energy plans. We also asked the officials, congressional staff members involved in energy legislation, and energy policy experts outside of government about the overall usefulness of energy plans.

We provided a draft of this report to DOE's Office of the Assistant Secretary for Domestic and International Energy Policy, which led development of the 1991 National Energy Strategy, and discussed the report with the Associate Deputy Under Secretary for Policy Analysis in this office. This official generally agreed with the facts presented. His comments have been incorporated where appropriate. However, as requested, we did not obtain written agency comments on a draft of this report. We conducted our review between September 1991 and December 1992 in accordance with generally accepted government auditing standards.

# National Energy Plans Have Varied Significantly

The extent to which past energy plans conformed with the provisions of title VIII varied significantly from administration to administration. None of the energy plans submitted fully addressed the statute's provisions; the 1979 and 1991 plans represented the most thorough efforts to incorporate title VIII's provisions. Most plans contained strategies for achieving general goals, and all discussed energy trends, although none set 5- and 10-year objectives specified in the act. Furthermore, few plans offered analysis supporting their statements. Public hearings to solicit a range of input were held for all but one of the plans.

The primary factors that influenced how the administrations approached planning were (1) their differing views on the role of government in energy planning, supply, and price regulation and (2) developments in the nation's energy situation.

Table 2.1 illustrates the wide variation in how the plans conformed with title VIII's provisions.



**Chapter 2  
National Energy Plans Have Varied  
Significantly**

**Table 2.1: National Energy Policy Plans, 1979-91**

Title of plan, date submitted, and administration responsible	Conformity with title VIII's provisions				
	5- and 10-year energy objectives	Strategies to achieve objectives	Projections of energy prices and supplies	Supporting analyses	Public hearings
National Energy Plan II (NEP II), May 1979; Carter administration	No	Strategies to achieve general objectives only	Yes	Partial	Yes
Securing America's Energy Future: The National Energy Policy Plan (NEP III), July 1981; Reagan administration	No	Strategies to achieve general objectives only	Yes	None	Yes
The National Energy Policy Plan, Oct. 1983; Reagan administration	No	Strategies to achieve general objectives only	Yes	None	Yes
The National Energy Policy Plan, Mar. 1986; <sup>a</sup> Reagan administration	No	Strategies to achieve general objectives only	Yes	Partial	Yes
Energy Security: A Report to the President of the United States, Mar. 1987; Reagan administration	No	Weighed pros and cons of alternative strategies	Yes	Partial	No
The National Energy Strategy, Feb. 1991; Bush administration	No	Strategies to achieve general objectives only	Yes	Partial	Yes

<sup>a</sup>The plan that was due in 1985 was not submitted until 1986. However, in this report we refer to this plan as the 1985 plan.

Note: No plan was submitted for the 1989 requirement. DOE officials told us that a summary of the public hearings prepared for the 1991 plan was used to meet the 1989 requirement and issued in April 1990.

**No Plans Set Specific 5- and 10-Year Objectives**

While title VIII calls for 5- and 10-year energy production, utilization, and conservation objectives, no plans followed this approach. The only time such objectives were established was before the law was enacted—in the 1977 National Energy Plan. As noted earlier, this plan set numerous objectives to be achieved for 1985. Each subsequent plan instead developed its own unique approach to objective-setting.

**1979: National Energy Plan II**

The first plan submitted under title VIII's provisions, in 1979, did not specifically set 5- and 10-year objectives for energy production, utilization, and conservation. Instead, the plan, known as NEP II, reiterated the President's 1977 vision of a long-term energy transition, declaring broad objectives for the three periods of the transition: near-term (1979-85),

mid-term (1985-2000), and long-term (2000 and beyond). The plan's near-term objective was to reduce the nation's dependence on foreign oil and vulnerability to supply interruptions. The mid-term objectives were to (1) seek to keep imports sufficiently low to protect national security and extend the time it took before world oil demand reached the limits of production capacity and (2) develop the capability to use new, higher-priced technologies as world oil prices rose. The long-term objective was to use renewable and essentially inexhaustible sources of energy to sustain the economy. The plan mentioned specific times for achieving only a few objectives, such as reducing oil import demand by 5 percent of the consumption in International Energy Agency countries by the end of 1979 (the result of an agreement that year by the agency's governing board) and curbing the federal government's energy use by 5 percent in the year ending March 31, 1980.

By the time the 1979 plan was completed, major elements of the legislative package that accompanied the 1977 National Energy Plan had been enacted. As a result, few new strategies were announced in the 1979 plan; almost all of the specific strategies in the plan represented implementation of the newly authorized programs. The plan included a few new strategies. One strategy called for developing a 10-year energy conservation plan for federal buildings. Another strategy envisioned new legislation to phase out controls on domestic crude oil prices and establish a tax on the so-called windfall profits resulting from the decontrol of oil prices. The proceeds of this tax were to be assigned, in part, to subsidize mass transit and alternative energy technologies.

