

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

1056 SCOMM 28: JOINT GAS PIPELINE COMMITTEE. 1981-82

all funds for the Alaskan segment must be committed before construction commencement; and the financing must be on the same terms and conditions which apply to other investors in the project.

The fact that Sohio has agreed to commit over \$2 billion to this project is a statement of our current attitude on its importance, the appropriateness of the physical concept and its prospective economic viability. However, if world events or governmental processes or decisions change the viability of this project, we would have to reassess our participation prior to major expenditure of funds.

This project is the second largest, upfront financial commitment that Sohio has ever made, exceeded only by our initial \$4 billion commitment to the trans-Alaska oil pipeline and the Prudhoe Bay field development. During the next 5 years, while this project is under construction, Sohio's capital expenditures are anticipated to be about \$20 billion. Over 80% of these expenditures are for domestic energy-related projects and programs. Approximately \$6 billion represent expenditures to maintain the Prudhoe Bay oil production. No other single project will carry with it an upfront commitment as large as \$2.25 billion. Unlike ANGTS, other projects and programs can be accelerated or slowed down as circumstances dictate. The lack of flexibility in a commitment of this size, and other risk factors such as uncertainty of

future gas prices, gas markets, capital cost overruns, and completion delays, make it less than prudent for us to commit more than \$2.25 billion to this project. I want to emphasize that this commitment of \$2.25 billion is the upper limit of our participation.

An additional condition to Sohio's participation in this project is that initial financing arrangements for the Alaskan portion must be for at least \$30 billion. This amount, which includes a \$3 billion overrun pool, is based on definitive estimates prepared by contractors at a cost to the participants of about \$400 million. Our experience with high rates of inflation for construction on the North Slope of Alaska substantiates the need for the included contingencies and overrun pool.

As indicated above, two important elements of the waiver package are necessary to obtain our participation in the project. If we are going to provide financial support, we must have the right to be an equity owner, and the conditioning plant must be included as part of the transportation system in Alaska. Equity ownership is required because those who invest in a project are entitled to the full benefits of ownership. The conditioning plant must be included because it is necessary solely to prepare the gas for entry into the pipeline. The design basis selected for the pipeline dictates the degree of conditioning required. Alternative pipeline designs could have been selected at higher capital costs

and lower operating efficiency which would have eliminated the need for this facility. The conditioning plant is a part of the transportation system selected and should be included in the system for tariff and other purposes.

In conclusion, the equity and gas conditioning plant provisions of the waiver package are critical to our participation. Other provisions such as regulatory certainty and billing commencement are critical to the sponsors and bankers. It is not clear to us that a project of this magnitude can be financed without Federal government participation. However, it is clear that without the waiver package the project cannot go forward.

Testimony of Richard E. Rowberg

Manager, Energy Program

Office of Technology Assessment

Before the Subcommittee on Fossil and Synthetic Fuels

House Committee on Energy and Commerce

And the Subcommittee on Energy and Environment

House Committee on the Interior and Insular Affairs

November 9, 1981

Thank you for the opportunity to testify today on this issue. With me is Dr. Tom Bull, Project Director of our current study on synthetic fuels. The rapidly increasing costs for the proposed Alaskan Natural Gas Transportation System (ANGTS) have renewed interest in alternate ways of delivering the Alaskan natural gas energy to the lower-48 states. The Office of Technology Assessment has recently carried out a brief analysis of two such alternatives. This testimony is an extension of a brief paper we completed in July 1981 describing the first phase of that analysis. In my testimony I will discuss the alternative of using the natural gas to produce ammonia or fuel grade methanol and transporting either of these chemicals to the lower-48 states by way of the existing Alaskan oil pipeline-tanker system.

Description of Alternatives

Both methanol and ammonia are logical choices to consider in a study of alternatives to ANGTS since they are by far the major chemicals currently being produced from domestic natural gas. Further, the conversion technology is well established and they are liquids which conceivably could be transported by an oil pipeline. Ammonia and methanol consumed about 2.6% of

STATEMENT OF
JOHN H. CROOM,
EXECUTIVE VICE PRESIDENT,
THE COLUMBIA GAS SYSTEM, INC.
BEFORE THE
UNITED STATES SENATE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
ON
THE PROPOSED WAIVER OF LAW
SUBMITTED BY THE PRESIDENT
PURSUANT TO THE
ALASKA NATURAL GAS TRANSPORTATION ACT

October 23, 1981

The Columbia Gas System, Inc.
20 Montchanin Road
Wilmington, Delaware 19807
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Mr. Chairman and Members of the Committee:

My name is John H. Croom. I am Executive Vice President of The Columbia Gas System, Inc. and President of Columbia Alaskan Gas Transmission Corporation, a wholly-owned subsidiary of The Columbia Gas System, Inc. and one of the sponsoring companies of the Alaskan gas pipeline project. I am here today to urge that you approve the Waiver of Law submitted by the President on October 15, 1981.

The Columbia Gas System is one of the largest integrated natural gas companies in the United States and last year delivered 1.2 trillion cubic feet or approximately six percent of the gas consumed in this country. Columbia supplies directly through its retail operations, or indirectly through sales to other utilities, the gas requirements of over four million customers in an area having a population of approximately eighteen million people. Columbia's customers are located in the states of Ohio, Pennsylvania, West Virginia, Maryland, Kentucky, Virginia, New York and New Jersey, and the District of Columbia.

The Need for the Proposed Waiver of Law

Columbia supports the Alaska Natural Gas Transportation System and the proposed Waiver because:

- the project is essential to the nation's as well as to our service area's long-term gas supply.

- the Prudhoe Bay gas represents 13 percent of the Nation's proven gas reserves. The building of the Alaskan pipeline can be expected to stimulate further development on the North Slope and increase these reserves significantly.
- while the delivered price will be relatively high in the early years, it will substantially decline in later years as the large rate base becomes depreciated. On the average, it will be below the price of imported oil.
- if the Waiver is approved, the Federal Energy Regulatory Commission will still have to implement it and the banks will still have to agree to finance the project. But without Congressional approval, the transportation system cannot be privately financed.

Columbia's Need for the Alaskan Gas

In the late 1960's Columbia recognized the need to look beyond its traditional sources of gas to assure an adequate supply for its customers. Included in studies of these nonhistoric sources were liquefied natural gas from overseas, deep domestic gas, synthetic natural gas from heavier hydrocarbons, gas from tight sands and Alaskan gas.

Following the discovery of the Prudhoe Bay Field in 1968, Columbia participated in studies which lead to the determination that it was technically and economically feasible to bring these reserves to the Lower 48 states.

Over the period 1971 through 1975 Columbia loaned 175 million dollars to Sohio for the rights to purchase a portion of Sohio's Prudhoe Bay gas reserves. Under the agreement with Sohio, the loan was repaid during the one-and-one-half year period after the crude oil pipeline was placed in operation. Columbia expects to obtain over 100 billion cubic feet annually which in 1987 will represent over seven percent of its gas supply.

The importance of the Alaskan gas to Columbia's customers cannot be overstated. The latest 10 year demand-supply projections, detailed in the attachment, indicate that Columbia must make a strenuous effort to replace declining volumes of committed gas supplies. Even with the inclusion of natural gas from Alaska, appreciable volumes must be sought and secured from reserves yet to be found and developed in such areas as the Rocky Mountains, Appalachian Basin, and the Gulf of Mexico.

The Marketability of the Alaskan Gas in Columbia's Market

Columbia strongly believes that the relatively certain assurance of a secure, consistent and domestic source of supply which this project promises for all of Columbia's customers outweighs any conjectural load loss due to possible temporary price increases. The magnitude of any price increase and resultant load loss is expected to be minimal on Columbia's system. Assuming continuation of the Natural Gas Policy Act, the expected delivered cost of Alaskan gas averaged with other committed lower-priced

volumes will result in a net gas cost to Columbia's residential, commercial and industrial customers below that of distillate oil, the principal alternate fuel for most of Columbia's high priority industrial loads. We expect the industrial customers will continue to use lower priced natural gas for some time, thus providing price and supply stability for all of Columbia's customers. Furthermore, the delivered cost of Alaskan gas declines over the life of the project. In real dollars, its cost will fall significantly below that of distillate oil after the first few years of the operation of the pipeline.

Conclusion

In addition to supplying long-term natural gas supplies at competitive prices, the Alaskan pipeline project will contribute to the economic and security interests of all of the Nation's consumers. Your approval of the President's Proposed Waiver of Law is an essential step toward this objective.

COLUMBIA GAS SYSTEM
DEMAND-SUPPLY PROJECTIONS
(Billions of Cubic Feet)

<u>Year*</u>	<u>Demand</u>	<u>Supply**</u>	<u>Alaskan Gas</u>	<u>Supply Deficiency</u>
1982	1,327	1,493		(166)
1983	1,364	1,509		(145)
1984	1,378	1,465		(87)
1985	1,409	1,313		96
1986	1,420	1,212		208
1987	1,432	1,127	104	201
1988	1,449	1,053	104	292
1989	1,468	999	104	365
1990	1,492	958	104	430

* Demand-supply years are from November 1 of the preceding year to October 31 of the year shown.

** Anticipated supply from identifiable sources.

Prepared Statement

Of

JOHN A. SPROUL

Executive Vice President
Pacific Gas and Electric Company

Chairman of the Board and Chief Executive Officer
Pacific Gas Transmission Company

Chairman of the Board
Alaska Energy Company

Before The

Senate Committee on Energy and Natural Resources

Washington, D.C.

October 23, 1981

I appreciate the opportunity to appear before this Committee on behalf of Pacific Gas and Electric Company (PGandE), its subsidiary Calaska Energy Company (Calaska), and its other affiliates participating in the Alaska Natural Gas Transportation System (ANGTS), to express our support for the President's proposed waiver of law under Section 8(g) of the Alaska Natural Gas Transportation Act of 1976 (ANGTA).

PGandE is a combined gas and electric utility, serving a population of more than 9 million people in northern and central California. Since 1972, PGandE and its affiliates have been working actively to create a direct pipeline system from Alaska, through Canada, to bring gas from Prudhoe Bay to California and the other lower-48 states. Our substantial and continuing commitment to the ANGTS reflects our view that its successful completion is essential to our ability over the long term to continue supplying our customers with reasonably priced and reliable gas supplies.

In my remarks, I wish to describe more fully the nature of our participation in the ANGTS, the importance of the project to PGandE's gas supply future, and the reasons why we believe Congressional approval of the proposed waiver of law to be vital to the timely and successful completion of the project, and to continued cooperation with Canada, which is the source of about 40% of PGandE's existing gas supply.

I. PARTICIPATION BY PGandE AND ITS AFFILIATES IN THE ANGTS

PGandE and its affiliates are participants in the Alaskan, Canadian and U.S. Western Leg segments of the ANGTS. Our involvement began in 1972, when we joined the Arctic Gas Project, which proposed construction of an overland pipeline from the Alaskan North Slope, through Canada, to the lower-48 states. After the Arctic Gas route was rejected by the Canadian and United States Governments in 1977, PGandE joined with Northwest Energy Company, the selected Alaska Highway Pipeline Project's original United States sponsor, and other gas transmission companies, including former Arctic Gas members, in sponsoring the Alaskan pipeline portion of the ANGTS. Through its subsidiary, Calaska, PGandE has been a member of Alaskan Northwest Natural Gas Transportation Company, the partnership which will build the Alaskan portion, since the partnership's formation in early 1978.

Our special contribution to the ANGTS is the construction of its western delivery leg. The U.S. Western Leg is the sole responsibility of PGandE and its 50%-owned subsidiary Pacific Gas Transmission Company (PGT), which were designated in the 1977 Decision and Report to Congress on the Alaska Natural Gas Transportation System (President's Decision) to construct, own and operate the new pipeline facilities that will assure direct delivery of Alaskan North Slope gas to markets west of the Rockies.

Direct and equal access of western consumers to the North Slope supplies was not always assured. We owe a special thanks to the many Senators and Representatives who saw to it that contemporaneous direct delivery of Alaskan gas to markets both east and west of the Rocky Mountains, and construction of the necessary new facilities, became a statutory mandate. The inclusion of that requirement in ANGTA made this project truly national in scope.

The Western Leg is a simple expansion of the existing PGT/PGandE pipeline system that has delivered Canadian natural gas to northern and central California and other western markets since 1961. The pipeline runs from the International Boundary near Kingsgate, British Columbia, to Antioch, California, in the San Francisco Bay Area. PGT owns and operates the facilities in the states of Idaho, Washington and Oregon. PGandE owns and operates the facilities within California. This 911-mile, 36-inch diameter pipeline delivers up to approximately 1 billion cubic feet per day of Alberta natural gas to PGandE. The pipeline facilities also transport for Northwest Pipeline Corporation (Northwest Pipeline) up to approximately 150 million cubic feet per day of Alberta natural gas, which is delivered by PGT at various points in Idaho, Washington and Oregon for distribution to gas consumers in the Pacific Northwest.

The Western Leg is a paralleling or "looping" of these facilities, through the installation of approximately 885 miles of additional pipe. With minor exception, the new facilities will be installed within the same right-of-way as the existing pipeline. No new compressor stations or compressor horsepower will be necessary for the volumes of North Slope gas expected to be initially available. The President's Decision left final determination of the pipe size and capacity of the ANGTS lower-48 facilities to the Secretary of Energy. As a result of decisions of the Secretary of Energy issued in 1980 and in January of this year, it now is planned that 42-inch diameter pipe will be used for the entire length of the PGT/PGandE expansion.

The Western Leg originally was proposed by PGT and PGandE in 1974, in connection with the Arctic Gas Project. However, because the PGT/PGandE proposal also was compatible with the competing and ultimately selected Alaska Highway Pipeline proposal, it was designated in the President's Decision as the project's western delivery leg. North Slope gas destined for California markets will be carried over the full length of the PGT/PGandE facilities to the San Francisco Bay Area, with gas destined for southern California delivered over southern portions of the PGandE system to Southern California Gas Company. Through interconnection with the Northwest Pipeline system, the Western Leg also will be able

to provide other western markets, in the Rocky Mountain area and the Pacific Northwest, with direct access to North Slope gas.

On October 1 of this year, the first portions of the ANGTS became operational. We are proud of the fact that this included 160 miles of the PGT Western Leg facilities, between Kingsgate, British Columbia, and Stanfield, Oregon, which were installed as part of the early construction or "prebuild" phase of the ANGTS, to deliver new Canadian gas imports to Southern California Gas Company. PGT's facilities went into service on time and within their approved cost estimate of \$176 million. This was a major, but manageable, undertaking for PGT, which financed the facilities on a corporate credit basis, and which, through this expansion, has tripled the size of its pipeline investment.

