UNITED STATES GENERAL ACCOUNTING OFFICE
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STATEMENT OF
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ASSISTANT COMPTROLLER GENERAL OF THE UNITED STATES
ON S. 2782
"A BILL TO ESTABLISH A NATIONAL ENERGY INFORMATION SYSTEM"
BEFORE THE
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
UNITED STATES SENATE

Mr. Chairman and Members of the Committee:

In a letter dated April 6, 1973, you requested that the General Accounting Office undertake a study "to determine the feasibility of establishing, either within the Executive or Legislative Branches, a data bank which would provide current information, independently developed or verified, on the energy supply and demand picture." We are pleased to be here today to report our findings and to assist the Committee in any way that we can in its examination of energy data problems.

While this statement summarizes our findings, a more detailed report is attached. We believe the more detailed material will be useful to the Committee and suggest that it be included in the record following this statement for possible reference. I also wish to call the Committee's attention to the chart on the easel before you showing, for major energy sources and twelve identified data categories, the agencies collecting data and the sources of the data. The size and complexity of the chart is

somewhat symbolic of the present situation with respect to energy data collection. The chart also is on page 9 of the detailed report.

First of all, to respond briefly and specifically to the question you asked us, we have concluded that it would be feasible to establish within the executive branch an energy information system containing current and valid information on energy supply and demand. To establish the type of system we envision, however, legislation will be required. We use the term "system" rather than "data bank" because only part of the data, in our judgment, will be in computers. We believe, moreover, that it will take a significant period of time--years--to develop an adequate system and that intervening steps are necessary to reach this goal. The remainder of this statement summarizes the existing situation, describes current data collection processes and problems, focuses on very recent activities in the Federal Energy Office and in the Congress, and sets forth our findings in support of the conclusion summarized above.

Our study of an inherently complex matter has been made more difficult by the fact that we have been attempting to analyze a rather rapidly moving target. Events of the last few months, while they underscored the pertinence and importance of the Chairman's letter of April 6, 1973, have also produced a frenzy of Government, industry, and public action and reaction which causes the energy situation and, most particularly, the energy data situation to change daily, if not hourly. We have endeavored however to keep our facts current and our analysis consistent with the current facts.

BACKGROUND

Our study sought answers to the following questions.

--What Federal agencies collect energy data?

--What types of data are collected?

--What are the basic sources of data?

--How and to what extent is basic data verified?

--What uses are made of the data?

--What data gaps exist?

Our study focused on the five primary energy sources--oil, natural gas, coal, water, and nuclear energy--and on electricity, a secondary source. In addition to contacts with Federal agencies, we have reviewed legislation authorizing the collection of energy data, contacted industry and industry trade association representatives, and visited Canada to obtain information on the Canadian Government's energy data collection and analysis methods. We also examined some of the literature in the field. While we have not obtained formal agency comments on the study results, we have met with representatives of the key agencies and obtained their informal comments. A list of the agencies and other organizations contacted is included as Appendix II to the detailed study report.

PRESENT SITUATION

Despite recognition over a decade ago of the fragmentation of energy data collection efforts, at the time we began our work in April 1973 there was no central agency in the Government responsible for directing or coordinating the collection of energy data. Neither was there any agency whose principal responsibility was the analysis of energy data,

as such. Since April 1973, of course, there have been a series of actions, not all of them consistent or complementary, in our judgment.

In his April 1973 Energy Message, the President directed the Secretary of the Interior to strengthen his Department's capacity for gathering and analyzing energy data, and, at the same time, issued an Executive order creating a National Energy Office in the Executive Office of the President. In May, the Secretary of the Interior created an Office of Energy Data and Analysis with the responsibility for developing an energy information system and analytic capability. On December 4, the President expressed his intention to seek legislation to establish a Federal Energy Administration and, as an interim step, issued an Executive order creating a Federal Energy Office within the Executive Office of the President. The proposed legislation would transfer the Office of Energy Data and Analysis and several other agencies to the Federal Energy Administration. The Federal Energy Office and its successor agency, the Federal Energy Administration, are intended to become the focal point for the collection and analysis of energy data in the Government.

We have identified 45 bureaus, offices, divisions or administrations of 17 different agencies which are significant collectors or users of energy data. The principal collection agencies are the Bureau of Mines and the Geological Survey in the Department of the Interior, the Federal Power Commission, the Atomic Energy Commission, and the Department of Commerce. The Office of Oil and Gas of the Department of the Interior, the Bureau of Labor Statistics, the Cost of Living Council, and the Interstate Commerce Commission also collect energy-related data.