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**1981: Securing America's  
Energy Future: the  
National Energy Policy  
Plan**

The 1981 plan, known as NEP III, did not include 5- and 10-year energy production, utilization, or conservation objectives. Instead, it offered "guiding principles" for energy policy that included both broad objectives and specific strategies such as

- recognizing that even though efficient displacement of imported oil is an important objective, achieving a low level of U.S. oil imports at any cost is not a major criterion for the nation's energy security and economic health;
- cooperating with international oil partners;
- increasing oil stockpiles against potential disruptions in world markets;
- eliminating controls or other impediments that could discourage the private sector from dealing with disruptions efficiently should they recur;
- implementing the President's Economic Recovery Program; and

- refocusing federal spending for energy-related purposes to cases in which the private sector is unlikely to invest.

The 1981 plan also briefly discussed other forthcoming actions, chief of which was the implementation of the President's Economic Recovery Program. To address the special needs of the poor that result from higher energy prices, the plan counted on the Economic Recovery Program to deal directly with the problems of inflation and unemployment. The plan also described as forthcoming actions a review of regulations affecting the coal and electric utility industries and improvements to the licensing process for nuclear power plants.

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### 1983: the National Energy Policy Plan

The 1983 plan also lacked 5- and 10-year energy objectives. Instead, it contained a single objective, two strategies for pursuing that objective, and a discussion of specific federal programs and actions determined by those strategies. The plan's objective was broadly to "foster an adequate supply of energy at reasonable costs." The strategies to meet these objectives were, according to the plan, to minimize federal control and involvement while maintaining public health and safety and environmental quality, and to promote a balanced, mixed energy resource system responsive to both domestic and international market forces that would also protect U.S. national security interests.

Describing the 1983 plan's approach to title VIII's provisions on 5- and 10-year objectives, a former DOE official who worked on the 1983 plan explained that the Department made a deliberate decision not to develop a "prescriptive set of domestic regulations," but instead structured the plan as a statement of policy, rather than as a plan. The administration, the official stated, believed that market forces rather than mandates would lead to socially desirable results for energy. As an example, he pointed to the administration's early opposition to setting minimum efficiency standards for appliances. Although appliance standards were eventually set by the Congress, the administration's approach of not setting general energy standards in the plan was not challenged and continued to be used in successive plans.

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### 1985: the National Energy Policy Plan

The 1985 plan, like the three plans before it, did not set 5- and 10-year objectives and therefore did not set specific strategies to achieve objectives. However, continuing the trend begun in 1981, the plan discussed strategies to achieve the general objective of adequate supplies

of energy at reasonable costs. These strategies were similar to those described in the 1983 plan: opening up additional offshore oil and gas fields; eliminating federal price controls on domestic natural gas production; redirecting research dollars to basic, rather than applied, science; and introducing legislation to reform licensing and regulation of nuclear power plants.

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### 1987: Energy Security

The 1987 plan, entitled Energy Security: A Report to the President of the United States, also did not establish 5- and 10-year objectives. According to a former DOE official, because the report was prepared with the objective of examining the domestic and international dimensions of energy security, it was not intended as a prescriptive document containing specific 5- and 10-year energy goals or strategies. The report did not purport to make any choices but rather to show what choices could be made, the former official said.

These choices were the strategies that could be used to reduce vulnerability to supply disruptions and enhance the domestic oil industry. For each strategy, the report weighed the pros and cons. However, no specific changes to existing law were proposed along with the report. The report raised, in general terms, the administration's belief that a revised regulatory framework would allow natural gas to compete more freely with other fuels, but it discussed few specific actions for making such revisions. The report also noted that DOE would pay increasing attention to electricity policy, although no specific steps were enumerated. The report included a general review of potential changes in federal requirements and regulations to increase development and improve the transportation of coal. More specific was a discussion of a four-part initiative for nuclear power, including licensing reform, federal-industry cooperation on reactor design, rate regulation, and creation of a repository for high-level waste disposal.

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### 1991: National Energy Strategy

The Department of Energy had intended to develop a plan to meet the 1989 requirement. But the report submitted in April 1990 was an interim report on the 1991 plan, containing only a summary of public opinion but no proposed objectives and strategies. However, the 1991 title VIII submission, known as the National Energy Strategy (NES), had an overall objective that had been set by the President in July 1989: "achieving balance among our increasing need for energy at reasonable prices, our commitment to a safer, healthier environment, our determination to

maintain an economy second to none, and our goal to reduce dependence by ourselves and our friends and allies on potentially unreliable energy suppliers." The plan also had more distinct objectives and approaches for energy production, utilization, and conservation than any plan before it. These goals included diversifying sources of oil supply outside the Persian Gulf, increasing energy efficiency, and enhancing environmental quality. Although few goals were identified with a specific date for their achievement, one objective was to have an operating nuclear fusion demonstration plant by about 2025 and an operating commercial plant by about 2040.

Although no 5- and 10-year timetables were included for most of its objectives, the NES gave more attention than any previous plan to identifying specific strategies that might achieve the plan's many distinct objectives. The plan included approaches for improving electricity generation and use in commercial and residential sectors, allowing private access to oil and gas on federal lands, and increasing the ability of natural gas to compete with other fuels. The plan also listed administrative actions and legislative proposals for a number of areas, and the administration submitted a major legislative package to the Congress shortly after the NES was released.