PGT and PGandE will build the remainder of the Western Leg in the same general time frame as the Alaskan portion of the project. In "as spent" dollars, we currently estimate that the 431 miles of PGT's remaining Western Leg facilities will cost approximately \$870 million, including AFUDC, and that PGandE's 294 miles of Western Leg facilities from the Oregon-California border to the San Francisco Bay Area will cost about \$590 million, including AFUDC. A corporate credit form of financing is planned by both PGandE and PGT,

with PGandE to be responsible for raising all of the capital associated with its Western Leg facilities, and for 50% of the equity investment in the remaining PGT Western Leg construction. In total, PGandE's additional Western Leg investment presently is estimated at almost \$800 million.

Finally, PGT's Canadian affiliate, Alberta Natural Gas Company Ltd (Alberta Natural), is a participant in the Canadian portion of the project. Alberta Natural is a 49% interest holder in Foothills Pipe Lines (South B.C.) Ltd., which is to construct a total of 106 miles of 36-inch diameter pipeline for the ANGTS in southeastern British Columbia, parallel to Alberta Natural's existing pipeline. Approximately one-half of these facilities were installed for the "prebuild" phase and are now in service.

II. THE IMPORTANCE OF THE ANGTS TO PGandE'S GAS SUPPLY FUTURE

Our participation in the ANGTS is key to our long-term strategy to assure a continuing, reliable and adequate supply of gas for the millions of people in northern and central California. PGandE's existing sources of gas supply are Canadian natural gas brought to California by PGT; gas, principally from the southwest, purchased from El Paso Natural Gas Company (El Paso); California-source natural gas,

and a small amount of Rocky Mountain gas produced by our gas exploration and development affiliates.

Although our natural gas requirements are projected to remain relatively stable, with moderate growth in our non-power plant requirements and a decline in fuel requirements for power plant use, our total existing supply is projected to decline significantly. Let me provide some statistics which illustrate this point:

1. Decline in El Paso supplies. In 1981, the gas supply from El Paso is projected to satisfy about 43% of PGandE's natural gas requirements. By 1987, however, when the ANGTS is scheduled for completion, available El Paso supplies are projected to satisfy less than 33% of such requirements, and by 1995, only about 21% of such requirements.
2. Decline in California supplies. Our California-source gas presents a similar case. In 1981, these supplies are projected to satisfy about 17% of our natural gas requirements, but by 1987 and continuing into the 1990's, available California gas supplies are projected to satisfy

no more than 9% of PGandE's natural gas requirements. Generally, with the exception of a recent, and what is projected to be short-term, upswing in available El Paso and California supplies, both our El Paso and California sources of supply have been declining since the early 1970's.

3. Expiration of existing Canadian gas export licenses.

Since Canadian gas was first delivered to PGandE in 1961, it has been our most reliable source of gas supply, never having been curtailed or cut back. Nevertheless, without renewal of the gas export licenses issued to our Canadian supplier and subsidiary, Alberta and Southern Gas Co. Ltd. (Alberta and Southern), our available supplies from Canada will be reduced starting in late 1985, and they will be cut almost in half by 1987. By 1990, without license renewals, our Canadian supply will be reduced to about 20% of the currently authorized level, and by the end of 1993, all of Alberta and Southern's existing export licenses will have expired.

Simply stated, in addition to the decline in supplies from El Paso and California sources, PGandE stands to lose almost another 20% of its present gas supply by 1987. By that year, without renewal of the Alberta and Southern licenses, supplies from these three sources, which now satisfy more than 99% of PGandE's natural gas requirements, are projected to satisfy less than two-thirds of such requirements, and by 1995, less than 30% of such requirements.

Since the early 1970's, PGandE has been engaged in a number of endeavors to augment this decline in its existing major gas supply sources. Our Rocky Mountain gas exploration and development programs are one such effort, but the new supplies we expect to develop will be only a partial solution. There will still be a substantial and growing drop in total supply as our existing major sources decline. At this time, PGandE has no assured source of natural gas to make up for this drop in supply.

Our chances for a reliable gas supply future turn on the successful completion of the ANGTS. More of that future is at stake in this project than in any other gas supply

option on PGandE's drawing boards. There are several reasons why this project offers the greatest potential for continuing supply security for our customers.

First, the North Slope gas we expect to purchase from Exxon Corporation (Exxon) will satisfy almost 10% of our projected natural gas requirements. In 1979 PGandE contracted with Exxon to purchase one-third of its production from the Prudhoe Bay Reservoir under leases in the Prudhoe Bay Unit -- which is estimated at about 220 million cubic feet per day, assuming an average day Prudhoe Bay output of 2.0 billion cubic feet.

Second, the long-term prospects for development on the North Slope lead us to believe that the initial volumes are only a beginning, that this source of supply will be available for years to come, and that deliveries from Prudhoe Bay eventually will exceed the 2.0 billion cubic feet per day level. Therefore, we see the ANGTS as opening the door to North Slope gas supply opportunities which extend beyond the volumes and term of our existing contract with Exxon.

Third, and for us, most significant, we link our chances for continuation of our Canadian gas supply to the completion of the ANGTS. As I have explained, about 40%

of our existing gas supply is from Canada, and obtaining maximum available renewal of the Alberta and Southern export licenses is a top priority of PGandE.

Alberta and Southern now has on file with the National Energy Board of Canada (NEB or Board) an application to extend its licenses at currently authorized levels through late 1993, so that the Canadian gas available to PGandE would remain at the level of about one billion cubic feet per day through that period. In view of the Board's recently issued report, Canadian Energy, Supply and Demand 1980-2000, it is not clear whether, in the near term, the Board will be prepared to act favorably on Alberta and Southern's request. It is clear to us, however, that over the long term, our opportunity for export license extensions -- and indeed, the opportunity of this nation to continue to look to Canada as a major natural gas supplier -- will turn on whether we in the United States are in fact, and are perceived as, willing and able to proceed to completion of the ANGTS. There are many factors which could affect Canadian gas export policy, and our own prospects for extended export volumes, but, in our view, there is no single factor as significant as the ANGTS.

This project should allow Canada to connect its own sizable northern frontier reserves in the Mackenzie Delta-

Beaufort Sea area to market on an economic basis. Progress toward completion of the ANGTS should encourage further exploration and development in that area. It also should cause the NEB to modify its policy which now excludes Canada's established frontier reserves from the tests applied to determine whether there is a surplus of natural gas available for export -- a policy which the Board consistently has indicated will continue until it is satisfied that there is an assured means for bringing these reserves to market.

Most important, perhaps, are the consequences which we believe would flow if the ANGTS did not progress toward completion. This is a larger issue than access to the Mackenzie Delta gas. At stake is the credibility of the United States as an energy partner, and future Canadian gas export relations with the United States.

Our 20 years of reliance on Canadian natural gas and our long-standing relationship with Canada make us especially sensitive to this issue, and especially appreciative of the continued showing of good faith which the Canadian Government has made toward completion of the ANGTS, as best evidenced by its decision to authorize the prebuild phase of the project following the concurrent Congressional resolution and Presidential letter of support for the project

in July 1980. Without further progress on the project, we believe that the Canadian Government may be increasingly cautious over how much additional gas is to be exported and who is to receive it. Generally, even though gas exports to the United States are a major source of revenue to Canada, it may become more difficult to justify increased export volumes, given a perception within Canada that the increased availability of Canadian supplies would allow the United States to defer or abandon completion of the ANGTS.

III. WHY THE PROPOSED WAIVER OF LAW MUST BE APPROVED

For PGandE and its customers, it is essential that the Congress act favorably on the proposed waiver of law submitted by the President. However we in the United States may wish to characterize it, failure to do so will be viewed in Canada as a breach of commitment by the United States -- a commitment which our Canadian neighbors believe was made by the President and the Congress, to assure Canada that its authorization of the prebuild phase would be followed by favorable United States Government action on overall project completion. To repeat, at stake for us is not only our future North Slope gas supply, but also the long-term continuation of our Canadian gas supply.

More specifically, the proposed waiver of law presents this Congress with a make-or-break choice concerning the financing and eventual completion of the project. If there is to be any hope of satisfying the private financing directive of the President's Decision, this proposed waiver of law must be approved. Such approval cannot guarantee that financing for the Alaskan portion of the project will be achieved. However, without this waiver of law, private financing can be ruled out completely, with the future of the project left uncertain.

Since the time of the President's Decision, it has been a recognized fact that the project's gas company sponsors do not, by themselves, have the capability to finance the Alaskan segment. Participation by the major North Slope producers is essential, but, as we have learned, no producer participation will be forthcoming without their receiving an equity interest in the project and without incorporation of the Prudhoe Bay conditioning plant into the designated ANGTS.

The largest banks in the country, who we hope will be major lenders to the project, also have told us that it is essential that there be mechanisms in place which help assure that the project debt will be repaid. These mechanisms include the proposed waiver of law to limit certain future

regulatory action on the project, and the proposed provision on billing commencement.

It is undeniable that the billing commencement provision will impose some risks on our customers and other North Slope gas consumers which were not contemplated when the President and the Congress authorized this project in 1977. As a gas distribution company, we share the concern of our regulatory body, the California Public Utilities Commission, over the imposition of such risks. We would rather not ask that our customers bear such risks if there were another way to achieve private financing. However, we know of no such other way. Moreover, we are convinced that the risks to be shared are manageable and minimal. If, for some reason, it is actually necessary to use this provision to accommodate project delay, the short-term costs which are imposed will be far outweighed by the project's long-term benefits.

I firmly believe that this country will find a way to make this project a reality. It must. It is in the long-run best interests of the country's economy and security. When ideological disputes are set aside and the facts are examined, we believe that this proposed waiver will be seen as a rational and fair way to overcome a critical roadblock to the private financing of the project. Therefore, we

respectfully urge the approval of the waiver package submitted by the President. If approval is not forthcoming, the ANGTS will suffer a major setback, to the detriment of our customers' and this nation's future energy security.

Thank you for inviting me to submit this statement on behalf of PGandE and its related companies. I would be pleased to answer any questions which the Committee may have concerning my remarks.

Before The
COMMITTEE ON ENERGY AND NATURAL RESOURCES
of the
SENATE

October 23, 1981

Statement of Kenneth E. Kalen, Group Vice President
of Panhandle Eastern Corporation

Panhandle Eastern Corporation is a diversified energy company whose activities include the acquisition, transmission and sale of natural gas in interstate commerce. Its two gas transmission subsidiaries, Panhandle Eastern Pipe Line Company and Trunkline Gas Company, operate a gas transmission system consisting of 16,000 miles of pipeline and 1.2 million horsepower installed in field and mainline compressor stations. The systems supply natural gas to 130 investor-owned utilities and municipal distribution companies. The utility customers, in turn, supply gas to a market area of 24 million people in 12 states, primarily Michigan, Ohio, Indiana, Illinois and Missouri. The systems supply approximately 6 percent of the national total gas consumption. The assets devoted to natural gas transmission amounted to \$1.982 billion at the end of 1980 and transmission employees number 4,245. The principal source of Panhandle Eastern Pipe Line Company's supply is the Anadarko Basin, the Denver-Julesburg Basin, the Powder River Basin and Green River Basins of Texas, Oklahoma, Kansas, Colorado and Wyoming. The principal source of Trunkline's supply is the on- and off-shore Gulf coast area of Louisiana and Texas. Attachment 1 shows the location of the pipeline systems and present sources of gas supply.

There is a clear and urgent need for the Prudhoe Bay gas, and in our view, the gas will be marketable in our service area when it comes on-stream. Transportation of natural gas by pipeline is clearly the most efficient and least costly method of getting gas to consumers. Further, as you gentlemen are well aware, the pipeline will offset the need to import 400,000 to 600,000 barrels of foreign oil per day. I will briefly discuss each of these points.

Need for the Prudhoe Bay Gas

Panhandle and Trunkline have long been actively seeking to develop new sources of gas through programs for both conventional and supplemental supplies. Generally, our share of national gas reserves has declined about the same as the decline for national reserves.

Attachment 2 shows the production, reserve additions and the reserve inventory for the lower 48 states during the period 1968 through 1979. The blue bars on the upper portion of the graph show the amount of natural gas produced each year from wells in the lower 48 states. You will note that production peaked at just over 22 trillion cubic feet during 1972 and 1973, and has declined to just under 20 trillion cubic feet during 1979. Production during 1980 amounted to 19.5 trillion. The yellow bars on the upper graph show the annual additions to proved reserves resulting from drilling in the lower 48 states. At no time since 1968 has industry in the United States been able to add proven reserves to inventory in volumes that come close to equalling annual production. The best performance in this period came in 1979 when approximately 14 trillion cubic feet of proved reserves were added as compared with 20 trillion cubic feet of production. During the five years ending with 1979, only 56 percent of production was replaced by additions to proved reserves. The lower portion of this chart shows the impact of producing more gas than is being found in the lower 48 states for the period 1968 through 1979 and clearly shows the tremendous need for Alaskan gas.

Attachment 3 shows the millions of feet of hole drilled during the period 1966 through 1980. The graph separates the drilled footage into three categories:

1. The top line connecting the circles represents the total feet of hole drilled. This includes both development and exploratory footage.
2. The middle line which connects the boxes shows the drilling footage for development wells.
3. The third line which connects the triangle shows exploratory footage drilled.

Attachment 4 records footage drilled in the lower 48 states. Again, the top line connecting the circles shows total footage drilled, both exploratory and developmental. The middle line connecting the boxes shows the total footage of hole in wells that were completed as producers of oil or gas. The bottom line connecting the triangles shows the footage of hole contained in all wells completed as gas wells during the years 1965 through 1980. Attachment 5 is a plot of natural gas

finding rates for the period 1966 through 1979. You will note that the finding rate is recorded in terms of "Mcf" (thousand cubic feet) of reserves per foot of successful gas wells drilled. During 1967, for each foot of successful gas wells completed, approximately 600 Mcf of new reserves were found. Since that time, the finding rate has declined steadily, and in 1979 only 120 Mcf was found for each foot of successful gas well drilled. The message of this chart is that gas is getting harder and harder to find.

Attachment 6 combines the footage and finding rate projections into a projection of proved reserve additions through the year 2000. The left hand side of this chart shows historical reserve additions averaging somewhere in the order of 10 trillion cubic feet per year during the last ten years. We forecast that reserve additions in the lower 48 states will increase to a level of 14 or 15 trillion cubic feet for 1985, and then will start to decline during the last 15 years of the century. Although we may have a few big years for reserve additions during the next 20 years, we do not think that, on the average, reserves can be added in the lower 48 states to continue to support production rates of 20 trillion cubic feet per year. In forecasting future reserve additions we assumed that the pricing incentives of the Natural Gas Policy Act of 1978 would remain intact.