To further indicate the magnitude and scope of energy data collection, as of March 1973, 15 major Federal agencies were circulating 145 energy-related questionnaires to the States and the private sector, requiring 11 million responses and an annual response effort of about 3.6 million man-hours.

Thus, a large volume of data is being collected by a wide range of agencies. Until recently, however, the data was collected to meet needs of specific, long established programs or agencies rather than as part of a systematic assembling of energy data. For example, data collection by the Bureau of Mines, the largest collection agency, is, for the most part, responsive to that agency's mandate to encourage the development of the mining industry, which incidentally includes fossil fuels. Appendix III of the detailed report contains profile charts depicting the type of data collected, sources of data, reasons for collection and use of data, type and extent of verification, and timeliness of reporting.

For reference, the chart on the easel and on page 9 of the study provides a means of reviewing the general situation. First of all, note the wide range of data collected and the dispersal of collecting agencies. Second, note the heavy reliance of the agencies on private industry as the source. Third, while not apparent from the chart, generally speaking, the data collected from private industry is unverified and the data itself and collection processes are not monitored. Only aggregate data is reported by the collecting agencies for the most part; individual company data is considered proprietary and held confidential. Finally, until the establishment of the Office of Energy Data and Analysis and, more recently

the Federal Energy Office, none of the collecting agencies had a coordinating or consolidating responsibility.

A notable void on the chart is the absence of Government activity in the collection of oil reserve information. The only complete and current Federal Government information on both oil and natural gas reserves is determined by industry and reported in the aggregate through industry associations--the American Petroleum Institute and the American Gas Association. While the American Petroleum Institute is the only source for oil reserves, the Federal Power Commission does obtain information covering about 60 percent of the reported natural gas reserves from interstate gas pipeline companies. Also, in May 1973, the Federal Power Commission published its appraisal of natural gas reserves as of December 31, 1970.

Coal and uranium reserve estimates have been made over the years by the Geological Survey and State geological agencies. Current coal reserve estimates are determined by subtracting production from the original reserve estimates, which go back as far as 1928. Uranium reserves are estimated by the Atomic Energy Commission from raw data submitted by private companies.

On federally-owned lands, the Government primarily relies on lease-holders for reserve determinations, with no requirement that reserve estimates be reported. The one exception is the Naval Petroleum Reserves where the Navy is charged with making independent estimates of reserves.

In summary, the salient points concerning Federal energy data collection are:

--For the most part, data is collected in conformity with individual agency missions and is only incidentally related to current energy problems.

--Until very recently, there was no central point of consolidation or analysis.

--Much of the data, including some of the most important, is voluntarily reported by the energy industries.

--There is little verification of data.

--With limited exceptions, only aggregate data is reported; company data is "confidential."

--The only complete and current information on oil and gas reserves, including reserves on Federal lands, is provided by non-Federal sources.

--Reporting of energy data is not timely.

--Terminology and definitions for reporting are not standardized.

PROBLEM AREAS

VOLUNTARY VS. MANDATORY REPORTING

The Bureau of Mines--the largest collector of energy data--recently analyzed the effectiveness of its voluntary reporting system and concluded that voluntary, cooperative efforts have provided results superior to many mandatory systems. We do not believe that voluntary reporting provides the Executive Branch adequate assurance that needed data will be available. We do not believe that the Government, the Congress, and the

public should be dependent on the voluntary and undefined cooperation of industry. Furthermore, voluntary reporting undoubtedly tends to extend the area of confidentiality, as well as to reduce the possibilities for standardization of terms and definitions.

CREDIBILITY

A problem closely related to voluntary reporting and to the lack of verification, as well as to confidentiality, is the matter of credibility. As long as the reporting of significant information by industry is voluntary and unverified, credibility questions will be raised even though the data may be entirely valid. Present Government inability to demonstrate convincingly the nature and extent of the shortage of energy producing resources is due, in large part, to the unavailability of independently verified data.

The lack of credibility also exists with respect to data collected for resources on federally-owned lands, particularly reserve data. Since something like 50 percent of our Nation's oil and gas reserves, 40 percent of its coal, and 50 percent of its uranium are on Federal lands, this is a significant shortcoming.

Greater provision for independent data verification is essential to improved credibility. Verification procedures will need to be carefully thought out to assure that objectives are achieved with the minimum costs.

The reserve area poses, however, a special problem in the area of data verification because of the potential for judgmental differences in evaluation of core samples and other geologic data. The potential for differences in judgment is a good argument for making such "raw data" widely available for examination and analysis. Greater standardization in terminology and techniques also would improve reserve estimates.

