099415 76-0166

GAO's Energy Role

Presented by Monte Canfield, Jr.
Director, Office of Special Programs
U.S. General Accounting Office

before

The Monthly Meeting of the Society of Petroleum Engineers
of the
American Institute of Mining Engineers
Washington, D.C.
March 16, 1976

DLG 699

AGC 78

Total energy consumption has more than doubled in about 20 years; per capita energy consumption increased by about 40 percent during the same period. On the other hand, domestic energy production has been growing more slowly; about 3 percent per year. Consequently, ~~we~~ the~~ve~~ is a growing gap between domestic consumption and production which has been largely made up by oil imports, particularly from the oil-rich Middle East countries.

What is the Nation going to do about this gap between domestic production and consumption? We can increase supply, reduce demand, or do some combination of both.

At the General Accounting Office we are attempting to provide the Congress with insight into the implications of these basic energy facts and the issues with which Congress must grapple in arriving at energy decisions. As you may know, GAO is an independent agency of the Government's legislative branch and has traditionally been called Congress' "watchdog" for our reviews of executive branch programs. This role has focused on assisting Congress' oversight responsibilities. Increasingly, though, we are providing Congress with critical analysis of Government options, policies, and legislative proposals.

The Office of Special Programs, of which I am Director, has broad responsibility for overall planning and direction of GAO's work in the energy, food, and materials areas. Energy, food, and materials have one thing in common. All are areas where our Nation is in transition from a long period of relative abundance to one of relative scarcity. In these circumstances, many of the policies of years past may not be adequate to deal with the problems of the 1970s and the 1980s.

In the energy area it is clear that new governmental policies are needed both to bring about conservation of energy and to encourage rational, orderly development of domestic resources. In GAO, we intend to assist the Congress in its consideration of the extent of GAO's commitment to identifying and investigating energy problems, we currently have approximately 75 energy assignments for which over 155 staff-years have been authorized. Of these assignments, 27 were initiated as a result of congressional requests--the remainder were undertaken on our own initiative.

I was asked to discuss today the GAO role relative to the production of basic energy. Our work in energy goes further, and deals not only with Federal programs for increasing energy supply, but also with those that impact on reducing demand. To give you an idea of the types of projects carried out by GAO, I would like to briefly mention just a few which relate to both supply and demand.

--First, a review of FEA's efforts to decrease the use of oil and gas in powerplants and fuel burning installations--we will examine FEA's implementation of Section 2 of the Energy Supply and Environmental Coordination Act, which authorizes FEA to require powerplants to burn coal instead of oil and gas.

--Second, a survey of Federal efforts to develop and introduce emerging alternate fuel sources with emphasis on alcohol fuels--here we will evaluate the ability of the Federal sector to respond to the increasing need for analysis, development, and promotion of emerging alternate fuel sources.

--Third, a review of effectiveness of Federal voluntary energy conservation programs--we will seek to determine (1) whether voluntary energy conservation programs are working, (2) what further incentives or requirements are needed for the various sectors of the economy to effectively conserve energy, and (3) what the Federal role should be in establishing energy conservation policies and priorities.

--Fourth, reviews of Interior's Outer Continental Shelf leasing program--last spring we reported on the implications of Interior's accelerated OCS leasing program, and subsequently, on the processes by which decisions are made, where on the OCS to lease and at what dollar value.

--Fifth, a report to be issued shortly examining Interior's coal leasing program in light of the President's declaration to double the Nation's annual coal output by 1985.

We are giving special attention to the question of increasing energy supplies, particularly since our future energy demand has received so much attention during the past several years. Many studies show that if we continue increasing our energy demand at 3 or 4 percent per year our energy supplies must more than double by the year 2000. We feel compelled to ask, "Can we get there from here?"

Our efforts to address this question began with a review of the Liquid Metal Fast Breeder Reactor, its promises and uncertainties. We noted that the breeder reactor future is uncertain, it is only an R&D effort now and that the Nation need not commit itself to this energy source for 7 to 10 years.

The study we completed in January on the implications of natural gas deregulation is our second effort in this area. I would like to discuss this evaluation in detail. A third study in the series will examine trends in coal leasing, production, marketing, and the future of coal in our energy supply picture.