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## **All Plans Described Energy Trends**

As set forth in title VIII, all of the plans provided estimates of energy supply and demand for the major energy sources (oil, gas, coal, nuclear, and renewable energy) and descriptions of current and foreseeable trends in world oil prices. Most plans discussed, in varying depth, the effects of these trends on the economy. Only the 1991 plan discussed the impact of energy trends on the environment.

The 1979 plan's evaluation of energy trends was contained in three statistical appendixes published during the year after the plan was released. These appendixes predicted energy supply, demand, and prices to the year 2000. The appendixes also analyzed likely macroeconomic impacts of the President's April 1979 oil price decontrol and tax proposals (on inflation, employment, the trade balance, and household expenditures on energy in 10 regions of the country and for nine income-group levels). The appendixes also included detailed input-output model calculations showing the likely effects of the new proposals on 157 sectors of the economy.

A separate series of reports in support of the 1981 plan evaluated current and foreseeable energy trends and their effects on the economic health of the nation. These reports presented the macroeconomic impacts of energy prices for the period 1980-90; described energy and economic interaction in 1973-80; analyzed the effects of energy price changes on various income groups; and provided estimates of energy prices, consumption, and supply. All projections assumed "the continuation of existing programs and policies." The reports stated that "since the projections take into account only policies or programs that were in effect as of June 1981, the projections should not be viewed as a statement of Administration energy goals [italics in original]. The plan projections are a starting point, or 'base case' for evaluating the potential impacts of new energy initiatives or developments."

The 1983 plan summarized projections of oil prices, energy consumption, energy production, and primary electricity inputs. These projections were presented in a technical report, Energy Projections to the Year 2010. The plan stated, however, that these projections "do not necessarily represent Administration policy or the beliefs of the President or the Secretary of Energy." A second technical report in support of the plan, Energy Activity and Its Impact upon the Economy, analyzed the macroeconomic effects of projected high and low energy prices using two different economic models.

The 1985 plan also contained forecasts for oil prices and energy consumption and production. A technical report, National Energy Policy Plan Projections to 2010, summarized expected world oil prices and U.S. energy supply and demand. Like the 1979 plan, the 1985 plan showed energy trends that might result if certain elements in the administration's energy policy were accepted. These elements included comprehensive decontrol of the natural gas market, increased rates of leasing federal lands for energy development, and a focus of federal research and development on long-term development rather than on subsidized commercialization.

The 1987 plan also provided an analysis of future energy trends, but it did not describe the potential effects of proposed administrative or legislative actions. Instead, it used two general scenarios—a higher world oil price, indicating less dependence on imported oil, and a lower world oil price, indicating greater dependence—to generate projections of energy consumption, production, and imports for 1985-95, by both world region and end-use sector. The 1987 report contained the most comprehensive

worldwide projections to date; the trends were developed through an interagency process that included analysts from DOE and other federal agencies.

The 1990 Interim Report on the National Energy Strategy compared future energy production, consumption, and utilization trends from the Energy Information Administration and academic and interest groups. Then, in 1991, the NES presented DOE's projections of energy prices, supply, and demand for 1990-2030. This plan also described trends in environmental emissions from energy sources. In addition, it provided possible scenarios with and without many of the proposed strategies. A technical annex published in July 1991 explained some methodologies and assumptions used for these projections.

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## Plans Did Not Always Provide Data and Analysis

Title VIII also states that the plan should be accompanied by "whatever data and analysis are necessary to support the [plan's] objectives, resource needs, and policy recommendations." Title VIII did not specify what types of data and analysis should be submitted or at what time, but the Senate report on title VIII suggested that "the relevant data and analysis necessary to demonstrate the feasibility of achieving the plan's objectives and to support the estimates made in the plan" be included in a report "accompanying the plan." The types and timing of data and analysis included varied from plan to plan.

One approach to providing data and analysis to support the plan's objectives was to project future outcomes—such as impacts on the economy, energy supply and demand, and the environment—should the proposals in the plans be adopted. This approach was used in the 1979, 1985, and 1991 plans.

Neither the 1981 nor the 1983 plan included analysis to support its purposes. But as described earlier, by projecting possible results the administration's proposals, the 1985 plan provided the data and analyses to support some of the plan's objectives (decontrolling natural gas, leasing of federal lands, refocusing federal research and development).

Although the 1987 submission discussed a wide range of theoretical strategies, an appendix to the report presented the data and analyses used to support only one proposal under consideration—a hypothetical oil import fee. The administration rejected this proposal because its analysis showed adverse macroeconomic impacts.

In 1991, the projections in the NES that reflected proposed administration strategies concerned (1) changes in the mix of fuels used in generating electricity or in transportation, (2) changes in oil import levels, (3) the impacts on electricity prices of clean coal technologies, and (4) changes in the levels of emissions and effluent from various pollutants. The plan presented more data and analyses to support its strategies than had any previous plan. Nevertheless, the NES lacked analytical support for several of its strategies. DOE has subsequently published four technical annexes containing analytical support for the proposals. In our July 1991 testimony on the process DOE used in developing this plan,<sup>1</sup> we stated that the administration had not published alternative analyses that it had examined in developing the plan's policy options, such as those examined at the request of the cabinet-level Economic Policy Council. At the time, we stated that disclosure of all the relevant analyses conducted for the plan would have provided the Congress with better information to judge the relative merits of various energy policy proposals.