Perhaps the most effective approach to verification would be an onsite audit of books, records, and core samples or other geological data in support of reported data. Verification by this means would require access to records authority for the Federal Government which, for the most part, does not now exist. Actual use of direct access authority could be minimized through sampling and systematic cross-checking of reported data.

A sound system of data verification should be supported by a requirement that data furnished be certified as to its accuracy and provision made for appropriate sanctions if reported data proves inaccurate.

CONFIDENTIALITY

During our study, officials of key data collection agencies advised us that the General Accounting Office could not be given access to confidential individual company data. We had a similar experience in 1969 which forced us to suspend our review of policies and practices in administering the oil and gas leasing programs for the outer continental shelf. Confidentiality is a major concern of industry. While the problem is not a simple one to solve, we believe that the terms confidential and proprietary, as related to energy information, have been overused and that steps should be taken to restrict confidential data to the absolute minimum.

TIMELY REPORTING

With few exceptions, energy data published by the Federal agencies is late, with time lags ranging from a month to two years. The Bureau of Mines runs two months late in its monthly reports on domestic petroleum supply. International petroleum data published by the Bureau of Mines

and the Office of Oil and Gas, issued in March 1973, covered calendar year 1971.

We recognize there is a trade-off between timely data and verification but, in instances where timeliness is vital, verification on an after-the-fact basis would assure the continuing quality of data obtained.

DATA DEFINITIONS

Efforts have been made by the Government and industry to set standards for data reporting. However, no authority exists to compel adoption of uniform energy terms and data published by Federal agencies tends to be contradictory and inconsistent. Our detailed report contains examples.

DATA GAPS

We identified the following areas in which needed information is not available:

--Petroleum and petroleum products held by other than refiners and major terminal operators.

--Petroleum product inventories held by large-volume consumers and retailers.

--Regional and local data on petroleum product inventories, distribution, and consumption.

--Data needed to make supply and demand analyses.

Some data covering the above areas is available but is fragmentary, late, or both. We understand that, in recognition of data gaps, the Federal Energy Office has presented 23 forms to the Office of Management and Budget for approval requesting industry data not otherwise available.

USER NEEDS STUDY

A full-scale user needs study should be conducted as soon as possible to examine more carefully and precisely national data needs for short-term and long-term energy planning and decisionmaking. Such a study could also reduce the burden on industry and the public through elimination of unneeded reports.

ANALYSIS

Until the establishment of the Office of Energy Data and Analysis and the Federal Energy Office in 1973, the myriad of programs and activities comprising the Federal energy effort evolved over the years without benefit of a formal national policy, and therefore without centralized direction or coordination. Perhaps the most crucial need is for analyses of energy data from the perspective of identified energy problems, rather than from the vastly different perspective of individual agencies and programs.

CANADA'S SYSTEM

Comparison with the manner in which Canada deals with some of the problems is particularly useful since the major petroleum companies operating in the United States also operate in Canada.

In Canada, companies are required by law to submit periodic data to the Government on the production and distribution of crude oil and petroleum products, natural gas, coal, and electricity. The Canadian Government also requires submission of engineering and geologic data from companies drilling for oil and gas on the outer continental shelf. Alberta, Canada's largest oil and gas producing Province, requires submission of core samples and other geologic data by companies during well drilling for use in making independent reserve estimates.

The Government has access to company records for purposes of verifying reported data.

Canada has developed a variety of practices with respect to confidentiality. Individual company data on production and distribution is kept confidential. Outer continental shelf data is kept confidential for 30 days if it relates to activity in known producing fields, and for two years for undiscovered fields. Disclosure practices with respect to other types of data vary similarly in accordance with the type of data and circumstances.

RECENT ACTIVITY

Since the Administrator of the Federal Energy Office has just appeared before this Committee to inform it of the recent activity and plans of his Office, we do not see any need to discuss recent Federal Energy Office activity. Mr. Simon appears to be aware of the shortcomings of the present arrangements for data collection and analysis, and determined to achieve prompt improvements in the situation. He clearly concurs in the need for mandatory reporting and for improved verification in many cases, and in the need to reexamine confidentiality.

On the legislative front, a range of bills would variously locate responsibility for data collection and analysis in the Federal Energy Administration, in a new Bureau of Energy Information in the Department of Commerce, or in a Council on Energy Policy. More directly important to the General Accounting Office, the proposals would place differing degrees of responsibility on the General Accounting Office for monitoring and evaluating energy data collection and analysis efforts.

