UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

FOR RELEASE ON DELIVERY
EXPECTED 2 P.M. EST
THURSDAY, JANUARY 15, 1976

STATEMENT OF
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ON THE IMPLICATIONS OF DEREGULATING
THE PRICE OF NATURAL GAS
BEFORE THE SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE
HOUSE OF REPRESENTATIVES

Mr. Chairman and Members of the Subcommittee:

The General Accounting Office has recently completed a study, initiated at the request of the Chairman, House Committee on Government Operations, on the implications of deregulating the price of natural gas. We welcome the opportunity to discuss the results of our work with this Subcommittee.

Our study explores the energy supply, economic, social, and environmental implications of deregulation from 1975 to 1985.

Before outlining the results of our analysis, I want to point out that most of the effects we describe as occurring under deregulation could also occur under continued regulation if interstate prices were allowed to rise to intrastate market levels. I emphasize this because under present circumstances the crucial variable is price, not the system through which the price is derived.

ENERGY SUPPLY IMPLICATIONS

A key question is: "How much more natural gas can we expect with deregulation?"

First of all, our analysis indicates that the supply of natural gas is constrained by factors other than price. Thus the answer to the key question of domestic natural gas supply depends upon interrelated assumptions regarding such factors as the price response to deregulation, the additional exploration generated by higher prices, the amount of undiscovered resources, and the rates at which new supplies are found. Each of these is the subject of great debate. Despite the differing judgments on these factors, however, there is a reasonable consensus in both Government and industry regarding reserve additions required to achieve a particular level of production. Moreover, the amount and composition of additions to reserves over the last 30 years indicate the reasonably expected limits of possible future levels of additions to reserves. These limits and the consensus regarding reserves required to attain a given level of production provide the basis for our energy supply estimates.

Higher gas prices--with or without deregulation--would have their major impact on supplies in the adjacent 48 states. They would have little or no positive impact upon Alaskan or imported natural gas, and they could have a negative impact on synthetic gas since increased supplies resulting from higher prices could lessen somewhat the incentive to develop this high cost source of supply.

We have developed three natural gas supply cases using adjacent 48 states supplies as the principal variable.

--Our low supply case assumes continued regulation with pricing patterns similar to those in recent years. Reserve additions in the adjacent 48 states would average 10 trillion cubic feet (tcf) per year from 1975 to 1985, about the same as the past 5 years. By 1985 total annual natural gas supply, including Alaskan, imported and synthetic gas, would have declined from the 1975 level of 21.4 tcf to 17.2 tcf.

--The medium case assumes deregulation and new gas discoveries equal to the best 10-year period experienced since 1945 (the mid-1950s to the mid-1960s). Reserve additions in the adjacent 48 states average about 12 tcf per year. On this basis natural gas supplies in 1985 would be 18.7 tcf, compared to the 1974 level of 21.4 tcf.

--The high case assumes deregulation and sustained new discoveries larger than ever previously experienced. Reserve additions average about 18 tcf per year with natural gas supplies in 1985 projected to be 21.4 tcf--about the same as 1975. If past performance is an indicator, additions to reserves of this magnitude imply discovery of at least 4 or 5 large gas fields with reserves on the order of 10 tcf each. Only one gas field of this size has been discovered in the adjacent 48 states since 1945. While serving to place an upper limit on likely gas supplies under deregulation, the high case is probably unrealistic.

The medium case is optimistic, but possible. It results in increased natural gas supplies in 1985 of 1.5 tcf or about 9 percent over projected supply under the low case which assumes continued regulation. 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.

Since the projected decline in natural gas supplies is likely to be replaced by increased amounts of imported oil, the additional 1.5 tcf of natural gas each year projected under our medium case could reduce oil imports by 750,000 barrels per day. Assuming a cost of $12 per barrel for imported oil, such an increased supply would have a positive balance of payments effect of about $3 billion per year.

ECONOMIC AND SOCIAL EFFECTS

The economic and social effects of deregulation are intertwined. From a national economic viewpoint there is concern over the effect of higher natural gas prices on the Nation's recovery from a deep recession. There are also economic and social concerns regarding the effect of deregulation on:

--distribution of natural gas supplies between intrastate and interstate natural gas markets,

--aggregate consumers costs, and

--industrial and residential consumers.

National effects

Using the Wharton economic simulation model, we computed national economic projections for our natural gas supply cases.

We assumed that under deregulation the price of all natural gas (in constant 1975 dollars) would rise by 1980 or 1985 to $1.75 per 1,000 cubic feet (Mcf) at the wellhead, plus $.35 in pipeline transportation costs--a total at the city-gate of $2.10 per Mcf or the British Thermal Unit (Btu)-equivalent price of $12 per barrel oil. Under continued regulation we assumed that the average price of regulated interstate gas would increase at a rate of $.05 per Mcf per year from an average of $.35 in 1975.

Simulations were run comparing continued regulation with deregulation if the average deregulation price reached $2.10 (city-gate) in 1980 or 1985. These simulations show that in all cases Gross National Product (GNP), the rate of inflation, and the rate of unemployment would not be significantly different. This would indicate that, while regional and sectoral effects could be significant, in the aggregate, deregulation would not have significant consequences for the Nation's economy.

