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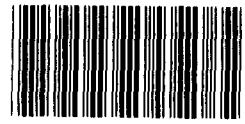

STATEMENT OF
JAMES DUFFUS III, SENIOR GROUP DIRECTOR
RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION
BEFORE THE
HOUSE SUBCOMMITTEE ON COMMERCE, CONSUMER AND MONETARY AFFAIRS
COMMITTEE ON GOVERNMENT OPERATIONS
IN DETROIT, MICHIGAN
ON
NATURAL GAS PRICES

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss natural gas prices. Recent price increases have been a matter of great concern to both the public and the Congress, here and throughout the Nation.

Our testimony today is based on our completed and current efforts to analyze developments in the natural gas market and to evaluate the effectiveness of Federal regulation of the natural gas industry.[1]/ In recent months we have focused primarily on price increases. Among our current efforts is a series of "case studies" of why natural gas prices have increased in five cities around the country. Detroit is one of these five cities, in response to requests from Congressman John Conyers, Jr., and Senator Carl Levin.

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[1]/Recently issued reports include the following: "Natural Gas Price Increases: A Preliminary Analysis," GAO/RCED-83-76, Dec. 9, 1982; "Information on Contracts Between Natural Gas Producers and Pipeline Companies," GAO/RCED-83-5, Feb. 22, 1983; and "State and Local Responses to Natural Gas Price Increases," GAO/RCED-83-142, Apr. 25, 1983.

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Because our work in Detroit is still under way, we have not yet reached overall conclusions about the factors which have accounted for price increases here. However, where appropriate, we have included information on Detroit in this statement.

We refer to data from various public and private organizations. We did not attempt to independently verify the data. Also, all dollar amounts in this statement are in current terms--not adjusted for inflation.

We would like to structure our testimony around four issues:

--the extent of increases in natural gas prices, both nationally and in Detroit;

--the distribution of gross revenues from end-user sales to the various segments of the natural gas industry;

--reasons for price increases; and

--recent consumption patterns, nationally and in Detroit.

Before proceeding further, it may be useful to describe briefly the structure and regulation of the natural gas industry, focusing, where appropriate, on Detroit.

Natural gas accounts for somewhat over 25 percent of the Nation's energy supply. Overall, about 95 percent of this gas is produced domestically, but imports from Canada, Mexico, and Algeria are concentrated in selected locales, including Detroit.

Gas is used thoughout the economy. Nationwide, industry accounted for about 36 percent of all gas use in 1982, more than any other sector. Residences accounted for about 29 percent. The others are electric utilities (20 percent); commercial establishments (14 percent); and miscellaneous uses (1 percent).

In Detroit, the pattern of gas use is somewhat different. Residences consumed 52 percent of the gas sold in 1982, commercial establishments accounted for 24 percent, and industrial establishments accounted for 24 percent. Other gas users (including electric utilities) accounted for a negligible percentage.

The natural gas industry is comprised of three sectors--production, transmission, and distribution--which are physically interconnected by a network of pipelines and mains throughout the Nation. Companies in the various sectors may also be related through corporate affiliations.

Producers include thousands of small, medium, and large firms which explore for, drill for, and produce gas. All domestic production is subject to Federal regulation. Texas, Louisiana, Oklahoma, New Mexico, and Kansas--in descending order--account for about 88 percent of production. Gas produced in Michigan is less than 1 percent of total domestic production.

Producers sell most of their gas to transmission, or pipeline, companies. Producers also sell some gas directly to distributors or end-users. Pipeline companies transport gas from the producing areas to consuming areas. There are 139 interstate pipeline companies which are regulated by the Federal Energy Regulatory Commission. Included among these are the companies that serve Detroit: Great Lakes Gas Transmission Company, Panhandle Eastern Pipe Line Company, Michigan Wisconsin Pipe Line Company, and Trunkline Gas Company. Intrastate pipeline companies in the producing States are generally subject to State regulation. Finally, there are almost

1,600 distribution companies throughout the Nation. They are usually local public utilities, serving a specific market area and under the jurisdiction of State or local regulatory bodies. The two distribution companies serving the Detroit area, and most of the rest of the State, are Michigan Consolidated, and Consumers Power. These two companies are regulated by the Michigan Public Service Commission.

THE EXTENT OF PRICE INCREASES

Although the magnitude of recent price increases has attracted widespread attention, natural gas prices have been rising for many years. Originally, natural gas was largely a by-product of petroleum extraction, and three decades ago gas sold for less than ten cents per thousand cubic feet (mcf) at the wellhead. The comparable price in November 1982 was $2.56 per mcf.