S. 2776, a bill establishing a Federal Energy Administration, would provide the Federal Energy Administration with authority to require submission of energy data and with access to the records of companies furnishing such data. However, the bill also establishes a Council on Energy Policy to serve as a focal point for "the collection, analysis, and interpretation of energy statistics and data * * *." The General Accounting Office would be required to monitor both agencies and would have access to records generally paralleling that of the Federal Energy Administration and the Council on Energy Policy. We prefer the provisions of S. 2776 to those of a related House bill, H.R. 11793.

S. 2782, on the other hand, would establish a new independent agency in the Department of Commerce--a Bureau of Energy Information coequal with the Bureau of the Census--to handle the energy data collection job. While the new Bureau would have collection and access authorities paralleling those given the Federal Energy Administration and the Council on Energy Policy in S. 2776, the General Accounting Office access to records authority is not set forth.

S. 2782 also requires the Secretary of the Interior to independently compile and maintain an inventory of mineral fuel reserves and energy resources on Federal lands, including the outer continental shelf. Also, the Secretary would be required, on request, to make onsite geologic and engineering inspections.

S. 2176, which passed the Senate in December, also would establish a Council on Energy Policy of the same sort as S. 2776 and S. 70, the Energy Policy Act of 1973, which passed the Senate some months ago. General Accounting Office responsibilities and authority would be comparable to those in S. 2776 and adequate for our needs.

CONCLUSIONS

Our conclusions are already evident, in many respects, from the foregoing discussion.

LEGISLATION

Legislation is required to establish the comprehensive data system we envision. Such legislation should:

--Require reporting of needed energy-related information.

--Provide for certification of the accuracy of reported data and establish sanctions for nonreporting or incorrect reporting.

--Provide for access to records and other supporting documentation by those collecting data so that programs of data verification can be established.

--Provide for standardization of terms and definitions to insure reporting on a consistent basis.

--Assure that needed data is available to Government agencies.

--Provide for prompt and complete public disclosure, limiting "confidential" data to the minimum.

--Provide assurance of independent reviews of energy data collection by giving the General Accounting Office access to all reported data and to the records and supporting documentation of those reporting data.

With respect to organization, we believe primary responsibility for energy data collection should preferably be located where it is independent of policy development, administrative, and analytical functions. The proposed Bureau of Energy Information in the Department of Commerce best meets this specification. So located, the collection of energy data is

less likely to be either influenced by or ignored because of overwhelming policy and administrative problems of the type confronting a Federal Energy Administration. Primary analytical responsibility could be located either in the Council on Energy Policy or in the Federal Energy Administration. Both agencies have much analytical work to do, whichever has the lead role.

Regardless of where primary or coordinating responsibility for collection and analysis of energy data is located, agencies having mission-related needs should continue to collect and analyze energy-related data where their individual needs require it and they have the capacity. However, their collection and analysis activity should be in conformity with a general plan which minimizes gaps and overlaps and conforms to general standards of priority, reliability, and timeliness.

It hardly seems necessary to say that public acceptance of the objectivity and validity of energy data is as vital as the reality of such objectivity and validity.

DEPARTMENT OF ENERGY AND NATURAL RESOURCES

We are considering energy and energy data problems in an emergency climate. However, the problems we are dealing with are long-term problems which probably will be with us for decades. The best long-term organizational approach to their solution, in our judgment, is to establish a Department of Energy and Natural Resources which would have the scope and stability to deal with complex and long-term issues. There are major short-run advantages as well to the establishment of a Department of Energy and Natural Resources if the legislation could be enacted promptly. A separate

organization in such a Department could be given responsibility for energy data collection with statutory provisions to insure its objectivity and appropriate insulation from the policy and operations of the Department.

SHORT-RUN IMPROVEMENTS

A single reference source or directory should be developed. A comprehensive inventory of existing collection efforts, periodically updated, should identify the data and its source, frequency, timeliness, and qualitatively describe its reliability. The Federal Energy Office could lead such a task, with cooperation from the Bureau of Mines and the Geological Survey.

As a final point, Mr. Chairman, I should like to emphasize that, while improved organization, the single reference directory for energy information, a study of user needs, and a comprehensive data system are necessary steps toward better energy-related policies and programs, we should not delay in taking other clearly necessary smaller steps to improve energy data collection. The urgency of our energy problems dictates that decisions be made each day on the basis of the data now available. This data can be improved day-by-day by the use of verification techniques, timely collection, and greater standardization. Such day-by-day steps also move us toward our longer-run goals.