IMPLICATIONS OF DEREGULATING THE PRICE OF NATURAL GAS

Last August, the Chairman of the House Government Operations Committee requested a study to assess: (1) the social, economic, and environmental consequences that would result this winter from natural gas curtailments, and (2) the natural resource, economic, environmental, and social impacts that would result if the price of interstate natural gas was deregulated. The report on the first part was issued in October, while the second part was issued in conjunction with our testimony before the Subcommittee on Energy and Power of the House Interstate and Foreign Commerce Committee on January 14, 1976.

Energy Effects

We found a consensus of opinion concerning the amount of annual additions to natural gas reserves necessary to maintain a particular level of natural gas production. Using this consensus, GAO developed three supply cases.

--The low supply case assumes continued regulation with pricing patterns similar to that occuring in recent years.

--The medium case assumes deregulation and new gas finds equal to the best 10-year period previously experienced in the history of

--The high case assumes deregulation and new finds larger than ever previously experienced.

GAO concluded that, while its high case seems to place an upper limit on likely gas supplies under deregulation, it is probably unrealistic.

We believe that our medium case is optimistic, but attainable. The medium case results in increased natural gas supplies in 1985 of 1.5 tcf (about 9 percent) over projected supply under the low case which assumes continued regulation.

However, when compared to natural gas supplies in 1975, the medium case results in a 13 percent decline in supply by 1985 as compared to a 20 percent decline under the low case (continued regulation).

Since the projected decline in natural gas supplies is likely to be replaced by increased amounts of imported oil, an additional 1.5 tcf of natural gas each year could reduce oil imports by 750,000 barrels per day.

Economic and Social Effects

Using the Wharton economic simulation model, we compared continued regulation with deregulation if the average deregulation price reached $2.10 (city-gate) in 1980 or 1985. In all cases, Gross National Product, the rate of inflation, and the rate of unemployment are virtually the same indicating that deregulation is not likely to have discernible consequences for the Nation's economy.

Consumer Effects

We estimated that under deregulation additional costs to consumers of natural gas would peak at $13 billion in 1980, decreasing to $4.2 billion in 1985. The cumulative additional costs of deregulation under GAO assumptions for the 10 years ending in 1985 are estimated at $75 billion, or an increase of 22 percent over the costs with continued regulation.

Under our assumptions, costs to consumers under continued regulation would continue to increase because of price rises within the regulatory framework and because consumers who could no longer buy natural gas would purchase substitute fuels at higher prices.

Industry Effects

Additional industrial fuel costs resulting from deregulation of natural gas or the use of alternative fuels should not be significant, since total expenditures by industry for natural gas in 1974 represented less than 1 percent of the monetary value of industrial output.

Some industries, however, could be severely impacted. They include:

- --industries for which natural gas costs represent a significant portion of their selling price (such as the cement industry)

- --industries which depend upon natural gas for its unique material or quality heating value rather than for its energy value and for which there is no practical substitute (such as the fertilizer, plastics, certain textile and baking industries).

Because FPC regulations give priority to residential customers in times of shortages, most interstate residential customers would continue to receive supplies under continued regulation. Therefore, the primary impact of deregulation on those residential consumers would be in increased prices. However, prices also would continue to increase under regulation, but more slowly.

Conclusions

Even with deregulation, we concluded that natural gas production is likely to continue its decline. Deregulation could, however, slow, and possibly arrest the rate of decline. Without it, production would decline even more steeply. In summary, it is not likely that the Nation will ever again achieve production in the amounts currently being experienced.

Even with continued regulation the price of natural gas will increase, but with deregulation the increase would be more rapid. The additional supplies of gas likely to result from deregulation must be weighed against the additional costs to consumers. The undesirable implications of continuing a regulatory framework which creates separate interstate and intrastate markets also must be considered.

Deregulation must be carefully weighed against other alternatives which include continuing regulation, but at higher prices, and bringing intrastate supplies under Federal regulation. The implications of deregulating natural gas and allowing it to rise to the equivalent price of imported oil--which is not established in a free and competitive market--also must be carefully considered.

In the final analysis, deregulation requires a political judgment based on a careful weighing of the trade-offs involved in alternative courses of action.