Panhandle and Trunkline system anticipates (forecasts) that the annual deliverability from committed gas supply will decline from approximately 930 billion cubic feet to approximately 350 billion cubic feet in 1987 when Prudhoe Bay natural gas comes on stream.

Attachment 7 shows our forecast of the annual volumes available for sale from the combined Panhandle Eastern and Trunkline systems. Of course, the figures shown prior to 1981 reflect actual sales figures. Sales declined during the early 1970s to a low of 771 billion cubic feet during 1976, reflecting the serious shortage of gas in those years. Since that time sales have gradually increased to 951 billion in 1979 and 927 billion in 1980.

The yellow bars shown on this graph for 1981 and the future years are what we refer to as "committed supply". This reflects our estimate of the volumes that will be available for the Panhandle and Trunkline systems under presently existing gas purchase contracts covering conventional lower 48 production. This is all of the gas that the two companies presently have under contract in the lower 48 states. We have our work cut out for us if our companies are to serve a 900 billion cubic feet annual market requirement in future years, and we are totally committed to that objective.

The green bars reflect 450 million cubic feet per day of LNG we have contracted to purchase from Algeria.

The solid blue portion of the bars represents 150 million cubic feet per day of Canadian purchases. Approximately 50 billion cubic feet per year of this gas will be made available to our systems through Northern Border pipeline over the 12-year period commencing in 1983.

The cross-hatched blue portion of the bars represents 150 million cubic feet per day of Alaskan gas to be purchased from the Prudhoe Bay field on the North Slope. This gas will reach the Panhandle system through the Alaskan gas transportation system which we hope will be in service by 1987.

The stippled blue portion of the bars represents volumes we had expected from our proposed coal gasification project in Wyoming into our system. That project has been delayed at least two to four years. This is the least certain of future supply because of the enormous cost involved, perhaps \$2 billion.

The red portion of the bars represents the volumes of conventional gas that we must purchase. If the Alaskan gas and LNG does not come on stream as expected, the shortfall required to be covered will be substantially larger as indicated by the graph.

Panhandle and Trunkline's gas supply forecasts are quite representative of the interstate pipeline industry as a whole--particularly as regards presently committed lower 48 supplies of conventional gas.

The foregoing demonstrates the immense need by Panhandle and Trunkline for the Alaskan gas. Not only is the gas tentatively contracted for, but we need to have available an opportunity to contract for the additional Alaskan gas expected to be discovered and developed. We believe 100 trillion to 200 trillion of gas reserves may be discovered and developed. Further, we believe that there is a possibility that gas will be discovered at various points along the Overthrust Belt which is within reasonable distance of the pipeline; hence, making more gas available. We will be permitted to compete for a share of these expected discoveries.

Because of today's excess natural gas producing capacity in the lower 48 states, many people are losing sight of the country's long term gas supply situation. Clearly the current surplus of gas productivity will not be long lived. Those people would probably look on this gas supply presentation as being very pessimistic. Panhandle's forecasts of future gas supply are not out of line with the great

majority of definitive studies prepared by others. Attachment 8 shows the results of three of these studies. This chart compares forecasted natural gas demand to forecasted conventional gas supply for the years 1980 through 2000. The top graph represents Exxon's estimate. Of course, the difference between the demand line and the supply line represents Exxon's estimate of the shortfall in conventional domestic supply from meeting demand. The second graph shows the forecast of the Department of Energy. The third graph shows the forecast of the Gas Research Institute. Although each study differs somewhat, they all reflect a need for additional sources of gas if we are to meet the needs of the United States consumers.

Marketability

Jensen Associates, Inc. have prepared a marketability study for the pipeline group. That firm has for some time provided consulting services to Panhandle and Trunkline as to the demand for natural gas and alternative fuels. We believe that the Jensen report, covering the demand for the Alaskan natural gas, is conservative. The probability that the gas will not be marketable in the earlier years, unless it can be rolled in with the price of cheaper gas, is small. We believe the most likely scenario is that conditions by 1987 will be such that the gas will be marketable. If the conditions are not as expected, we would expect that the spread between the cost of Alaskan gas at the city-gate and the price at which it could be sold, will be small enough that a workable solution can be made through the regulatory process before the FERC.

Need for the Waiver of Law Package

Panhandle and Trunkline subscribe to the statements and presentation made by Northwest for the Partnership and subscribe to the statement of needs made by representatives of the lead banks with which the Partnership is dealing. The pipeline companies simply do not have the financial capacity to fund the Alaskan pipeline and the related gas conditioning facilities. Producer's equity and construction debt support participation will go a long ways towards creating conditions under which necessary capital can be raised.

We believe that the inclusion in the waiver of the provision which would permit the commencement of billing upon completion of a segment of the pipeline or a date certain, whichever occurs last, does not create an unreasonable risk assumption by consumer's groups. We believe that our customers want to be assured of a gas supply in the late 1980's and in the 1990's and want our companies to take action now so as to assure that supply.

Our companies cannot commit large amounts in an open-ended commitment to a project as large and risk-laden as the Alaskan project and be assured the companies remain financially viable so as to be able to continue to supply gas consumers' requirements. Further, the President's Decision in 1977 did not contemplate that the companies would support project debt. We believe that the greatest exposure to not completing the pipeline on a date certain would arise from actions of government including delays caused by litigation, not from the hostile environment through which the pipeline must be constructed. The waiver provision which would permit collection of billing upon completion of a segment of the pipeline will motivate the pipelines to complete sections on time by the date certain, and likewise, may afford some encouragement to governmental units to not unreasonably take any action which would delay completion of the project and placing it in service. It would, of course, permit collection of debt service revenues during such period of delay, and thereby, hopefully prevent the pipeline's Sponsors from being thrown into insolvency by reason of the money required to be paid during such delay.

The waiver seeking conditions of regulatory certainty for servicing debt, we submit, poses little if any risk to consumers. On the other hand, this waiver will provide assurance to potential lenders that a stream of income will always be there to repay debt and interest. This additional assurance, we hope and believe, will create necessary incentives to lenders to commit debt money to the project.

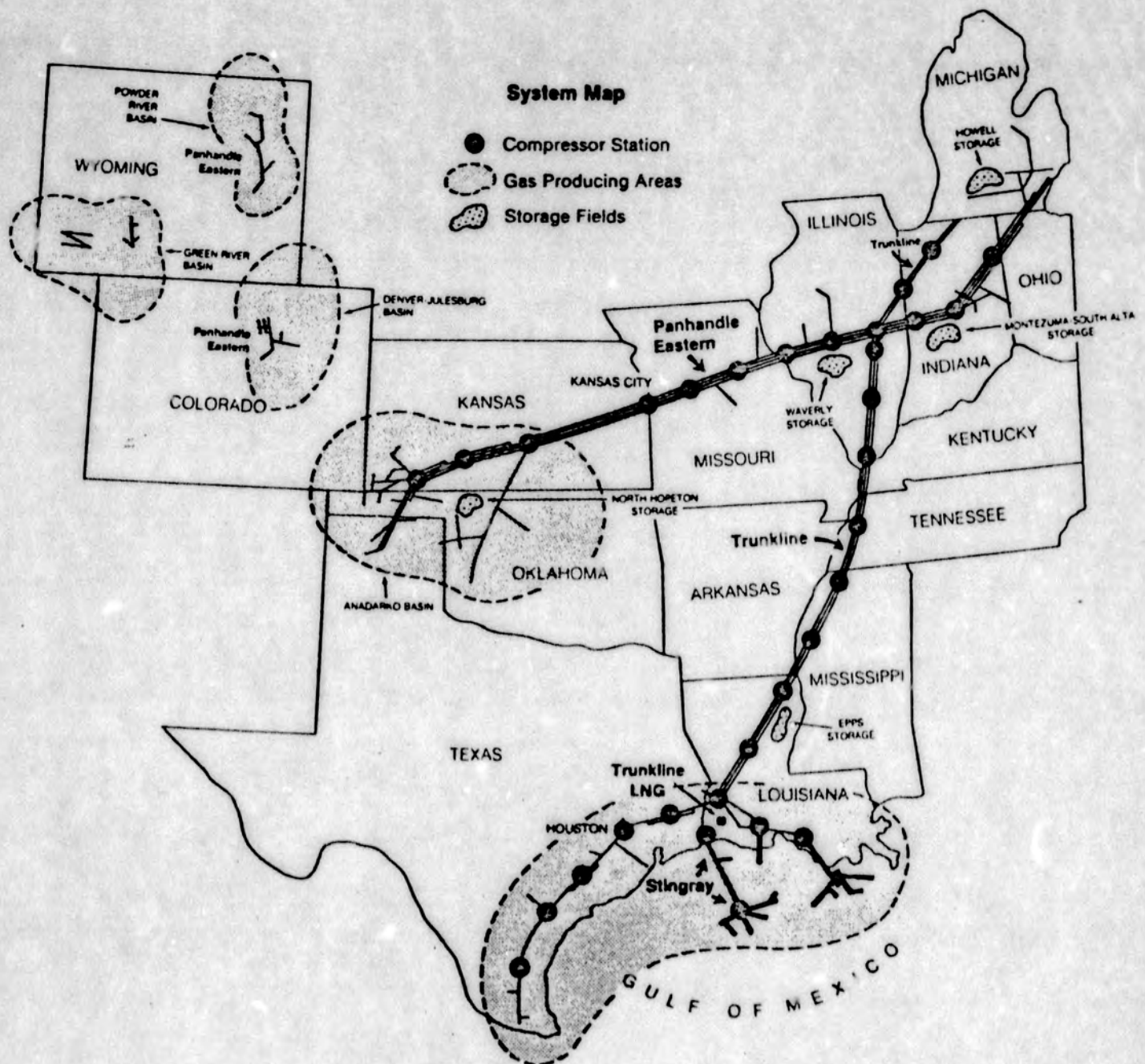
National Interests

The President, Secretary of State Haig and numerous others, in and out of government, have alluded to the enormous benefit to the nation by completion of the pipeline and the natural gas supplies it will make available. We agree. On the other hand, we must remain mindful of our duty to not place our pipeline companies in a position of financial vulnerability. We believe the pipeline will serve to strengthen ties between the countries of North America and will otherwise enhance security by reducing reliance upon foreign sources of oil and natural gas and improve this nation's balance of payments position.

Conclusion

Alaskan natural gas will be urgently needed in the late 1980's and thereafter. The proposed Alaskan pipeline offers the best mode of transportation of the gas to consumers. The proposed waivers of law are necessary for the obtaining of financing. We urge that the waivers be approved.