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## **Public Hearings Were Usually Held**

Another title VIII objective is active participation through public hearings. Except for the 1987 plan, each administration held public hearings to solicit input into its national energy plan. The public-hearings process for the 1991 National Energy Strategy, conducted over an 18-month period, was the most extensive effort in this regard.

For the 1979 plan, DOE conducted six seminars in Washington, D.C., to obtain the views of several major constituency groups concerned with energy policy. Represented were energy producers and consumers, state and local government agencies, large and small businesses, large industrial energy users, environmental groups, and labor. These seminars were followed by public hearings in six cities: Boston, Dallas, Denver, Omaha, San Francisco, and Washington, D.C. Members of Congress, representatives of state and local governments, and environmental and other interest groups were also consulted. An appendix to the plan summarized the public participation.

For the 1981 plan, DOE held public hearings to solicit views of minority groups in Atlanta, Boston, Dallas, Denver, Kansas City, and San Francisco. The plan provided a supplemental report on these hearings.

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<sup>1</sup>Full Disclosure of National Energy Strategy Analyses Needed to Enhance Strategy's Credibility (GAO/T-RCED-91-76, July 8, 1991).



DOE sought comments for preparation of the 1983 plan in an invitation to hearings published in the Federal Register. Hearings were held in seven U.S. cities. The comments of the 136 persons who testified and the 111 who submitted written responses were summarized by general topic in the final plan. The plan reported that “energy security and emergency preparedness” were “mentioned frequently,” while “some believe” in “free-market forces” to ensure fair and equitable distribution of energy supplies during an emergency. Similarly, the plan reported that while “many respondents expressed concern” about the role of nuclear energy in the nation’s future and “questioned the continued funding” in light of “the Administration’s commitment to free-market forces, others supported the development of nuclear power.”

For the 1985 plan, DOE received 275 letters in response to a notice published in the Federal Register soliciting comments on energy policy. Public hearings were held in seven U.S. cities, and 124 people testified. In a two-page summary, DOE grouped public comments into five broad categories. Of these five categories, conservation was the issue most often cited—specifically, in support of continued federal funding of residential conservation and energy-efficiency programs and extension of energy tax credits. The summary stated that some speakers encouraged a “more market-based approach.” Comments on fossil fuel and environmental issues were said to include support for offshore oil and gas leasing, full deregulation of natural gas, and increased research into nuclear waste disposal and acid rain. Nuclear energy prompted a range of suggestions as well, from streamlining licensing procedures to lessening federal promotion of nuclear power plants.

For the 1987 plan, DOE made a limited effort to obtain public participation. A Federal Register notice soliciting public comments resulted in 50 submissions from state and local government officials, trade associations and industry representatives, public interest groups, university and research organizations, and private citizens. A second Federal Register request for comments on a “Study of Crude Oil Production and Refining Capacity in the United States” produced 28 written comments. But no public hearings were held to provide input to the report.

Public hearings were a major feature of the process for developing the 1991 NES. In April 1990, a year after the 1989 plan was due, DOE released the Interim Report on the NES—a summary of these hearings. As noted earlier, the Interim Report contained no proposed objectives, strategies, or data and analysis to support such objectives.

For the NES, DOE held 18 sessions in 14 cities, more hearings than had been held for any previous plan. Over 499 witnesses from 43 states, two U.S. territories, and two Canadian provinces appeared, and DOE received more than 2,000 written submissions. When DOE released its Interim Report on April 2, 1990, it said the report was not intended as a first draft of the NES but as a step in building a national consensus.

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## **Administrations' Views and Energy Conditions Shaped Planning Approaches**

The different approaches taken in the title VIII submissions prepared through 1991 largely reflected the specific views of each administration regarding the proper role for the federal government in energy policy. Changes in the nation's energy situation itself during the last 15 years have also influenced approaches to energy planning.

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## **Stronger Federal Role Was Sought During the 1970s**

A belief that a federal government plan could reduce dependence on foreign oil supplies and develop domestic alternatives shaped the national energy plans produced in 1977 and 1979. According to an energy analyst who witnessed much of the debate at the time, a prevailing view was that "if the government sat down and thought ahead, then we would have a better energy policy for the nation." Developing models which portrayed future scenarios and seeking public opinion, according to this expert, were also believed to contribute to a better energy policy.

The 1979 plan was issued about a month after the end of the Iranian oil embargo that had led to rapidly increasing world oil prices. Reducing dependence on foreign oil and the vulnerability to higher world oil prices were the principal energy concerns of the administration, and the 1979 plan described the economic, political, and strategic risks posed by continued dependence on foreign oil. At the same time, the plan predicted that U.S. dependence on imported oil would endure, that world oil prices would continue to rise, and that the nation would in turn continue to be vulnerable to oil price shocks or supply shortages.

