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The Honorable Brian Donnelly  
United States House of Representatives

Dear Mr. Donnelly:

At your request we performed a cursory review of the [natural gas supply problem encountered by Massachusetts during ~~the month of~~ January 1981]. As agreed upon with your office, this letter confirms our oral report highlighting the factors which significantly contributed to and exacerbated the gas supply problem.

An unusual combination of factors caused the natural gas supply problem in Massachusetts.

- The State has been allowing local distribution companies to expand markets,
- Unanticipated severe weather conditions--the coldest January in 100 years,
- Lack of underground natural gas storage in the New England area,
- Disruption in supplemental liquefied natural gas (LNG) supplies from Algeria, and
- Lack of transportation for delivering propane.

Local natural gas distribution companies have been allowed to expand markets over the years. Consequently, the local companies' winter peak demand requirements can and sometimes do exceed the combined maximum capacities of the two interstate pipelines serving the State. Thus, the local distribution companies have to rely heavily on supplemental supplies from other sources to meet their peak demand requirements.

The primary supplemental supplies for Massachusetts include LNG from Algeria, natural gas in storage in other parts of the country,

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and propane. Unfortunately, there were problems in delivering supplies from all three of these sources.

Because LNG plays a vital role in satisfying the State's natural gas peak demand requirements, the disruption in LNG shipments from Algeria significantly exacerbated the gas problem. This LNG is supplied to 11 local utilities including the one which serves 50 percent of the States' natural gas market. Therefore, any disruption in LNG supplies during extended periods of extremely cold weather will have an adverse impact on the State.

The lack of natural gas storage in the New England area inhibits the use of storage gas in providing relief during extended periods of severely cold weather. The New England utilities, which have underground storage in other areas of the country, are forced to rely on pipelines to deliver their storage gas on a best-efforts basis or when pipelines have excess delivery capacity. During severe weather, however, the pipelines do not have excess capacity. Consequently, the storage gas could not be delivered.

The gas problem was compounded by the lack of transportation (rail tank cars and trucks) for delivering propane after it arrives within the State. Utilities use propane to supplement gas supplies and the State uses propane in its set-aside program to relieve hardships or emergency conditions. However, due to the lack of transportation, propane could not be delivered to the State in maximum volumes. Consequently, its use was limited during the crisis.

The unanticipated severe weather was the major contributor to the crisis. A local distribution company, which serves 50 percent of the natural gas market, stated that it was prepared for a design winter or the worst winter in a 30-year period. However, as mentioned above, the State experienced its worst winter in 100 years, thus creating an unprecedented demand for natural gas.

We realize the above factors may not have been the only ones causing the natural gas problem, but they obviously were the main contributors.

The Department of Energy (DOE) collects an enormous amount of data on natural gas supplies, however, the time required for collecting and processing most of the data precludes its use for identifying potential localized spot shortages like the one that recently occurred in Massachusetts. Even though the possibility

of a recurring similar natural gas supply crisis still exists, it is unlikely that the particular set of circumstances occurring in January 1981 will occur again.

We trust that this letter will satisfy your needs. If any further information is needed or if you have any questions, please let us know.

Sincerely yours,



J. Dexter Peach  
Director

cc: Mr. McCullough  
Mr. Boland  
Mr. Elske  
Mr. Allen  
Control Desk, CC-81-98

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