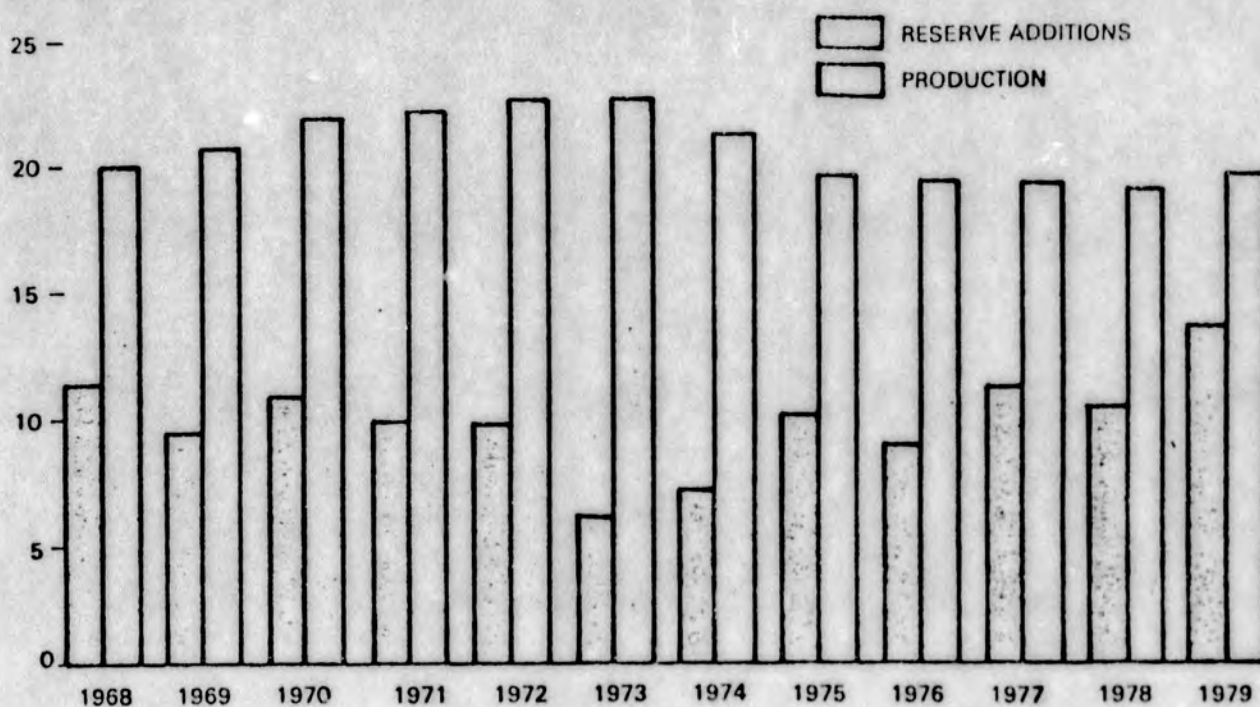
PANHANDLE EASTERN PIPE LINE COMPANY AND TRUNKLINE GAS COMPANY



NATURAL GAS—PRODUCTION AND RESERVE ADDITIONS

LOWER 48 STATES

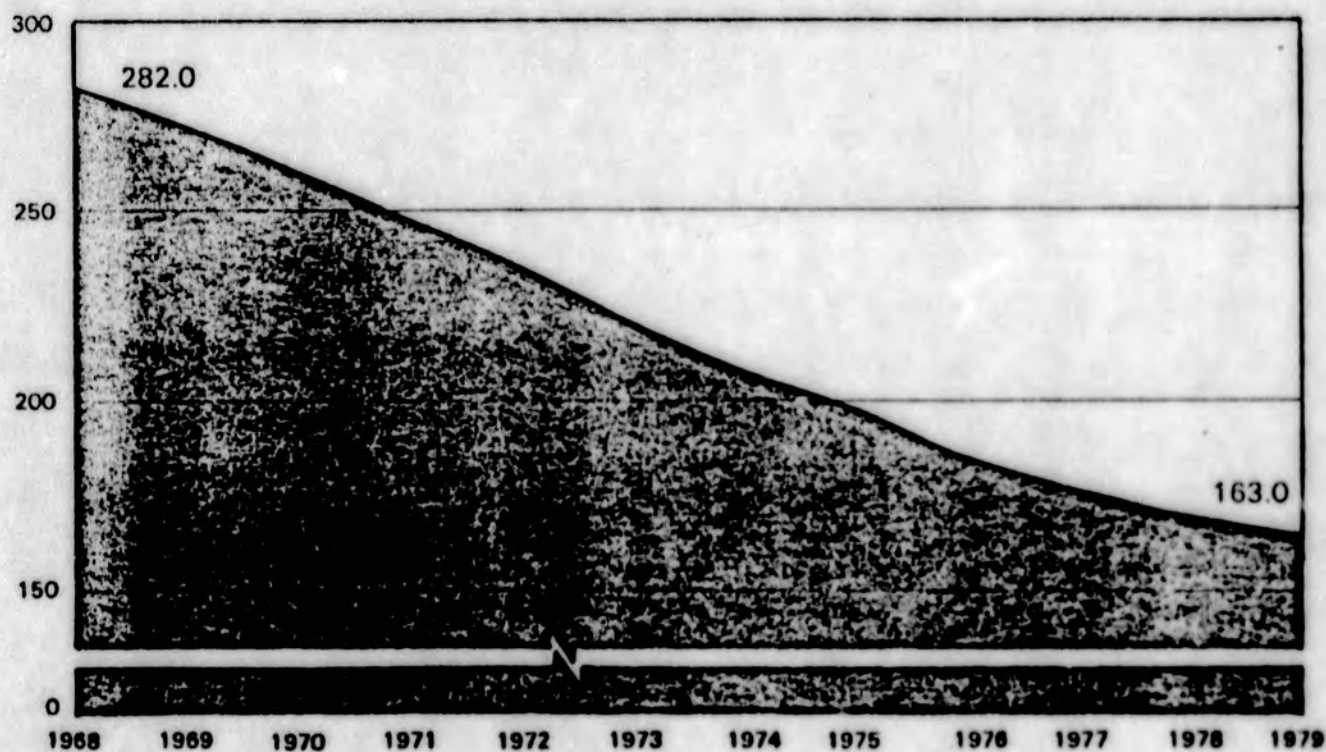
(TCF/YEAR)



NATURAL GAS—PROVED RESERVES

LOWER 48 STATES

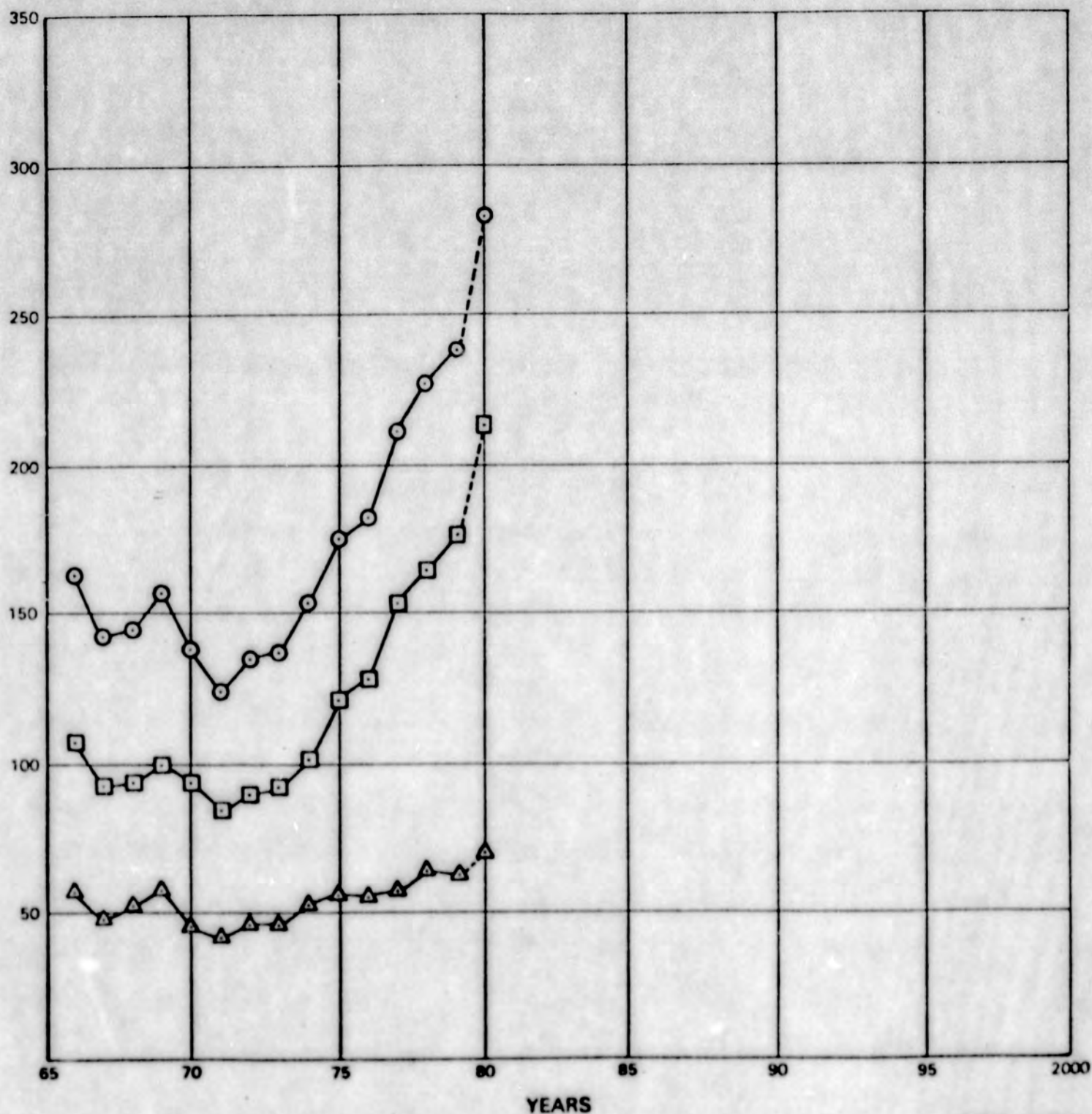
(TRILLION CUBIC FEET)