Apart from possible inadequacies of currently available models to measure factors of this relative magnitude such findings may be explained by two facts. First, the market value of natural gas currently is only about $20 billion in an economy with a GNP of $1.3 trillion. Second, under our assumptions the maximum additional cost of deregulation in any one year would be $13 billion in 1980.

Interstate and intrastate gas supplies

Under our current regulatory framework, the interstate and intrastate markets for natural gas are separate and distinct. New interstate natural gas is now priced at 52 cents per Mcf at the wellhead while new intrastate gas sells, on the average for about $1.17 per Mcf--some recent contracts have exceeded $2.00.

A comparison of reserve additions dedicated to the two markets clearly indicates the incentives created by the price difference in recent years. From 1964 to 1969, when prices in both markets were comparable, two-thirds of the additions to reserves in the adjacent 48 states were dedicated to the interstate market and one-third to the intrastate market. For 1970 to 1973, however, 92 percent of reserve additions in the adjacent 48 states were dedicated to the intrastate market.

Assuming a continuation of this trend we estimate that without deregulation the interstate market would bear almost all the natural gas shortfall in the coming years. Under continued regulation interstate pipeline supplies would decline to 7.7 tcf by 1985--down from 11.1 tcf in 1975 which is a decrease of over 30 percent. Intrastate supplies meanwhile would decline by less than 10 percent.

With deregulation and the elimination of the price differential between the two markets, we estimate that shortfalls in natural gas supplies would be shared equally by both markets. Using our medium case interstate supplies by 1985 would decline to 9.5 tcf--down

13 percent from the 1975 level. Intrastate supplies would decline to 9.2 tcf--also down 13 percent.

Consumer effects

Using our supply and price assumptions, we compared the effects on consumers of continued regulation and deregulation phased through 1980. This would be a more rapid increase then might actually occur since natural gas is usually sold under long-term contracts. Should the average price take longer to reach comparability with oil, the effect of deregulation would, of course, be less noticeable. Since consumer conservation would reduce the net increased cost of energy, our estimates serve to identify the probable upper range of consumer costs due to increased wellhead prices of natural gas.

We estimate that under deregulation the maximum additional costs to consumers of natural gas, in constant 1975 dollars, would peak at $13 billion in 1980, decreasing to $4 billion in 1985. The cumulative additional costs of deregulation under our assumptions for the 10 years ending in 1985 is estimated at $75 billion, or an increase of 22 percent over the estimated cumulative city-gate 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 the decreasing percentage of low priced gas from the adjacent 48 states, and because consumers who could no longer buy natural gas would purchase substitute fuels at higher prices.

Ideally, additional revenues to producers resulting from deregulation should be invested in additional exploration and development of natural gas or in development of other substitute energy sources. If such investments were not forthcoming, there might be need for specific incentives or requirements regarding reinvestment of additional revenues resulting from deregulation.

Industrial and residential effects

Many industries which now use natural gas will be subject to higher fuel costs whether deregulation occurs or not.

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

Some industries, however, could be severely affected. They include

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

--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).

Under continued regulation, gas dependent industries, particularly those who use gas as a material or quality heat source, will have an incentive to locate in gas producing areas.

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 a more rapid increase in prices than under continued regulation.

We estimate that deregulation would increase costs to residential consumers nationwide by 40 percent in 1980 and 10 percent in 1985 over what they would be with continued regulation. Under our assumptions residential costs under deregulation, in constant 1975 dollars, would increase from an average of $1.50 per Mcf in 1975 to $2.77 by 1980 and 1985. Under continued regulation costs would increase to $2.04 by 1980 and $2.52 by 1985.

ENVIRONMENTAL EFFECTS

The environmental effects of natural gas deregulation requires analysis of the trade-offs between decreasing the importation of oil and increasing the production of natural gas.

Gas production can have environmental effects from accidents such as explosions and also from oil pollution to the extent that the gas is found in association with oil. This latter aspect is more severe offshore.

The environmental problems involved in producing and transporting natural gas seem about equal with the environmental consequences of oil imports.

However, natural gas is a clean-burning fuel, it has clear advantages in the consumption stage. Any increased supplies under deregulation would therefore have an overall beneficial impact on the environment.

CONCLUSIONS

The general conclusions drawn from our work are:

1. With continued low prices natural gas supplies should decline about 20 percent by 1985.
2. Even with deregulation, natural gas supplies are likely to continue to decline although more slowly--about 13 percent by 1985.
3. In either event, the Nation is unlikely to ever again achieve the production levels of the recent past.
4. The Nation's natural gas bill will increase even with regulation. With deregulation the increase would be more rapid, but by 1985 the differences would be quite small.
5. Continued regulation at low prices will put a disproportionate share of the natural gas shortfall on the interstate market.
6. Reaching a decision regarding deregulation requires weighing a set of interrelated trade-offs including:
   - --the additional supplies of gas likely to result from deregulation,
   - --the additional costs to consumers,
   - --the economic and social costs of continuing a regulatory framework, including the fostering of separate interstate and intrastate markets,

--alternatives such as regulation at higher prices and bringing intrastate supplies under Federal regulation.

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This concludes my statement, Mr. Chairman; I will be happy to answer any questions concerning our study.