On a national basis, end-user prices vary widely--both from one type of customer to another and from one city to another. According to the Department of Energy's Energy Information Administration, the national average end-user price increased from $0.84 per mcf in 1974 to $3.39 per mcf in 1981, representing a compounded growth of 22 percent per year. In 1981, residential users paid $4.29 per mcf, the highest average price, while industrial users paid an average of $3.14 and electric utility users paid an average of $2.89. However, residential users experienced a lower rate of increase between 1974 and 1981 (about 17 percent) than did industrial users (24 percent) and electric utilities (28 percent).

Data from the Bureau of Labor Statistics provide more detail on residential prices. These data show considerable variation from city to city. (A table listing rates for 26 major cities for March 1979 and March 1983 is shown in an attachment to this statement.)

The U.S. city average increased from $1.02 per mcf in March 1973 to $6.19 per mcf in March 1983. For Detroit, the rates were $1.07 per mcf in March 1973 and $5.43 per mcf in March 1983. The Detroit prices increased by a 18 percent compounded annual growth rate while the U.S. prices increased at a 19 percent compounded annual rate.

In checking with local distribution companies we have learned that Detroit area gas prices rose by another 10 to 20 percent in April due principally to increased costs of gas.

DISTRIBUTION OF GROSS REVENUES

Prices paid by end-users flow back as gross revenues to distributors, pipelines, and producers. We do not have definitive information on how much each sector retains--either for the Nation as a whole or for Detroit. We hope to obtain that information in the course of our ongoing case studies in Detroit and elsewhere.

Nevertheless, we can relate the results of two national analyses. One of these was performed by the American Gas Association (a trade group).[2]/ The other was performed by staff of the Federal

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[2]American Gas Association, Gas Facts 1981, p. 124.

Energy Regulatory Commission.[3]/ The two studies differ somewhat in their methods and results, but they suggest similar overall conclusions about the distribution of end-user prices. The studies show that the gross revenues received per unit of sales increased between 1971 and 1981 for all three sectors. But the rates of increase differed so much that there were notable shifts in the distribution of the total revenues. Principal points of agreement in the two studies were that:

--The distributors' share of gas revenues was reduced by more than one-half, and represented 15 to 21 percent of the total in 1981.

--The pipelines' share was reduced by a smaller proportion, and represented 21 to 25 percent of the total in 1981.

--The share for producers (both domestic and imported) approximately doubled, reaching 53 to 64 percent of the total in 1981.

We caution that these studies deal with gross revenues, and not net revenues or profits.

REASONS FOR PRICE INCREASES

Recent price increases have been attributed to a wide range of reasons. In our December 1982 report, cited above, we identified a number of factors which could contribute, in some measure, to price increases in various localities. We did not attempt to determine which factors are most important in any specific locality. We are

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[3]/Memorandum dated Mar. 8, 1983, from staff to the Director, Office of Regulatory Analysis, Federal Energy Regulatory Commission, on the subject of "Pipeline Cost Increases."

trying to do so in our ongoing "case studies" which I referred to earlier. Because we addressed these reasons in detail in the report cited and because of time constraints for today's hearing, we will summarize some of the reasons that may be of particular relevance in Detroit. We will first discuss how gas is priced to pipelines and then how gas is priced to distributors and end-users.

Prices to pipelines

Pipeline purchases of natural gas from producers are governed by the Natural Gas Policy Act of 1978. That act essentially established eight major price categories for first purchasers of natural gas. Prices paid by pipelines depend on both the quantity of domestic gas in each category and the price of gas in each category, as well as the quantity and price of imported gas. Several factors affect the quantities and prices. One of these is the regular increases in ceiling prices for the various categories. For example, the ceiling price for new natural gas increased from about $2.12 per mcf in December 1978 to about $3.34 mcf in December 1982.

Another reason for price increases is the establishment of incentive prices for high-cost gas, as provided by the act. According to the most recent published Energy Information Administration data for major pipelines' projected purchases, high-cost gas accounted for about 6 percent of wellhead purchases nationally. For the pipelines serving Detroit, such gas totaled about 1 percent for Panhandle Eastern, 8 percent for Trunkline, and 9 percent for Michigan-Wisconsin. (Great Lakes buys only imported gas.)

A third reason is the depletion of old gas reserves. To maintain a stable gas supply, the continuing depletion of existing gas reserves must be balanced by the addition of new discoveries. This depletion is important because the old gas usually sells for considerably less than the new gas.

A fourth reason relates to clauses in producer-pipeline contracts. Many contracts obligate the pipeline to pay for a set amount of gas even if the pipeline does not have a ready market. These so-called "take-or-pay" clauses can induce pipelines to pass up less expensive gas and accept more expensive gas; this can cause average gas prices to increase.