April 1980

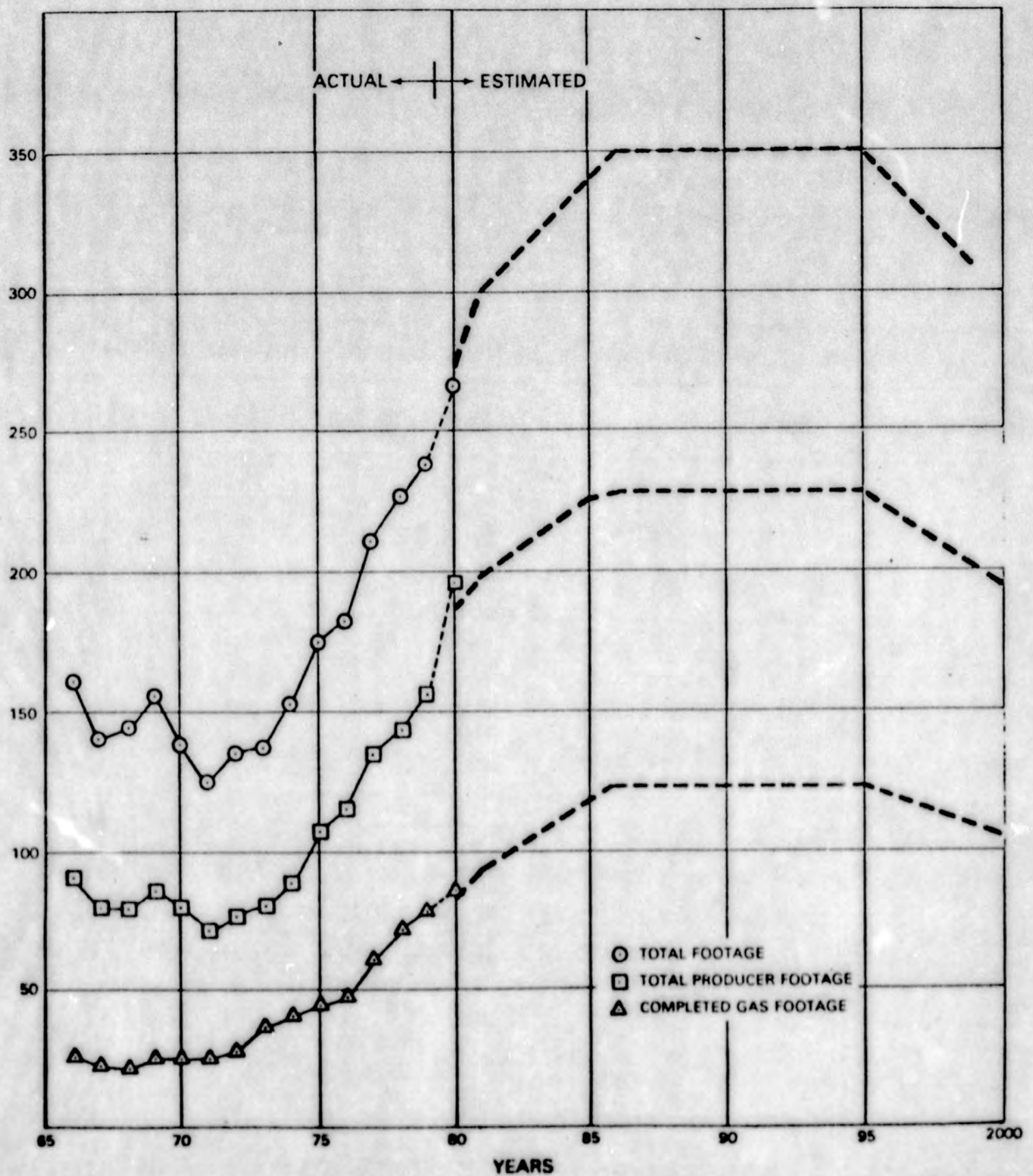
CONTIGUOUS UNITED STATES DRILLING MILLION FEET PER YEAR

- TOTAL FOOTAGE
- DEVELOPMENT FOOTAGE
- △ EXPLORATORY FOOTAGE



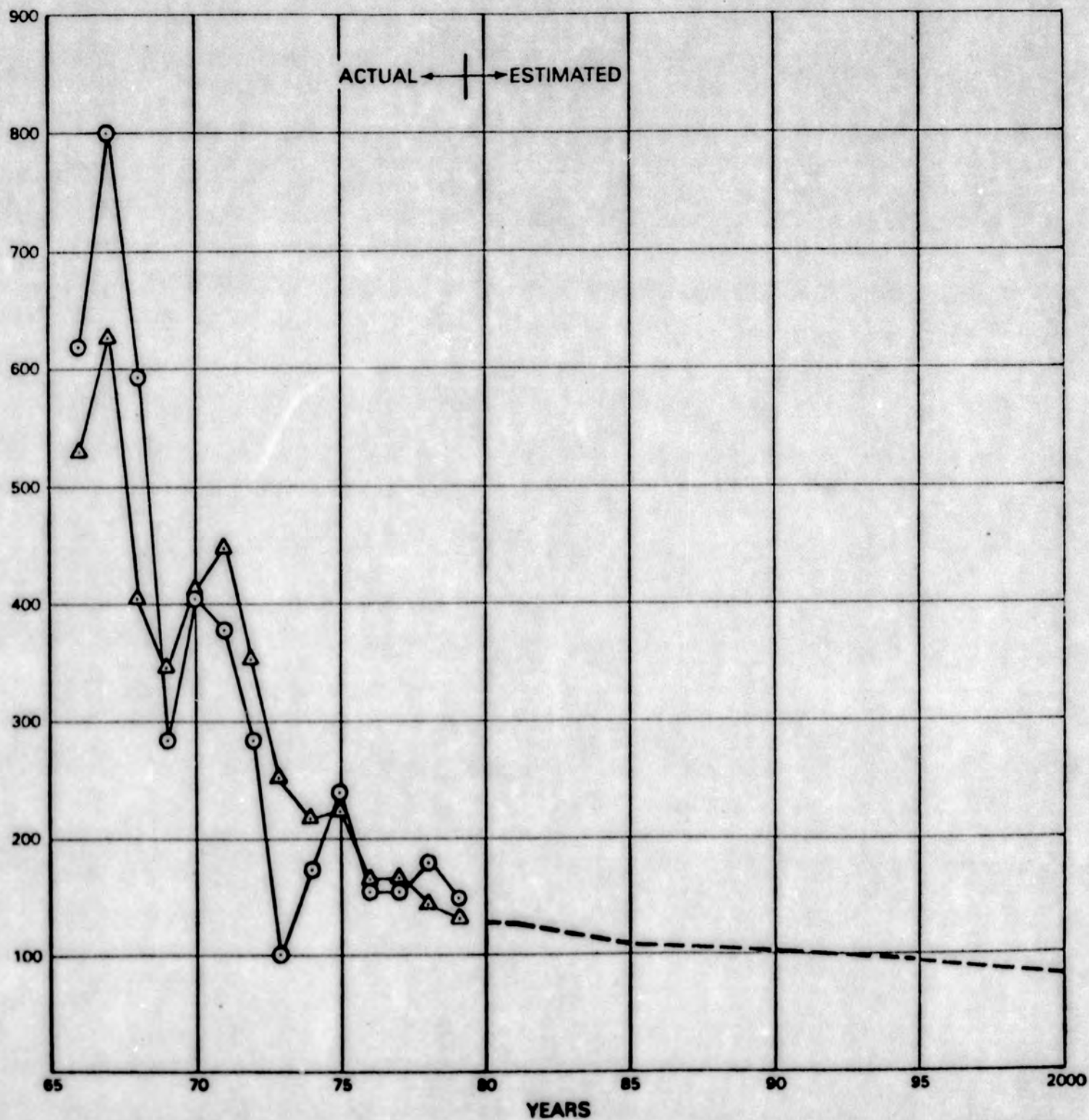
APRIL/1981

CONTIGUOUS UNITED STATES TOTAL DRILLING MILLION FEET PER YEAR

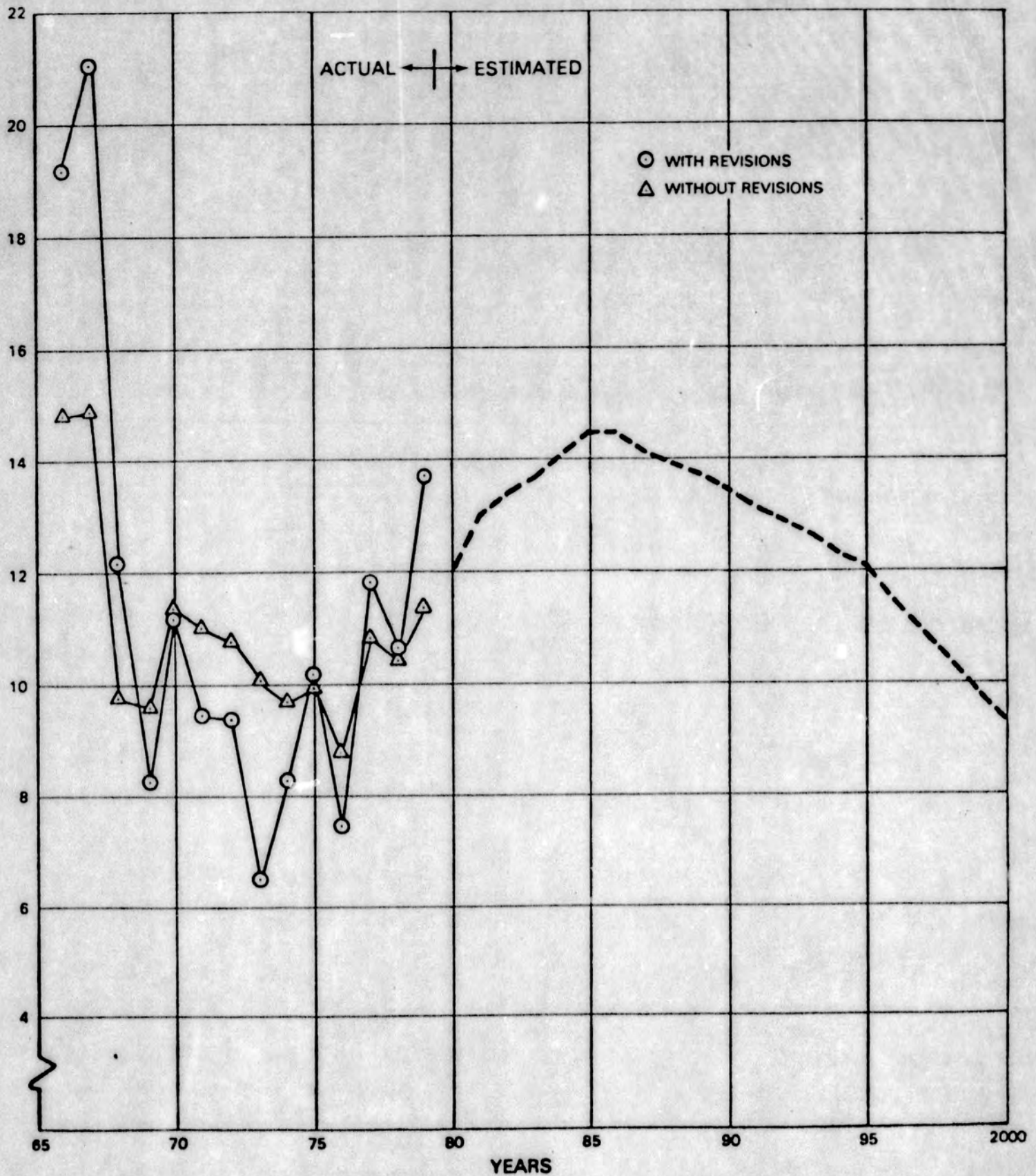


CONTIGUOUS UNITED STATES NON-ASSOCIATED GAS ADDITIONS MCF PER COMPLETED GAS FOOT TOTAL DRILLING

○ WITH REVISIONS
△ WITHOUT REVISIONS

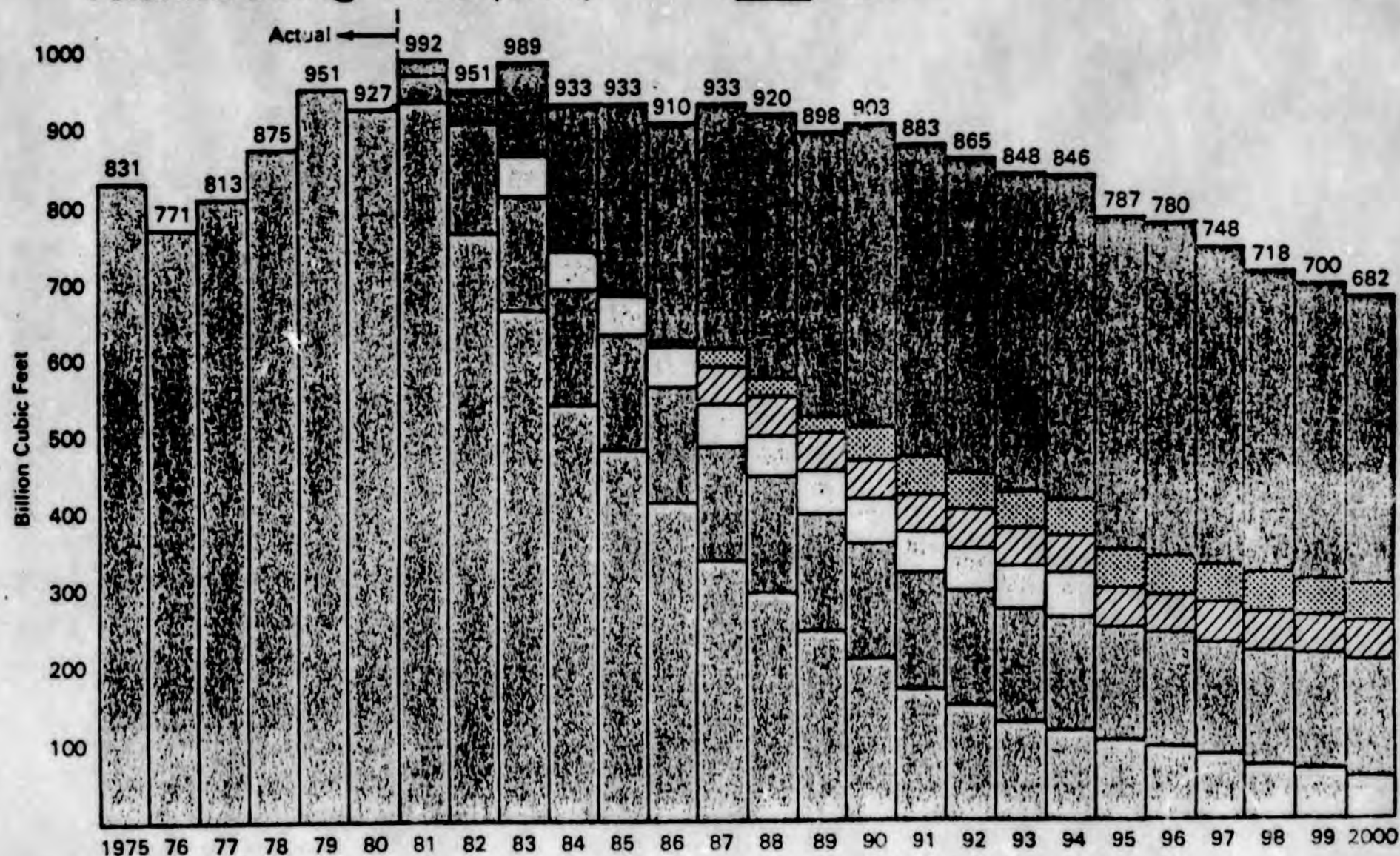
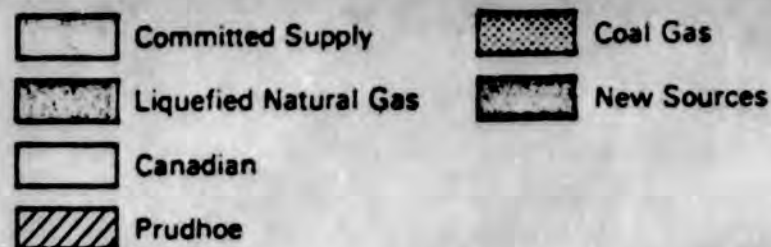


**CONTIGUOUS UNITED STATES
ADDITIONS FROM TOTAL DRILLING
TCF PER YEAR**



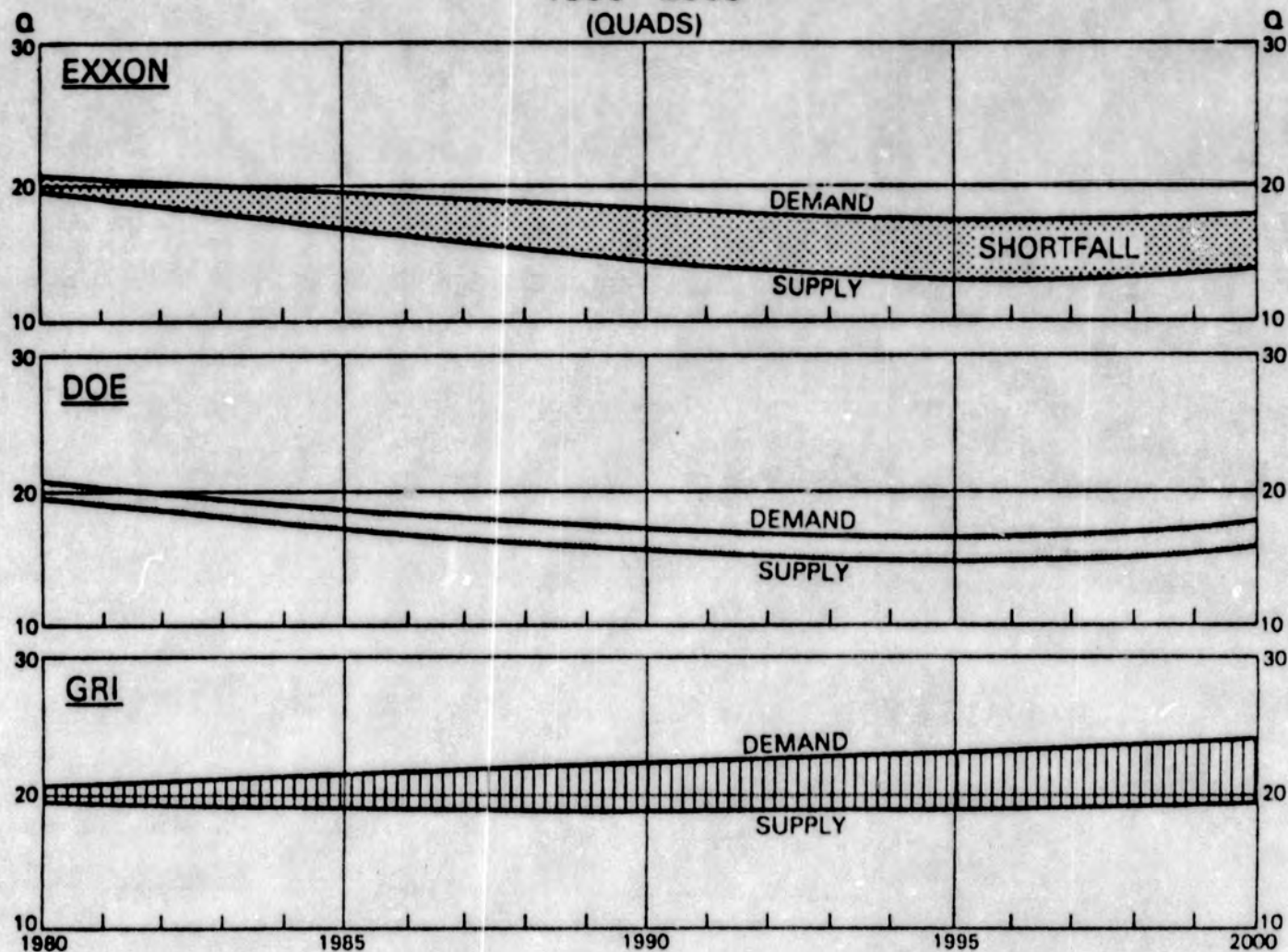
Panhandle Eastern — Trunkline Gas Consolidated System

Projected Volumes Available For Sale
Volumes BCF @ 14.73 (SAT.)



APRIL 1981

COMPARISON OF DEMAND WITH CONVENTIONAL DOMESTIC SUPPLY
1980 - 2000
(QUADS)



Source: Exxon Energy Outlook, DOE Forecasts Through 2020 & GRI Future Demand Scenario

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Omaha, Nebraska 68103
Telephone (402) 691-2100



**Northern Border
Pipeline Company**
New Natural Gas for America

BEFORE THE
SUBCOMMITTEES ON ENERGY AND ENVIRONMENT
OF THE
HOUSE COMMITTEE ON INTERIOR
AND INSULAR AFFAIRS
SUBCOMMITTEES ON FOSSIL
AND SYNTHETIC FUELS
OF THE
HOUSE COMMITTEE ON ENERGY
AND COMMERCE

STATEMENT OF
NORTHERN BORDER PIPELINE COMPANY

SUBMITTED BY
HOWARD L. HAWKS

Washington, D. C.
October 23, 1981

Northern Plains Natural Gas Company, Managing Partner
Northwest Border Pipeline Company • Pan Border Gas Company
TransCanada Border Pipeline Ltd. • United Mid-Continent Pipeline Company

Mr. Chairman and Members of the Subcommittee:

I am the President of Northern Plains Natural Gas Company. Northern Plains Natural Gas Company is the Managing Partner (Operator) for the Northern Border Pipeline Company. I am here today to describe the participation of Northern Border in the Alaska Natural Gas Transportation System (ANGTS) and to express the support of Northern Border for the President's proposed waiver of law under Section 8(g) of the Alaskan Natural Gas Transportation Act of 1976 (ANGTA).

Northern Border Pipeline Company is a General Partnership consisting of five Partners. The Partners and their parent companies are as follows:

1. Northern Plains Natural Gas Company is a subsidiary of InterNorth, Inc. Northern Plains Natural Gas Company is a Delaware corporation, with its principal office at 224 South 108th Avenue, Omaha, Nebraska. As I mentioned earlier, Northern Plains is the Managing Partner.
2. Northwest Border Pipeline Company, a subsidiary of Northwest Energy Company, a Delaware corporation, with its principal office at 314 East 200 South Street, Salt Lake City, Utah.
3. Pan Border Gas Company, a subsidiary of Panhandle Eastern Pipe Line Company, a Delaware corporation, with its principal office at 3000 Bissonnett Avenue, Houston, Texas.
4. TransCanada Border PipeLines, Ltd., a wholly-owned subsidiary of TransCanada PipeLines, with its principal office at Commerce Court West, Toronto, Ontario, Canada.