During the 1970s, as a result of two major oil price shocks and a natural gas shortage, as well as a belief that energy supplies would be inadequate to meet growing demand, a crisis atmosphere shaped U.S. energy policies. These policies, which envisioned an activist government and national energy management, were designed primarily to insulate consumers from high world oil prices and increase energy self-sufficiency. As a result, by the end of the decade a number of demand-reducing (conservation) and supply-enhancing policies were put in place. Conservation measures

included oil price controls, natural gas regulation, a tax on windfall profits, taxes on fuel-inefficient vehicles, tax credits for purchases of energy-saving equipment, and weatherization grants for low-income households, schools, and hospitals. To increase supplies of alternatives to imported oil, policies encouraged funding for renewable energy research and development, tax incentives for domestic production, and the development of synthetic fuels. The Department of Energy was created to manage many of these new programs and to fund research and development of renewable resources and conservation.

However, by mid-1979 some policies favoring more government involvement in energy began to be reversed. While the 1979 plan, published in May of that year, proposed continued federal support for alternatives to imported oil, it also proposed less federal intervention in some areas. The removal of federal price controls on domestic crude oil and implementation of the Natural Gas Policy Act of 1978, which deregulated some natural gas, were major features of the 1979 plan.

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### **More Market-Based Approach Was Pursued in the 1980s**

During the 1980s, the administration's views about the appropriate role of government in energy matters shifted further, and these views were reflected in each of the plans produced during that decade. The plans revealed the administration's opposition to setting energy goals with specific timetables, intervention in energy markets, and planning for different supply and demand conditions.

The 1981 plan departed from energy policies that had been in place since the 1973-74 energy crises. The plan stated that "increased reliance on market decisions" rather than a "stubborn reliance on government dictates" was likely to lead to "the most appropriate energy policy." The plan presented a general set of guiding principles that were consistent with the administration's Economic Recovery Program—a plan for federal spending reductions, tax cuts, and regulatory reform. The American economy, not the government, according to these principles, would choose the appropriate energy consumption level for a strong, productive, and secure society in the year 2000. According to the plan, the best guarantee of maintaining a wholesome balance among competing interests in regard to energy lay in reversing policies that insert the government into the energy market and "allow[ing] the American people themselves to make free and fully informed choices."

Furthermore, on December 17, 1981, the President announced his intention to propose to the Congress a reorganization of federal energy programs. Federal efforts to finance the commercialization of energy technologies were to be greatly reduced. Concluding that a cabinet-level department was no longer necessary for managing energy matters, and that other highly critical energy functions (including DOE's nuclear weapons and basic research activities) could be more effectively carried out elsewhere in the government, the President proposed abolishing DOE and shifting many of its principal functions to other federal departments.

Beginning in early 1981 and continuing throughout most of the 1980s, a number of other developments had taken place in energy systems and markets as well as in government policies toward them. One of the most far-reaching of the government energy reforms was the suspension of oil price controls with deregulation of the oil industry in 1981. In addition, during this decade, federal funding for conservation programs and alternative energy resources was reduced and funds were redirected toward basic research. The government-sponsored synthetic fuels and breeder reactor projects were canceled, efficiency standards for automobiles were softened, natural gas prices were further decontrolled, and the windfall profits tax was eventually rescinded.

Federal policies to reduce government intervention in energy markets were further bolstered by simultaneous developments not necessarily related to the administration's energy policies. Oil prices had peaked in 1981, were fully decontrolled by September 30, 1981, and continued to fall until 1987. During the period 1981-86, the world price of oil had dropped from about \$50 to about \$17 a barrel, adjusted for inflation. From 1981 through 1985, electric utilities cut back on their petroleum consumption. Falling world oil prices between 1981 and 1986 also precipitated a drop in the value of U.S. production. As a result, domestic producers were receiving less value for each barrel of oil.

The 1983 plan attributed several of these developments to an improved national energy situation after 1981. As had the 1981 plan, it rejected the notion of government planning but did indicate that "protecting the environment, maintaining health and safety standards, and improving energy security are appropriate government responsibilities" and that "limited control and intervention may be required to reflect nonmonetary costs to society as a whole of energy production and use."

The 1985 plan, stating that “heavyhanded government planning has been abandoned,” noted the success of the “energy policy planning” [italics in original] of recent years as “distinct from the earlier efforts at micromanaged energy planning.” Repeating the goal of the administration’s 1983 plan—that Americans should have an adequate supply of energy at a reasonable cost—the 1985 plan stated that progress had been made since 1981 through a climate of reduced government regulation, fewer controls, lower tax rates, and freer international trade in energy. According to the plan, “Market-oriented policies that build upon America’s vast production and conservation resources and its technological genius, free of arbitrary regulation, provide the best hope of maintaining the momentum of energy progress of the past 5 years.”

After the 1985 plan was issued, the U.S. energy situation took another turn, marked by steady increases of oil imports from countries in the politically unstable Middle East, continued plummeting of world oil prices, and a declining domestic oil industry. Moreover, in the spring of 1987, the United States and several of its allies had begun using the military to protect the safety of Kuwaiti oil tankers in the Persian Gulf in Operation Earnest Will.

The 1987 report Energy Security was issued in the wake of these events. In presenting the report, the Secretary of Energy stated that it had been written at the request of the President in response to his concern over declining domestic oil production and rising oil imports. When the report was published, imported oil accounted for over 40 percent of U.S. consumption. According to the report, worldwide oil price reductions, coupled with lower inflation and lower interest rates, had deeply affected the domestic oil industry. The net income of the 22 largest oil companies had been cut in half between 1985 and 1986, and exploration expenditures and active drilling by oil companies had declined by more than 40 percent. The most pressing question raised by the oil price collapse, according to the report, was what would happen if the United States and its principal allies and trading partners became much more dependent on oil supplies from the Persian Gulf region and from other member countries of the Organization of Petroleum Exporting Countries (OPEC). Because the administration was primarily concerned about rising oil imports—not about developing a national energy policy plan—the report made no specific proposals but rather weighed the costs and benefits of a range of policy options for meeting the nation’s energy security objectives.