Finally, imported gas can be a key factor in some areas. The price of Canadian gas, which accounts for most imports, increased from about $2.19 per mcf in 1978 to nearly $5.00 per mcf until very recently, when the price was reduced to about $4.40 per mcf. The introduction of Algerian liquefied natural gas by Panhandle Eastern, at a price of over $7.00 per mcf when landed in Louisiana, has aroused widespread concern in the midwest. Detroit receives both Canadian gas (from Great Lakes) and Algerian gas (from Panhandle Eastern).

Prices to distributors and end-users

Prices paid by distributors depend on the prices paid by the pipeline suppliers, plus pipeline operating expenses, recovery of investments, and rates of return. Prices paid by end-users depend on the prices paid by their distributors, the distributors' expenses, and the way these costs are allocated to residential, industrial, and other classes of users. Reduced consumption by end-users can result in pipeline and distribution company facilities

being underutilized. When this happens, the fixed expenses of these companies are spread over a smaller volume of natural gas sales, resulting in a higher price per unit.

CONSUMPTION PATTERNS

Overall natural gas consumption varies from year to year. Total gas consumption in 1982 amounted to 17.9 trillion cubic feet, compared to 19.4 trillion cubic feet in 1981 and 19.9 trillion cubic feet in 1980.

Changes have occurred in natural gas consumption among the end-use sectors. Residential use of gas increased 3 percent from 1981 to 1982, and commercial use fell 1 percent. Electric utility use fell 11 percent, and industrial use fell 16 percent.

In the Detroit area total consumption by end-users has dropped. In 1982 total consumption was 617.3 billion cubic feet compared to 664 billion cubic feet in 1981 and 716 billion cubic feet in 1980. This represents a declining consumption rate in excess of 7 percent annually. Industrial consumption dropped over 25 percent in the last year. Residential consumption dropped 2 percent and commercial consumption dropped 23 percent. Electric utility consumption for one Detroit area distributor alone dropped over 85 percent percent from 1981 to 1982.

There are three major factors which significantly affect changes in natural gas consumption--higher prices, the level of economic activity, and the weather. Higher prices encourage businesses and households alike to use gas more efficiently.

Industry can redesign manufacturing processes and products; households can add insulation and turn down their thermostats. An extreme reaction from industrial users in some areas (but not uncommon in Detroit) is switching from natural gas to residual fuel oil or another fuel because the price of gas exceeds the price of these alternate fuels. This switching option is practical to many industrial users, but not to residential users.

The level of economic activity also affects users. In times of economic distress, householders have less income to devote to paying heating bills, and businesses need less gas to fuel manufacturing operations.

Finally, the weather can be a significant factor. Moderate temperatures can reduce residential direct use of gas to provide heating in northern States and utilities' use of gas to generate electricity for cooling in some "sunbelt" States. However, the industrial sector's use of gas is tied largely to output levels; it is not as sensitive to the weather.

The recent heating season provides evidence of the weather sensitivity of gas consumption. According to a study by the National Ocean and Atmospheric Administration, the winter of 1982-83 was the mildest in 29 years, especially in the north central States. The agency estimated that--based on the weather alone--a residential gas customer's heating bill for December 1982 through February 1983 would have been 16 percent lower than for the same period a year earlier. However, actual bills were about 1 percent higher, primarily because of higher prices.

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Mr. Chairman, this concludes my statement. We will be pleased to respond to your questions.

ATTACHMENT

AVERAGE RESIDENTIAL PRICES OF NATURAL GAS FOR 26 MAJOR CITIES

U.S. Cities	March 1979 ($/mcf)	March 1983 ($/mcf)
Anchorage	1.73	2.41
Atlanta	3.76	7.07
Baltimore	4.15	7.40
Boston	4.78	9.03
Buffalo	3.30	7.09
Chicago	3.34	5.25
Cincinnati	2.95	6.53
Cleveland	2.83	5.82
Dallas	2.66	5.98
Denver	2.89	6.96
Detroit	3.03	5.39
Houston	3.26	5.46
Kansas City	2.38	6.21
Los Angeles	2.53	5.27
Miami	6.64	7.84
Milwaukee	3.19	6.96
Minneapolis	3.44	6.26
New York	5.84	10.32
Philadelphia	4.38	7.88
Pittsburgh	2.64	6.04
Portland	4.04	7.00
St. Louis	3.58	6.81
San Diego	2.50	5.95
San Francisco	2.07	4.24
Seattle	4.25	7.77
Washington, D.C.	4.39	8.70
U.S. City Average	3.30	6.41

NOTE: The prices shown in this table are averages which reflect differences between cities in both quantities and prices. Such data are available for all of these cities only since 1978. The prices shown in the text are the cost of 10,000 cubic feet of gas a month. Such data are available for a longer period. Hence, the prices in this table differ somewhat from the prices in the text.

Source: Bureau of Labor Statistics

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