5. United Mid-Continent Pipeline Company, a subsidiary of United Gas Pipe Line Company, a Delaware corporation, with its principal office at 700 Milam Street, Houston, Texas.

Northern Border has been an active participant in the efforts to introduce Prudhoe Bay gas into United States markets since 1970. Northern Border was originally involved with the Arctic Gas Project which proposed construction of an overland pipeline from the Prudhoe Bay area of Alaska through Canada and into the lower 48 states. As a part of that project, Northern Border proposed to construct the U.S. Eastern Leg. In 1976, when the competing Alcan Project was proposed, the Sponsors of that project also proposed that Northern Border construct and operate the Eastern Leg of their project.

Subsequent to the passage of ANGTA, Northern Border was designated to construct and operate the lower 48 state portion of the "Eastern Leg" of the ANGTS as a part of the Alcan project. The Northern Border transportation system will receive Alaskan gas at the Saskatchewan-Montana border from the Canadian-owned portion of the ANGTS and transport such gas through 1,131 miles of 42-inch pipeline to be constructed along a route diagonally through the States of Montana, South Dakota, North Dakota, Minnesota, Iowa and Illinois terminating at a point near Dwight, Illinois.

Northern Border is presently engaged in constructing what is referred to as the "Prebuild Project."

The concept of a Prebuild Project first appeared both in the President's Decision on the ANGTS, issued in September of 1977, and in the companion National Energy Board (NEB) decision in Canada. Those decisions recognized that both countries might benefit from a new export of surplus Canadian gas to the U.S., and that such gas, if transported through prebuilt portions of the ANGTS in southern Canada and the lower 48 states, could

provide significant assistance to successful completion of the entire ANGTS. In pursuing this objective, Pan-Alberta Gas Ltd. thereafter contracted to sell 1.04 billion cubic feet per day (1.04 bcf/d) of Canadian gas to Northwest Alaskan Pipeline Company over a term of 12 years. Northwest Alaskan in turn contracted to resell such gas to the following purchasers:

1. Pacific Interstate Transmission Company, 240,000 Mcf per day (240 MMCF/d), for delivery to Southern California through "Western Leg" facilities;
2. (a) United Gas Pipeline Company (United), 450,000 Mcf per day reducible to 400 MMCF/d commencing with the third contract year;

(b) Northern Natural Gas Company (Northern Natural), 200,000 Mcf per day (200 MMCF/d), increasing at Northern's option to 250 MMCF/d commencing with the third contract year; and

(c) Panhandle Eastern Pipeline Company (Panhandle), 150,000 Mcf per day (150 MMCF/d).

The total volume of 800 MMCF/d purchased by the above-named companies is to be transported by Northern Border through the U.S. "Eastern Leg Prebuild" facility.

Pan Alberta Gas Ltd. made application to the National Energy Board of Canada for authorization to export the volumes in accordance with the terms of its contract with Northwest Alaskan. However, the term of the license issued by the National Energy Board was not concurrent with the 12-year term of the contracts. The National Energy Board issued an export license authorizing the export of 800,000 Mcf per day for the period commencing November 1, 1981 through October 31, 1986 and 400,000 Mcf per day

during the period November 1, 1986 through October 31, 1987. In addition, the export license provides that to the extent that volumes are not exported during the first year (i.e. 11-1-81 through 10-31-82), such unexported volumes can be added to the 400,000 Mcf per day authorized for export in the year November 1, 1986 through October 31, 1987 up to a total of 800,000 Mcf per day in that year. Any unexported first year volumes not taken during the period November 1, 1986 through October 31, 1987 can be taken in the next contract year. However, this right of "make up" is conditioned upon a prior determination by the National Energy Board that the "make up" volumes to be exported are surplus to Canadian domestic requirements.

The practical effect of the above is that the term of the current export license is 5-1/2 years with a conditional right to add the volumes not taken at the beginning of the 5-1/2 year period to the end of the period. Northern Border has been advised that Pan-Alberta Gas, Ltd. has filed an application with the National Energy Board to firm up the export of the volumes which will not be taken in the first contract year and to extend the term of the license to coincide with the term of the contracts.

Concurrent with the proceedings before the National Energy Board in 1979, Northern Border made application to the Federal Energy Regulatory Commission for authority to construct and operate the Prebuild segment of the Eastern Leg. Specifically, Northern Border requested authorization to construct and operate 823 miles of 42-inch pipeline and one compressor station extending from a point on the U.S.-Canadian border to a point of interconnection with the facilities of Northern Natural Gas Company near Ventura, Iowa and for authority to transport 800,000 Mcf per day for the accounts of United, Northern Natural and Panhandle.

Additionally, applications were filed by Northwest Alaskan for authority to import the volumes to be purchased from Pan-Alberta Gas, Ltd. and for authority to resell the volumes to the

U.S. Purchasers. Also, Northern Natural Gas Company made application to construct and operate facilities to receive the Canadian gas into its system at Ventura, Iowa and for authority to transport and to exchange-displace the volumes in order to get the volumes purchased by Panhandle and United into their systems. By orders dated April 28, 1980 and June 20, 1980, the FERC issued the appropriate authorizations necessary to implement the Pre-build Project.

Subsequent to the issuance of these orders, orders were issued by the NEB and the FERC authorizing Northern Border to transport an additional 175,000 Mcf per day of Canadian gas and to construct and operate a second compressor station. Of this total, 100,000 Mcf per day will be transported for the account of Northern Natural Gas Company and 75,000 Mcf per day will be transported for the account of Natural Gas Pipeline Company of America. The licenses issued by the NEB for the export of these volumes expire on October 31, 1987.

Following the issuance of the FERC authorizations, Northern Border undertook the activities necessary to commence construction. As a part of these activities, Northern Border finalized the financing of the Prebuild Project by execution of a Loan Agreement dated December 15, 1980.

The source of the debt financing for the Prebuild Project is a consortium of 28 United States and Canadian banks which will provide up to seventy percent of the cost of constructing the Prebuild Project. The remaining thirty percent will be contributed by the Partners as equity.

The major terms and conditions of the Loan Agreement are as follows:

- a) The Loan Agreement provides for the borrowing of up to \$1.055 billion. The loan has two variable-rate price options. The first option is a domestic rate plus 3/4 percent. The domestic rate is the greater of (a) the

three-week moving average of 90-day certificates of deposit plus 1/2 percent or (b) the average prime rate for three designated banks (Canadian Imperial Bank of Commerce, Citibank and Morgan Guaranty Trust). The second option is the average London Interbank Offered Rate (LIBOR) for six reference banks (Canadian Imperial Bank of Commerce, Bank of America, Chase Manhattan, Citibank, Morgan Guaranty Trust, and Royal Bank of Canada) plus 1.125%. This rate is locked in for a period of either three or six months as elected by Northern Border.

- b) The loan requires infusions of debt and equity equally until combined debt and equity total \$772 million. Thereafter, additional debt (\$515 million) is drawn until the total of debt and equity equals \$1.287 billion. The next \$129 million will consist of 70% debt (\$90 million) and 30% equity (\$39 million). The final \$129 million, if required, would consist of 50% debt and 50% equity.
- c) Repayment will begin six months after the initial billing commencement date. The first payment is anticipated in March, 1983. The amount of the repayment will be the debt percentage of the capitalization times depreciation and deferred taxes. The final payment of up to 40% will be in 1993. Also, prepayment is required when Alaskan gas flows or earlier at the Borrower's option.
- d) TransCanada PipeLines, Ltd. has agreed that if, at maturity, the loan is not fully paid, TransCanada will contribute equity to Northern Border in an amount at least equal to all amounts due under the Loan Agreement or would purchase Northern Border's notes issued under the Loan Agreement for such amount. TransCanada and the

other Sponsors of Northern Border have agreed that in the event TransCanada is required to make an equity contribution, the other Sponsors have the right to participate in such equity contribution.

In addition to the above, TransCanada agreed to certain other undertakings. TransCanada is obligated to purchase the remainder of the equity in the Partnership under certain conditions. This purchase obligation is triggered if on the final day of the tenth year after the date of completion of the Prebuild Project the Management Committee of Northern Border has not determined that the additional facilities on the Northern Border system required for transportation of the Prudhoe Bay gas are to be constructed and the only gas being transported through the Prebuild line is Canadian gas ultimately destined for consumption in TransCanada's market area in Eastern Canada. In addition, TransCanada has agreed to a "backstop" by assuring the transportation of TransCanada gas should Canadian exports terminate prior to the shipment of Alaskan gas. If these exports terminate before Alaskan gas begins to flow through Northern Border, TransCanada would become obligated for payment of the full Northern Border cost of service.

Thus, the repayment of the debt and the return of equity is assured through the provisions of Northern Border's Tariff, TransCanada's backstop obligation, and TransCanada's obligations to repay the debt at maturity.

In May of 1981, mainline construction of the pipeline began in the States of Montana, South Dakota, Minnesota and Iowa. Commencement of construction in North Dakota was delayed until September of 1981 because of litigation over the route of the pipeline in North Dakota. As of this date, approximately 575 miles of the pipeline have been installed. The remaining 250 miles will be completed by the fall of 1982. We anticipate no overall delay in completion of the Prebuild Project, nor do we anticipate any cost overruns.

As demonstrated above, the completion of the Prebuild Project is being accomplished without the necessity for any special legal or regulatory treatment. Given that the Prebuild Project is only one segment of the entirety of the ANGTS, its complexities, uncertainties, and problems are obviously less than for the totality of the project.

With the completion of the Prebuild Projects, the first steps will have been taken in bringing the totality of the ANGTS to reality. This early building of both the Eastern and Western Legs of the ANGTS to transport a total of 1,215,000 Mcf of Canadian gas to United States markets (which is the equivalent of 190,000 barrels of oil per day) will not only supplement current energy supply, but more importantly, will facilitate the financing of the remainder of the project, will lessen the inflationary effects on cost and will ease the demand on labor and capital during the construction of the remainder of the Alaska Natural Gas Transportation System.

Northern Border will construct the remainder of the Eastern Leg concurrent with the construction of the Alaskan portion of the ANGTS. The facilities to be constructed to complete the Eastern Leg consist of 308 miles of 42-inch pipeline extending from Ventura, Iowa, to a point near Dwight, Illinois and the construction of 12 compressor stations. We now estimate that the cost of these facilities will be approximately one billion dollars. Under the provisions of the Partnership Agreement, the Partners are committed to contribute the equity requirements for completion of the additional facilities, and we are confident that we will be able to secure the debt financing.

When completed, the Eastern Leg will have capacity to transport 2.2 billion cubic feet per day without further expansion.

As a long time participant in the efforts to bring Alaskan gas to market, Northern Border cannot emphasize too strongly the nation's need for completion of the ANGTS:

- 1) The Prudhoe Bay proven reserves now approximate 26 trillion cubic feet, and the completion of the ANGTS not only gives access to these reserves but will also encourage exploration and development of additional North Slope reserves.
- 2) The completion of ANGTS will go a long way in leading to the connection of Canada's sizeable frontier reserves in the McKenzie Delta-Beaufort Sea Area. At the present time, the NEB is unwilling to include these frontier reserves in their calculations of available surplus. Access to these reserves through the ANGTS would be a most positive step toward causing the NEB to modify its policy.
- 3) Failure to complete the ANGTS, on the other hand, could very well jeopardize the future export of Canadian gas to the detriment of the United States as the Canadians will most certainly take into consideration our failure to complete the ANGTS as they set their national energy policy. It is in the best interest of the United States to continue to purchase and import Canadian gas as long as such purchases result in a positive net economic benefit to our nation.
- 4) Failure to complete the remainder of the ANGTS will most certainly have a detrimental effect on Northern Border, its shippers and the ultimate consumer. It would eliminate the major source of supply for Northern Border and a critical, long term source of supply for consumers of the United States. Furthermore, the most economical

operation of the system will not be realized if the Alaskan volumes are not transported. Generally, the unit cost of transportation through a pipeline is reduced as the volume transported increases. Additionally, a failure to complete the ANGTS due to problems which are rectifiable will most certainly be taken into account by the Canadian government in the determination as to whether or not to extend the term of the Pan Alberta export license beyond the current 5-1/2 years.

Northern Border strongly urges the Congress to act favorably on the President's proposed waiver of law.

Thank you for inviting me to submit this statement on behalf of Northern Border. I would be pleased to answer any questions which the members of the Committee may have.

STATEMENT OF
EDWIN ROTHSCHILD
Director
Energy Action Educational Foundation

BEFORE THE COMMITTEE ON ENERGY AND
NATURAL RESOURCES OF THE UNITED STATES SENATE

October 26, 1981

AND

BEFORE THE FOSSIL AND SYNTHETIC
FUEL SUBCOMMITTEE OF THE HOUSE ENERGY AND
COMMERCE COMMITTEE AND THE ENERGY AND
ENVIRONMENT SUBCOMMITTEE OF THE HOUSE INTERIOR
COMMITTEE OF THE UNITED STATES HOUSE OF REPRESENTATIVES

October 27, 1981

Mr. Chairman and members of the Committee. I appreciate very much the opportunity to testify today on the proposed waivers of law regarding the construction of the Alaska Natural Gas Transportation System (ANGTS).

The proposed waivers submitted to the Congress by the President on October 15, 1981 are designed to make the ANGTS a project that transfers a substantial portion of the risk from sponsors and lenders to consumers. In addition, the waivers would permit equity ownership in the pipeline by the gas producers of the Prudhoe Bay field, a situation the Justice Department in 1977 said should not be permitted. These waivers would curtail the rights of consumers to review financial and managerial decisions and determinations through an evidentiary hearing by leaving such a hearing up to the discretion of the Federal Energy Regulatory Commission. Finally, these waivers would provide that the Commission could not change any final rules or orders under Sections 4, 5, 7, and 16 of the Natural Gas Act, despite changed financial, physical or technical circumstances. Consumers are being asked to shoulder the extraordinary financial risks, while the sponsors and their banks seek insulation from such risks as well as the substantial rewards. Based on these conclusions, we do not believe Congress should adopt the waiver proposal.

SOME HISTORICAL NOTES

Before examining in detail our objections to the proposed waivers of law, I think it would be useful to review how John McMillian's Northwest Energy Company's project, Alcan was selected as well as the representations made by Mr. McMillian and his company which were instrumental in persuading the Government to choose his proposal over the others. Three projects--Alcan, El Paso and Arctic--were before the Federal Power Commission in 1976 and 1977 proposing to construct a transportation system to deliver Alaskan gas to the lower 48 states. While there were criticisms of all the systems from varying points of view, one of the key elements for obtaining government approval was whether or not the transportation system could be privately financed.