## 1991 Plan Responded to Concerns About Oil Vulnerability, the Economy, and the Environment

Concerns about the vulnerability of the United States to “sudden, dramatic changes in world oil prices” and about maintaining a “safer, healthier environment” and “an economy second to none” shaped the NES issued in 1991. Among the steps toward achieving these goals, the plan emphasized diversifying world oil supplies, increasing funding for renewable energy programs, extending renewable energy tax credits, and implementing the Clean Air Act Amendments of 1990.

Although oil imports as a percentage of U.S. consumption continued to rise in the latter half of the 1980s, concerns since then have been less about the level of these imports than about the vulnerability of the United States economy to oil price shocks and developing ways to mitigate the effects of such shocks. The NES stated that the United States would continue to be heavily dependent on oil imports into the next century, but that alternatives to Persian Gulf supplies in particular—such as oil from Western Hemisphere sources, domestic oil supplies, and alternative fuels—should be developed.

Several energy programs that had been scaled back during the 1980s were revived somewhat during 1991 and 1992. Between fiscal years 1980 and 1990, appropriations for DOE’s renewable, fossil, nuclear, and conservation research and development programs fell by 83, 50, 68, and 34 percent, respectively. The administration’s budgets in fiscal years 1991, 1992, and 1993 all proposed increases above the previous year’s levels in these programs.

Despite these changes, the NES largely repeated a pattern of opposition to government energy planning, goal setting, and intervention in energy markets. In fact, as noted in chapter 2, this document was not called a National Energy Policy Plan but rather a National Energy Strategy, although DOE officials told us it was submitted in response to title VIII. A DOE official in the Office of the Assistant Secretary for Domestic and International Energy Policy who worked on the plan stated that setting objectives or goals represented a kind of “command and control” approach to energy policy that the administration opposed. The NES reflected the administration’s philosophy that, wherever possible, markets should determine energy prices, quantities, and technology choices, and that when markets fail to do so, government actions should be aimed at removing or overcoming barriers to efficient market operation. For example, the plan proposed removing regulations that prohibited energy exploration in the Arctic National Wildlife Refuge and the Outer

Continental Shelf, further decontrolling natural gas, and accelerating the licensing of commercial nuclear power plants.

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## Energy Planning Is a Challenging Process

Developing consensus on energy policy can be a contentious activity, as administrations have learned in 15 years of responding to title VIII. Addressing title VIII's many provisions requires coming to grips with many complex issues, such as conflicting national goals, differing agency missions, and regional disparities in energy supplies. The difficulty of resolving these and other issues does not fully explain why plans have not addressed all of title VIII's provisions, but it does illustrate the challenge of completing the planning exercise within a short time.

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## Balancing Conflicting Goals and Values Is Difficult

Preparing energy plans requires coping with multiple and often conflicting goals and social values. Under title VIII, energy plans are to consider the "needs for full employment, price stability, energy security, economic growth, environmental protection, nuclear non-proliferation, special regional needs, and the efficient utilization of public and private resources." In the 1979 plan, the administration characterized these conflicts as "a complex tangle of sometimes competing national goals—market efficiency and greater production, equity among income classes and regions, environmental protection, national security, economic growth, and inflationary restraint. It will be difficult, and sometimes impossible, to reconcile all these goals." In 1983, the administration's commitment to securing an "adequate supply of energy at reasonable costs" signified a belief that Americans had abundant, affordable energy but that financial assistance to low-income Americans might be necessary. During the first of many hearings in 1991 on comprehensive energy legislation, the president of Cambridge Energy Research Associates and author Daniel Yergin observed that over the last 20 years energy policy has pursued three sometimes contradictory objectives—"cheap energy, secure energy, and clean energy."<sup>2</sup>

Conflicting goals also occur in other aspects of energy policy. Fundamental differences between the interests of consumers and producers blend with geographic disparities to make agreement on energy policy contentious. For example, most domestic oil is produced in the Pacific and West South Central states or offshore (in the Gulf of Mexico, in Alaska, or on the West Coast). But the Middle Atlantic, South Atlantic, and

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<sup>2</sup>National Energy Strategy: A New Start," statement of Daniel Yergin before the Subcommittee on Energy and Power, House Committee on Energy and Commerce, Feb. 20, 1991.

East North Central states, which produce almost no oil, account for 41 percent of U.S. consumption, giving rise to questions of fairness.

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### **Energy Policy Involves Multiple Federal Agencies**

Interagency conflicts arise from the multiple goals that need to be addressed by a comprehensive energy policy. For example, a Department of Energy or Department of the Interior program to encourage energy production may conflict with the Environmental Protection Agency's missions to protect the air, land, and water.