THE ENERGY POLICY AND CONSERVATION ACT

Last December, two years after the OPEC oil embargo, the Congress finally passed, and the President approved a "comprehensive energy bill." Public Law 94-163, the Energy Policy and Conservation Act, will do a number of things, among them, establish a strategic petroleum reserve, set a ceiling price for domestic crude oil. and mandate auto efficiency standards. Some feel the law is a step in the right direction. Others, because of the crude oil price rollback, feel it is a step backward. Regardless of whether you feel that the overall act is positive, negative or merely harmless, it has a significant impact on our work at the FEA and confers upon GAO a significant new responsibility.

The Act substantially increases FEA's responsibilities. Among other things, the Act authorizes FEA to:

- --expand programs to convert powerplants from oil and gas to coal
- --develop a strategic petroleum reserve of 1 billion barrels of oil
- --develop standby plans for rationing and mandatory conservation
- --administer a program of grants to States to promote therein conservation programs
- --establish industrial energy conservation programs

--prescribe standards for U.S. petroleum companies necessary for U.S. participation in the International Energy Program

--develop standby mandatory allocations for asphalt

--prescribe energy efficiency standards for consumer appliances.

We are currently required by Section 12 of the Federal Energy Administration Act (15 U.S.C. 771) to monitor and evaluate the operations of FEA. With the expanded FEA programs under the new Act, this will have a significant impact on our work.

Regarding the Act's direct impact on GAO, Section 501 states that GAO may use its authority to inspect the books and records of private persons and companies. GAO's traditional role has been to evaluate and report to the Congress on how effectively Federal agencies are administering their programs. For example, in the case of FEA's recent study of U.S. oil and gas reserves, we could examine FEA's procedures and methodology for conducting the study and conclude that they did a good or bad job. We did not have the authority, however, to go to the oil producer's records and determine if the producer over or under-reported his reserves to FEA.

Title V grants GAO very broad authority to, in effect, determine the accuracy of (1) any piece of energy information submitted by a company to the Federal Government, and (2) any piece of energy information which a Federal agency might obtain from public sources for use in carrying out its official functions.

Specifically, GAO may use its authority to inspect the books and records of private persons and companies under the following conditions:

1. A company is legally required to submit energy information to FEA, FPC, or Interior;
2. A company is engaged in the energy business (other than at the retail level) and
   a. furnishes energy information directly or indirectly to any Federal agency (excluding IRS), and
   b. GAO determines that the Federal agency uses this information carrying out its official functions
3. The energy information is any financial information pertaining to a vertically integrated petroleum company.

Although GAO has the authority to carry out these verification examinations on its own initiative, we are required to conduct such verification examinations if requested to do so by a congressional committee having jurisdiction over energy matters or any laws administered by FEA, FPC, or Interior.

We are anticipating that our new authority will generate a substantial number of requests from congressional committees since we have identified roughly 33 committees and 86 subcommittees having some jurisdiction over energy matters.

Much of the debate in Congress over energy issues since the OPEC embargo has had at its roots a basic distrust of the motives and operations of the big multi-national oil companies. The oil companies have not always helped their own cause by hiding behind the shield of proprietary information when questioned by members of Congress during hearings.

We expect GAO to be called up to provide "answers" to the many question marks punctuating current congressional energy debates.

As long as the Federal Government continues to control oil and gas prices and the energy industry continues to oppose these controls, the Congress will continually be raising questions concerning oil and gas prices.

Such questions as might be asked of GAO are:

--Are companies failing to develop reserves or shutting-in reserves in anticipation of higher prices?

--Are companies accurately reporting oil production to FEA?

--Are price increases allowed by FEA and FPC justified on the basis of actual costs incurred by the energy companies?

--Are the acquisition costs of imported oil being accurately reported to FEA?

--Are current prices leading to industry "windfall" profits?

While industry argues for higher prices to spur additional oil and gas production, others argue that the U.S. is running out of resources and higher prices will not yield additional production. GAO may be requested by Congress to evaluate heretofore confidential company information to determine the adequacy of U.S. oil and gas reserves the industry's ability to convert resources into reserves.

There is a growing segment of Congress in favor of breaking up the big oil companies. GAO could be called on to determine how much money the oil companies make on their integrated operations, such as production, refining, distribution, and marketing.

These are just a few of the issues that we foresee ourselves getting involved in with our new authority. With this new authority and a continuation of our ongoing efforts, we in GAO are hopeful that we can provide information to the Congress and the executive branch which will assist them in choosing the best options available for the Nations' energy future.