In this regard all three of the original competing projects -- Alcan, El Paso and Arctic -- insisted that they needed an "all-events tariff." This tariff provided for consumer payment of the pipeline even if the pipeline never delivered a single cubic foot of natural gas. There was great opposition to this type of tariff both in Congress and among many of the potential consumers of this gas. Recognizing that an alternative to the "all-events tariff" would have a significant influence on the decision-making process, Alcan's chief financial advisor Mr. Mark J. Millard, a vice president of Loeb Rhoades, sent a memorandum to McMillian stating,

There is sufficient credit support capacity among the primary beneficiaries of gas pipelines, excluding the consumer, to assure completion of the pipeline. This is the single, most important risk to be addressed in arranging a private financing. Such beneficiaries are the gas transmission companies, gas producers, and the State of Alaska. (Emphasis mine)

and

The obligations of consumers to pay certified costs of the project can be limited to a minimum bill tariff commencing when initial gas deliveries are made. I do not believe legislation obligating gas consumers to an "all-events" tariff, which provides for payment of cost prior to the completion of construction, is a necessary condition of successful private financing if sufficient overrun funds are provided.¹

¹Memorandum to John G. McMillian from Mark J. Millard, August 10, 1977, pp. 2-3.

With El Paso and Arctic still insisting that such an "all-events tariff" was necessary and with Northwest Energy pledging its support for President Carter's National Energy Plan, the White House, after reaching agreement with the Canadian Government, submitted its Decision and Report on the Alaskan Natural Gas Transportation System to Congress.² On the same day Mr. McMillian told House members,

The President's decision requires the Alcan project to be privately financed in its entirety. The United States and Canadian governments will not be called upon for financial guarantees. Nor will the consumer have to bear the hypothetical burden of the non-completion of the project. Instead, other primary beneficiaries of the project will be called upon to provide the necessary financial backing. We believe that Alcan can obtain the necessary project financing from Canadian and United States sources.³ (Emphasis added)

These assurances were repeated by Mr. McMillian to the Senate Energy and Natural Resources Committee on October 11.⁴ Mr. McMillian and his financial advisors also stated that they would not need the financial support of the Prudhoe Bay producers in the effort to obtain private financing.

But as we all know Mr. McMillian was wrong, so wrong that he and his cohorts are running around the halls of Congress trying to obtain support for the very things he said he would not need and the very things the sponsors of the other projects said were necessary. Clearly, Mr. McMillian changed his position on the financing of this pipeline in August 1977 to obtain the Government's approval, while knowing full well that private financing under those conditions would be improbable, if not impossible. But he must also have recognized that once he had received the Administration's approval, he would have his foot in the door. Now, four years later, Mr. McMillian is trying to force his way further in by using all of the work that has been done, the expectations that have been raised and the money already spent as justification for these extraordinary and unprecedented waivers.

²Decision and Report to Congress on the Alaska Natural Gas Transportation System, Executive Office of the President, September 22, 1977.

³Joint hearings before the Subcommittee on Energy and Power of the Committee on Interstate and Foreign Commerce and the Subcommittee on Indian Affairs and Public Lands of the Committee on Interior and Insular Affairs, House of Representatives, 95th Cong., 1st Sess., on The President's Decision on an Alaskan Natural Gas Transportation System, p. 87.

ALLOWING PRODUCERS EQUITY PARTICIPATION

The first of the proposed waivers would waive Section 1, Paragraph 3, and Section 5, Conditions IV-4 and V-1, of the President's Decision to allow the gas producers --Exxon, BP/Sohio and Arco -- an ownership interest in the pipeline. The proviso to this waiver is that the Federal Energy Regulatory Commission approve any participation agreement only after considering "advice from the Attorney General" and making a finding that the agreement will not violate the antitrust laws, nor restrict access for nonowner shippers and capacity expansion.

While the current arrangement between the pipeline-owners and the producers limits the producers to 30 percent of the equity, there is nothing preventing the pipelines or Mr. McMillian from handing over 49.9% of the pipeline's ownership to the producers, if the financial backers insist that this is a necessary condition for the credit worthiness of the project. Once the Congress allows producers to become owners of the pipelines, then it is not unreasonable to assume that their ownership interest could expand.

This is a serious problem. It is one that has concerned the Justice Department for many years, particularly in reference to oil pipelines and oil ports. To allow the largest and only gas transportation system from Alaska to be acquired in whole or in part by the producers of the largest U.S. gas field is dangerous, especially in view of the Administration's likely effort to accelerate decontrol of natural gas prices. It was just such an eventuality that prompted the Justice Department's opposition. Thus, according to an August 9, 1977 letter to the White House, the Justice Department's

recommendation concerning gas producer ownership and participation was based on the premise that such ownership or participation under a regime of deregulated or relaxed wellhead price regulation could lead to the evasion of effective pipeline regulation and create the opportunity for the earning of monopoly profits through anticompetitive activity.⁵

⁴Hearings before the Committee on Energy and Natural Resources, United States Senate, 95th. Cong., 1st Sess. on S.J. Res. 82, Joint Resolution to Approve the Presidential Decision on an Alaska Natural Gas Transportation System, p. 102.

⁵Decision, Exhibit following p. 212.

This waiver does not provide the public with sufficient assurance that anticompetitive activity will not occur. In fact, the waiver permits the Federal Energy Regulatory Commission, whose chairman has already stated he is in favor of moving the project forward, to reject the Justice Department's recommendations concerning antitrust problems raised by producer ownership in the pipeline. It would seem to be more logical that, if nothing else, the Justice Department be required to approve producer participation, rather than just act as a consultant to the FERC. Such antitrust reviews are within the domain of the Justice Department's Antitrust Division, not within the FERC. To provide the FERC with decision making authority over antitrust matters is tantamount to giving the Department of Energy authority over Defense matters.

INCLUDING THE CONDITIONING PLANT AS PART OF THE TRANSPORTATION SYSTEM

It is the usual practice in the natural gas industry that a pipeline company is responsible for constructing a pipeline up to a producer's gas conditioning plant. The gas emanating from that plant receives a price from the pipeline company that contains in it a provision for the cost of the conditioning plant. Of course, the producer retains the ownership of the valuable products produced from that plant -- propane, ethane and butane, to name the most well known. In today's marketplace, these products command high prices for use as petrochemical feedstocks. Under regulation, the sale by producers of natural gas liquids often resulted in a "net liquid credit" against the costs incurred in the production of the gas. In other words, the wellhead price under regulation also reflected the revenue produced by the sale of these liquids. This benefited consumers by reducing the price of natural gas they received but at the same time benefited producers by giving them another secure source of revenue.

If consumers are going to be forced to pay for something producers should rightfully be paying for, then consumers should at least receive some compensation in return. After all, the price allowed at the wellhead for Prudhoe Bay gas incorporates the cost of conditioning the gas. In addition, the cost of Prudhoe Bay gas is, in reality, next to nothing, since it was found and developed in connection with crude oil. Clearly, the conditioning plant should not be part of the rate base of the pipeline project. It should be a cost borne by the producer. If, however, the Congress decides to allow such a dramatic shift in regulatory policy, then consumers must receive credit for the value of the gas liquids which the plant produces. In other words, the value of the plant liquids should be used to offset the rates charged to consumers for the conditioning plant.

BILLING COMMENCEMENT DATE

The waiver of Section 5, Condition IV-3 which would prevent consumers from being charged until the pipeline is completed and in operation represents nothing less than a variation of the "all-events tariff." Yet, Secretary Edwards interprets this waiver to mean that "the FERC could allow billing for transportation through the ANGTS prior to the time the whole system is completed and gas begins to flow, under certain specified, limited circumstances." Mr. Edwards' comment notwithstanding, it is obvious that what is being proposed is comparable to what is called under electric utility regulation, "construction work in progress" (CWIP). As Edward Petrini of the National Consumer Law Center has observed,

...the issue is the timing of ratepayer payment of capital costs on such plant--i.e., whether such payments should be made by ratepayers when the plant is actually serving customers or whether such payments should begin before that time, while the plant is still under construction.⁶

Mr. Petrini points out that CWIP "violates what accountants call the 'matching principle' (the principle which attempts to associate financing costs with earnings)" and also "discriminates against present ratepayers in favor of future ratepayers."

⁶Letter to Rep. Philip R. Sharp, July 24, 1981.

Finally, argues Petrini, "Utilities have stronger incentives to complete capital construction projects quickly if they do not begin recovering the costs on their investment until the project is completed. By permitting early recovery of the costs of the project, this incentive is diluted. On a project as ambitious as ANGTS, such a change in the typical risk allocation could result in high escalations indeed."

By making consumers pay for segments of the pipeline before the pipeline is complete and operational shifts the financial risks from the sponsors and banks to the ratepayers. Such a tariff, if allowed, would effectively undermine what Secretary Edwards claims should occur -- "the private financing of ANGTS." Of course, it will be easier for the pipeline sponsors, the major oil companies and the banks to finance this project. Their exposure, their risks will be substantially reduced. Instead, consumers in California, Ohio, Michigan, Wisconsin, etc. will bear the risk. They will be putting up their capital, which is much more limited than the capital available to the aforementioned, for a project in which they will receive no equity, no interest, but only a promise in the future of some gas at an extraordinarily high price. I do not know what you call that arrangement, but it certainly is not free enterprise and it is not private financing.

A recent report, "Financing of the Alaskan Natural Gas Transportation System" by Hilary Sills, director of Energy and Environment Policy of the Government Research Corporation noted that

The Administration views advance billing as imposing two obligations on consumers. First, consumers are forced to make a loan during construction. Second, there is a contingent liability in which the group who bears the risk of delay, in this case consumers, cannot influence the extent of the delay. While the waiver is not unique, it is unusual and confirms the fact that the economics of the project are so close that the sponsors have to resort to these unusual measures in order to obtain financing.

Again, the comparison to CWIP is noteworthy. It is precisely at times when electric utilities claim they are in financial straits "usually brought about by a combination of ongoing, large construction programs which have increased dramatically in cost, soaring fuel costs, and lagging demand,"⁷ that they must resort to such risk-shifting proposals.

EVIDENTIARY HEARING

The proposed waivers would not require the use of a formal evidentiary hearing in proceedings related to applications for certificates of public convenience and necessity authorizing the construction or operation of any segment of the approved transportation system and would allow the FERC discretion in determining when such evidentiary proceedings will be held. It is clear that whoever drafted this waiver is quite familiar with the recent history of the FERC, because he knows that wherever the FERC has had discretion, it has, in most cases, eliminated the use of evidentiary proceedings. Without evidentiary hearings consumers will effectively be prevented from cross-examining testimony, submissions, economic analyses and witnesses. Fact finding will be restricted. By waiving this requirement, the sponsors are seeking not swift regulatory approval, but blind and unaccountable regulatory approval. There is no guarantee that the bureaucracy will protect the rights of individual citizens as they try to understand and assess the judgments and decisions of the pipeline sponsors. Without an evidentiary hearing on this most expensive, complex and unprecedented project, there is a great probability, if not a certainty, that cost and technical data will be applied so as to favor the pipeline sponsors and to harm the ratepayer. What banker, what businessman would be willing to commit his scarce capital resources to a risky venture without access to full documentation and the right to an independent and thorough review of the cost accounting and technical designs? There is no such prudent businessman. So then, why should the ratepayer, who is putting up capital, be denied the same opportunity?

⁷See Petrini letter to Rep. Sharp.

SECTIONS 4, 5, 7, and 16 OF THE NATURAL GAS ACT

The objective of this proposed waiver is to provide what the sponsors like to call "regulatory certainty." Specifically, they would like to have set in concrete the FERC's final rules and orders approving the pipeline tariff and the recovery of all costs related to the transportation of the gas under that tariff. Such a waiver is unprecedented. It is like saying Congress can not adopt these waivers because the pipeline sponsors have suddenly realized they cannot finance the pipeline under the Decision made by the President and affirmed by the Congress.

Suppose, for example, the sponsors for the purpose of the tariff have assumed that the depreciation life of the gas reserves is 20 years, but it turns out to be 40 years. The depreciation rate would be cut in half. Why shouldn't the ratepayer get the advantage of this? Why should the pipeline owners recover their depreciation expenses too quickly? Or, suppose there is a technological innovation that improves the efficiency of the gas compressors, thus reducing operation and maintenance costs? There are many more reasons why the FERC should reconsider a tariff under changed circumstances. What the sponsors and their banks are asking for is a condition which upsets the entire regulatory framework, but more importantly, further prevents the consumer from obtaining benefits of this project.

Sections 4 and 5 are the heart of the Natural Gas Act. These two sections empower the Commission to guarantee that rates charged by natural gas pipelines are just and reasonable. Without the operation of these two sections, ratepayers would have no protection against paying unjust and unreasonable rates. Section 5(b) affords ratepayers the added protection of permitting investigations by the Commission on its own motion or upon the request of any State commission to "determine the cost of production or transportation" where it cannot establish the rate. In fact, we would like to know from the project sponsors

the specific reasons for waiving each of these sections. These are answers Congress should demand and should examine thoroughly. We suspect that much more is at stake than simple "regulatory certainty."

And where is the "regulatory certainty" in allowing the waiver of Section 7, which authorizes the Commission to direct the extension and improvement of transportation facilities and the establishment of physical connections; to prohibit the abandonment of facilities or service without permission? This section provides "regulatory certainty" to consumers, who need such certainty in view of the monopoly nature of the enterprise they confront, an enterprise that could choose to avoid the requirements of Sections 4, 5, 7, and 16 and thereby adversely affect the lives of millions of ratepayers.

WHO IS WILLING TO BEAR THE RISKS AND WHO IS SHARING THE REWARDS

We think it is fascinating to observe the comments of the key financial advisors to the ANGTS project. H. Anton Tucher, vice president of the Bank of America, testified last week (as did three other bankers) that even with the adoption of the waiver package, the pipeline might still not be economically or financially feasible. Said Mr. Tucher, "We will not go forward until we have done a 'due diligence' investigation to satisfy ourselves on the technical, economic, financial and regulatory feasibility of completing the whole system." Yet, neither the Administration nor Congress have such an investigation to help determine if this waiver package is sensible and cost-effective. Secretary Edwards has admitted "that the Administration has not performed a cost estimate of its own nor has it conducted a final evaluation of the sponsors' estimated costs." This has not been done, and yet the Administration is willing to risk consumer capital. If the banks are unwilling to make loans before they do a thorough study, why should the U.S. Government be so willing to allow consumer financing without a thorough investigation?