Furthermore, despite the consolidation of administrative and information-gathering functions within the new Department of Energy in 1977, important policy activities continue to take place elsewhere within the executive branch. At the time DOE was created, energy functions were spread among 20 executive departments and agencies, and more than 100 energy data programs were run by four separate entities. While some of this fragmentation has been corrected, jurisdiction over energy exploration on federal lands and the Outer Continental Shelf remains with the Department of the Interior, fuel-efficiency standards for motor vehicles are the responsibility of the Department of Transportation, and tax policy affecting both domestic and imported energy sources is initiated and regulated by the Department of the Treasury.

Cognizant of these diverse authorities, the drafters of title VIII played the responsibility for developing plans not with the Secretary of Energy but with the President. Traditionally, however, the Secretary of Energy has managed the process of developing a plan.

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### **Other National Issues Compete With Energy for Attention**

A final reason for the difficulty of creating an energy plan is that energy policy is an adjunct to so many other policy matters. Energy serves as a medium or a catalyst to social, political, and economic activities and, as such, is inextricably linked to the complexity of the nation's heterogeneous society. Yet, unless policymakers perceive a crisis—such as after the first oil shock in 1973-74, or when increased reliance on imported oil threatened the domestic industry in 1986-87, or when some oil supplies were lost during the Persian Gulf War in 1990-91—energy, according to some of the experts we interviewed, does not always receive consistent and focused attention.



# A National Energy Planning Process Is Useful

Despite the inconsistencies in the approaches taken in past energy plans, experts we interviewed believed that the process of preparing energy plans is beneficial. Energy planning gives the federal government an opportunity to periodically assess long-term energy needs and develop a "base case" against which to weigh future decisions. It also provides a forum for competing interests to express their views and have them challenged.

GAO believes that title VIII provides a useful framework for achieving these planning benefits. However, the frequency with which plans must be submitted and the timing of those submissions under title VIII have not contributed to more effective planning. Once an administration prepares a comprehensive plan setting forth its goals and strategies, little is gained by repeating the full planning exercise 2 years later unless a new administration or energy developments warrant a new plan. It will be particularly difficult for incoming administrations to fully address all of title VIII's provisions, including additional provisions in the Energy Policy Act of 1992, by April of the first year in office.

## Experts Support the Need for Energy Planning

After 15 years of plans with varying approaches, there is no clear agreement among energy experts, agency officials, and congressional staff we interviewed about the type of plan that may be the most useful to the Congress. Many believe the process itself is the most useful aspect of energy planning. A few of those we interviewed, including congressional staff, questioned whether the planning process should be continued, given that title VIII's objectives have been disregarded in the past and the Congress does not always find the plans useful.

Despite the inconsistencies of past plans, most of the experts and officials we interviewed generally believed that a periodic evaluation of energy trends such as prices, supplies, and consumption is an important executive branch function, serving to focus attention and debate on key issues. Most who had an opinion on the question believed that requiring such an evaluation as often as every 2 years was probably not necessary. In addition, most favored the approach of setting some kind of energy goal or goals. But those we interviewed did not all agree that the administration should set goals with specific dates for their achievement and accompanying strategies, as currently specified in title VIII but not included in the plans that have been submitted to date. This wide range of opinion may help explain why title VIII's provision for 5- and 10-year objectives has not been uniformly observed.

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## Opinions Differ on the Value of Objective Analysis Versus Policy-Oriented Plans

Some experts we interviewed, including congressional staff, when asked what kind of national energy plan or report they believed would be most useful, stated that a “state of energy” report that also contained projections but that did not serve as a justification for current policy or make additional recommendations might be the most valuable. Such a report, they believed, would present a vision of the future under various energy price, supply, and demand scenarios. The information in such a report would be useful to a wide variety of interests, and those who chose to do so could challenge the data and assumptions. Although the 1987 report Energy Security did not address all of title VIII’s provisions, it was regarded by some experts we interviewed as highly valuable because it objectively examined the future of the nation’s energy needs.

On the other hand, some DOE officials and other experts believed that plans that contained policy statements and specific strategies, such as the 1991 plan, were more useful than those that contained only relatively neutral analyses of future scenarios. One congressional staff member believed that a plan should lay out all possible paths to reach the same goal. A few of those we interviewed saw no value in continuing the planning exercise.

Because of the important role energy plays in the economy and national security, and its impact on the environment, the need to develop a national energy policy plan or energy “strategy”—as DOE called the 1991 title VIII submission—was a principal objective of the Department of Energy Organization Act in 1977. In a June 1990 report, we stated that DOE’s effort to develop a national energy strategy in 1989 was a step in the right direction toward addressing the nation’s future energy needs and the environmental and budgetary implications that should be considered when developing energy policies.<sup>1</sup>

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## Experts Believe Goals Are Important to Energy Planning

From the first plan, administrations have chosen not to set 5- and 10-year objectives for energy production, utilization, and conservation. However, most plans did contain one or more goals without dates attached to them. Goals with specific target dates were only set in 1977, before title VIII was enacted. When asked whether objectives with target dates or some other kinds of quantifiable goals should be part of plans, those we interviewed did not agree on any single approach. But they all agreed that the nation needs at least “general energy goals.” On the question of the level of

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<sup>1</sup>Energy Policy: Developing Strategies for Energy Policies in the 1990s (GAO/RCED-90-85, June 19, 1990).

specificity that such goals should include (e.g., the percentage of oil imports in 5 years), concerns were raised that (1) the choice of specific goals runs the risk of choosing the wrong numbers, (2) failing to meet the goals does not necessarily indicate a lack of progress, (3) choosing specific goals sets up a debate over how much the nation would be willing to spend to reach them, and (4) the goals themselves become more important than the policies employed to achieve them. One argument in favor of specific goals was that since the administration currently has specific goals for education, nutrition, and health, why not for energy? Some of those we interviewed believed that certain environmental goals already imposed or that may be imposed, such as meeting fuel efficiency standards or national targets for carbon dioxide emissions by specific dates, could influence energy policy.

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### The Process Itself May Be the Most Valuable Part

Some experts we interviewed noted that the real value of a plan is in the process that the administration must go through to prepare it. Soliciting a wide range of opinions, developing models, weighing alternative policies, setting goals, and choosing strategies may be more important than the final product itself, they argued. The exercise itself stimulates debate on the issues and serves as a forum for discussing alternatives and dealing with competing interests. "The point was that everything was heavily debated; that is exactly what you want in putting together an energy plan," stated a former DOE official in describing the approach taken to develop the 1987 plan.

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### Frequency and Timing Requirements Do Not Contribute to Better Plans

The requirement that plans be submitted biennially has contributed to the differing approaches and inconsistent adherence to title VIII's provisions. Incoming administrations have had difficulty meeting title VIII's provisions in their first year of office and have, in fact, chosen not to address all of title VIII's provisions every 2 years.

In 1981, a new administration provided only a limited response to title VIII in a plan that set forth no specific energy policies or strategies but offered only "guiding principles." In addition, in responding to title VIII's provision for projections of energy prices and supplies, a supplement to the plan, Energy Projections to the Year 2000, pointed out that "since the projections take into account only policies or programs that were in effect as of June 1981, the projections should not be viewed as a statement of Administration energy goals. The plan's projections are a starting point, or

'base case,' for evaluating the potential impacts of new energy initiatives or developments."

In response to the requirement that a plan be submitted in 1989, another new administration prepared only a summary of its public hearings and issued it a year late. The administration chose instead to work toward a comprehensive plan—the National Energy Strategy (NES)—in time for the 1991 deadline. To explain the approach taken by this administration, one DOE official who worked on the NES said that in January 1989—when the new administration was still choosing staff—the Department was not ready to publish even a general energy policy statement. Yet the deadline for submission of the plan fell 3 months later. This official and others also acknowledged the time-consuming process of developing the NES. Because of the level of effort involved, DOE officials said that the process for meeting title VIII's requirement in 1993 would be a much more limited effort.

Most recently, in response to the 1993 deadline, another new administration had not made a decision as of mid-April about the timing of its first energy plan but will not be submitting a plan in April 1993. Under the current deadline of April 1 in every odd-numbered year, this administration was required, within 3 months, not only to undertake the exercises called for in title VIII, including public hearings, but also to prepare the least-cost energy strategy required by the Energy Policy Act of 1992.

Plans submitted by the same administration every 1 to 2 years are not likely to vary much from one year to the next, according to some current and former DOE staff we interviewed. Another DOE official stated that starting to prepare a new plan immediately after completing one leaves no time for retrospection. In addition, requiring an administration to submit a new plan every 2 years if no significant changes in the energy situation or in administration policies warrant a substantially revised plan could result in plans that are generally identical.

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## Conclusions

Title VIII was developed at a time when the Congress believed that a biennial, step-by-step planning process in the executive branch would lead to a more effective national energy policy. But administrations have not always closely followed the process of setting objectives, developing strategies, and projecting energy supply and demand from plan to plan. Each plan has reflected the current administration's philosophy toward

energy and toward planning itself as well as the status of energy prices and markets. No plan has fully addressed all of title VIII's provisions.

Developing the required plans is difficult and sometimes contentious because of the time needed to address title VIII's provisions, the fact that energy policy cuts across many issues, and the large number of competing interests that must be considered. Thus, the current requirement that plans be submitted biennially—with the additional analysis the 1992 energy legislation requires—is unlikely to result in the comprehensive planning exercise the Congress intended in title VIII. Changing the frequency and timing to require that plans be submitted every 4 years, with the first deadline falling during the administration's second year in office, would allow each administration time to develop—and the Congress to review—a thorough energy policy statement.

We believe and most experts we interviewed agree that there is value in periodically evaluating the nation's energy needs and developing a strategy to address these needs. The process of developing an energy plan serves as a forum for debating and discussing alternatives and for dealing with competing interests.

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## Matter for Congressional Consideration

With a new administration beginning to address title VIII's provisions, now is an opportune time for the Congress to consider changes to the frequency and timing of the plans. For example, to permit administrations sufficient time to develop comprehensive plans of their own, allow for public participation, and address the additional requirements of the new energy act, the Congress could require that plans be submitted every 4 years, by April 1 of the second year of an administration's term of office. With a quadrennial plan as its principal focus, each administration could also submit annual or other updates of its plan, reflecting significant changes in economic, environmental, social, national security, or other trends that affect energy production, utilization, and conservation.

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