On top of all of this, on top of the waiver package, on top of all the support this Government has provided to the sponsors of the pipeline, they are still unwilling to commit themselves to the completion of the project if the waiver package is passed. Each of the sponsors was asked if the waiver package was sufficient to insure construction and completion, and none of them would state that it was. The bankers stated their doubts quite openly. Mr. Tucher wants "the waiver package [to] preserve flexibility to permit some form of pre-completion billing commencement in Alaska beyond that contemplated in the present waiver request that would provide some form of consumer risk-taking or actual tariff changes to commence prior to completion of the Alaskan segment." Robert H. Graham of Citibank isn't sure whether the waiver package "will be sufficient," while Stephen W. Jenks of Morgan Guaranty Trust states, "Whether or not this package will be sufficient to ensure such financing we are unable to say at this time."

This uncertainty is not surprising. I suspect that now that Mr. McMillian is close to getting his upper torso in the door, he's going to try to get all the way through and seek federal guarantees. In fact, a recent story in the Christian Science Monitor states that pipeline officials have already had conversations with administration staffers and have received optimistic signs that the Administration might consider such federal guarantees. I can even play out the scenario. Congress passes the waiver package. President Reagan proposes to accelerate decontrol. The bankers are now convinced that unless the Government helps the pipeline, decontrol will make Alaskan gas unmarketable. The Administration reluctantly agrees to propose a financial loan guarantee program to Congress.

Mr. Stanley J. Lewand, vice president of the Chase Manhattan Bank told you last week that "Lenders have indicated...that they are not willing to accept the risks that the delivery system might not be completed nor are they willing to accept the risk of a future regulatory body changing the conditions under which the tariff and tracking mechanisms have been allowed to be implemented...and that they must be assured of the timely repayment of their debt and the interest thereupon." If such prudent businessmen are unwilling to risk their money on this project, why should individual citizens be placed in even more jeopardy. I see no reason why Chase Manhattan Bank should be treated with more care and concern than an elderly couple on a fixed income living in a drafty apartment and wondering where their next gas bill payment is going to come from.

All of us would like to see the gas from Alaska produced and used for the benefit of the country. This pipeline may or may not be the project that does the job. The world has changed a great deal in four years. In September 1977, President Carter told us that the proposed Alcan system "will deliver Alaska gas at the lowest cost-of-service to U.S. consumers--probably below the cost of imported oil and substantially below the cost of other fuel alternatives." That is no longer true, if it ever was. The Department of Energy estimates that the 1987 imported Canadian natural gas price will be \$13.10 per MMbtu. This compares with an estimate of between \$15 and \$20 for the delivered price of Alaskan gas. Undoubtedly, with or without decontrol, natural gas delivered by the ANGTS will be the most expensive fuel Americans can buy.

This pipeline, even unbuilt, has failed to live up to its glowing expectations. These waivers should be rejected. We should start the process of finding the most efficient and economic method of producing Prudhoe Bay gas again. Perhaps, the proposal to convert the gas to methanol and ship it down TAPS would make more sense. The time has come to stop trying to rescue John McMillian's \$40 billion boondoggle and to start finding a better alternative.

STATEMENT OF JEROME J. MC GRATH
PRESIDENT, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA
BEFORE THE
FOSSIL AND SYNTHETIC FUEL SUBCOMMITTEE OF THE
HOUSE ENERGY AND COMMERCE COMMITTEE
AND THE
ENERGY AND ENVIRONMENT SUBCOMMITTEE OF THE
HOUSE INTERIOR COMMITTEE

October 27, 1981

I am Jerome J. McGrath, President, Interstate Natural Gas Association of America, often referred to by its acronym, INGAA. We appreciate this opportunity to appear before your Committees to express our endorsement of and support for the Alaskan Northwest Natural Gas Transportation project. Final approvals for this project are long overdue, and favorable Congressional action on the waiver package is essential to development of a financing plan which will, hopefully, enable the project to go forward.

INGAA is a national trade association representing virtually all of the major interstate natural gas transmission companies in the United States. Our members account for approximately ninety percent of all natural gas transported and sold in interstate commerce. All of the U. S. pipeline partners in Alaskan Northwest are members of INGAA either directly or through affiliates or subsidiaries. You have heard testimony from most, if not all, of the partners, and INGAA certainly joins in their unified support of the project and request for approval of the waiver package.

Since these companies are much more familiar with the proposed waivers and are in a much better position to comment on them than we are, my statement will not address the waivers as such. What I do wish to stress is the importance the natural gas pipeline industry attaches to securing natural gas supplies from Alaska at the earliest possible time. The delays encountered by

the effort to bring Alaska natural gas to the lower forty-eight states have been endless. The first proposal to build a pipeline from Alaska to the upper Midwest was submitted to the Federal Power Commission in March, 1974 -- over seven years ago. Since that time, the cost has spiraled upward and today financing is the critical issue that must be resolved. Without approval of the waiver package, the economic viability of the project is in grave doubt and even further costly delays are sure to follow.

The long and short of it is, we sorely need the Alaskan gas in the lower forty-eight states, and the Northwest Alaskan project is the best available means to get this gas to market. Alaskan gas will be needed to offset the gradual decline in lower forty-eight reserves of gas which most forecasters predict will occur. As has been pointed out to you previously in these hearings, the U. S. is currently producing more gas annually than we are finding, although the discovery rate of new reserves has increased dramatically since passage of the Natural Gas Policy Act (NGPA) in 1978. Nevertheless, the largest single untapped reserve of natural gas in the United States is the Prudhoe Bay area in Alaska, containing some twenty-six trillion cubic feet of proved reserves. With lower forty-eight production estimated to decline from about 20 Tcf. in 1980 to about 16 Tcf. in 1990, it is apparent that Alaskan gas must be brought into the lower forty-eight as early in the 1980's as is possible. Without Alaskan gas, there will be a considerable shortfall in supply available to meet projected demand.

Most current estimates project Alaskan gas coming on stream in 1986 and gradually increasing to about eight to ten percent of total U. S. supply by

1990 and beyond. The line would have an initial capacity of 2.0 to 2.4 billion cubic feet per day (Bcf/d) with the capability for expansion to an average daily volume of 3.2 Bcf/d. These are significant amounts of gas to be introduced into the lower forty-eight states' market.

The U. S. pipeline partners in their own systems cover practically every area of the country -- from the East Coast to the West. These companies, after exhaustive study, have determined that not only will Alaska gas be needed to shore up declining supplies but that it will be marketable in their respective service areas. The cost of competitive sources of energy, principally fuel oil and electricity, are constantly rising in most regions of the country; and natural gas is still a bargain, even with higher supplemental sources such as high BTU coal gas and Alaskan gas. Moreover, as the cost of the Alaskan Northwest project is amortized over the project life, the cost per MMBTU becomes lower, enhancing its competitive posture. From the point of view of the interstate pipelines, the Alaska project presents a viable source of new supply; and the sooner it becomes available, the better off we all will be.

Finally, the Congress cannot overlook the fact that Alaskan gas can offset oil imports by a significant amount -- anywhere from 400,000 to 600,000 barrels per day, depending on the amount of gas delivered through the ANGTS. From the national security standpoint and certainly as a means of reducing our balance of payments, it makes eminent good sense to reduce our dependency on OPEC imports and increase our reliance on known sources of energy in Alaska and the North American Continent. The Alaskan Northwest project would be a major step in that direction.

The interstate pipeline industry, therefore, believes it imperative that the Alaska Northwest project go forward as expeditiously as possible. Congressional approval of the waiver package is essential.

I thank you for this opportunity to appear before your Committees to express INGAA's support for this important project.

FOR RELEASE ON DELIVERY
EXPECTED AT 10:00 A.M.
October 30, 1981

STATEMENT OF THE HONORABLE ROGER W. MEHLE
ASSISTANT SECRETARY OF THE TREASURY (DOMESTIC FINANCE)
BEFORE THE SUBCOMMITTEE ON ENERGY AND THE ENVIRONMENT
AND THE SUBCOMMITTEE ON FOSSIL AND SYNTHETIC FUELS
U.S. HOUSE OF REPRESENTATIVES

Messrs. Chairmen and Members of the Subcommittees:

I am pleased to have this opportunity to assist you in your consideration of the waiver of law submitted by the President to Congress on October 15 for the Alaska Natural Gas Transportation System (ANGTS). In proposing this package of waivers to Congress, the President aims to facilitate the private financing, and hence construction, of this multi-billion dollar energy transportation system. I urge Congress to adopt this waiver proposal in support of the expeditious completion of this important energy project on a privately-financed basis.

Background

By enacting the Alaska Natural Gas Transportation Act of 1976, Congress recognized the importance to our Nation of transporting the Prudhoe Bay gas to the lower forty-eight States. The Act provided a unique and comprehensive process to designate and approve a sound proposal for a natural gas transportation system, and to expedite its construction and operation. The Act required the President to submit to Congress a financial analysis of the system

designated for approval, along with a determination of whether the designated system could be privately financed, constructed and operated.

In response to this statutory provision, the Treasury Department prepared an extensive study in 1977 of the sources of funds available to finance the proposals for the ANGTs. The report concluded that an economically viable system to transport gas from Alaska to the lower forty-eight States could be privately financed -- that is, without Federal financial assistance. The report found, however, that a private financing would be difficult to arrange without prior resolution of a number of issues, such as determining a rate of return on the investment, forming a final consortium of equity investors in the project, and determining the extent to which benefited parties would provide financial support to the project. The feasibility of private financing could be determined only after these issues were resolved.

In 1977, President Carter reflected Treasury's findings in the Decision and Report to Congress on the Alaska Natural Gas Transportation System which designated the proposal of the Alcan Pipeline Company, predecessor to Northwest Alaskan Pipeline Company, to transport the natural gas from Prudhoe Bay to the contiguous forty-eight States. The Decision also specified terms and conditions under which the private financing would occur. These terms included:

1. a prohibition against gas producers' equity interest, voting power or management control in the Alaskan segment;
2. the exclusion of the gas conditioning plant from the pipeline system; and
3. a prohibition against the use of consumer charges prior to completion and commissioning the entire system.

As stated in the Decision, the terms and conditions were not meant to limit or foreclose their later modification, but were intended to begin the process by which a set of effective and workable guidelines evolved. Without a doubt, the Decision recognized the unprecedented physical size of ANGTS as an energy transportation system, and its enormous debt financing requirements. What few realized, however, was the magnitude of the project's need for funds as the proposal would approach reality.

Resolving a number of technical issues associated with the pipeline proposal required almost four years. In May 1981, the gas producers and pipeline sponsors reached agreement on a conceivable plan for financing the system on a private basis. Major provisions of the plan included:

- . Capital costs estimated at \$27 billion (\$21 billion for the pipeline, \$6 billion for the gas conditioning plant), with an additional \$3 billion for a completion assurance pool
- . a debt/equity ratio of 75%/25%

- . an equity split of 70%/30% between sponsors and producers respectively, with each group responsible for an equivalent percent of the debt of the pipeline project.

The plan aims to accommodate the private financing of the pipeline the cost of which has escalated substantially during the past four years from an estimated \$10-\$13 billion to \$30-\$40 billion.

Waiver Proposal

Since the sponsors' financing plan for the system would require key modifications in existing statutes, President Reagan transmitted the proposed waiver of law to Congress in accordance with the Alaska Natural Gas Transportation Act.

The package of waivers submitted by the President proposes both substantive and technical changes to existing law to facilitate the private financing of the project. Three specific waivers which I would particularly like to discuss concern producer equity participation, the inclusion of the gas conditioning plant in the system, and billing prior to completion of the entire transportation network.

Producer Participation. As stated in the Decision in 1977, the strength of the sponsoring consortium of gas transmission companies was a significant element of the financing. In 1981, the strength of the consortium remains an important element in financing the project; but the substantial increase in credit support required to fund the system relative to the aggregate financial capability of the pipeline sponsors necessitates producer

equity participation. Creditors of the project will be concerned that the equity owners of the pipeline system possess the financial strength to complete the project and to help assure repayment of the debt. The participation of the gas producers on an equity basis will substantially add to the financial capability of the project participants to support the project, and thus facilitate its private financing.

Gas Conditioning Plant. ANGTS comprises four pipeline segments -- an Alaskan segment which will run from the Prudhoe Bay reserves southward to the Canadian border; a Canadian pipeline segment which will extend from the Alaska-Yukon border to Central Alberta; and from Central Alberta, Eastern and Western Legs which will transport gas to the Chicago and San Francisco areas, respectively. An integral part of the system also is the gas conditioning plant which prepares and readies the natural gas for shipment. The purposes and benefits of the pipeline and conditioning plant are intertwined -- both are required in the delivery of gas from Alaska to the ultimate consumers. In arranging the private financing, therefore, potential creditors of the system will evaluate the risks inherent in the entire project, including the conditioning plant. Before extending any funds, they will require assurance that all parties of the closely-integrated system have financial backing for its completion. An underlying regulatory and tariff structure comprising the whole system as one unit, as the waiver would allow, seeks to provide such assurance.

Billing Commencement. The waiver of law also includes a provision allowing the Federal Energy Regulatory Commission (FERC) to allow billing for transportation charges through the pipeline system prior to completing and commissioning the entire system. This provision would separate the ANGTS into three parts for billing purposes: an Alaskan pipeline segment, an Alaskan gas conditioning plant segment and a Canadian pipeline segment. For the Canadian segment, the full cost of service would be recovered upon completion of that segment, but no billing would begin on that segment prior to a date established by FERC. Upon completion and successful testing of the Alaskan pipeline segment, the waiver would permit recovery of a minimum bill consisting of actual operation and maintenance expenses, actual current taxes, and amounts to service principal and interest on debt. The billing, however, would not commence prior to a date established by FERC. Likewise, recovery of a minimum bill on the gas conditioning plant segment could begin upon its completion and successful testing, but not prior to the date established by FERC. This waiver would provide some assurance against the risk of not completing one of the Alaskan portions, or of the Canadian segment. This waiver, therefore, would protect potential lenders against the unlikely event of non-completion of related portions of the system, but lenders would bear the risk of non-completion of the segment financed by them.

Conclusion

The Alaska Natural Gas Transportation System is the largest construction project ever contemplated by private enterprise. Although the requisite financing is uniquely large, complex and difficult, private financial markets appear capable of providing the estimated funds required for the project. In the United States, between \$400 billion and \$500 billion of new credit is generated on an annual basis, and these amounts do not take into consideration the financial capacities of foreign markets which may fund a substantial portion of the needed capital for the project. Furthermore, the funding needs of the project will not be met at one point in time, but will probably be phased in over a number of years. Thus, the financing requirements of the pipeline project will likely have a minimal effect on the financial markets, interest rates, and financing of other energy projects. Since the waiver package aims to facilitate the private financing of the project, and since private investors will not provide funds if the project does not appear to be economically feasible, there will be a free market determination of the allocation of economic resources to the project. Resources will thus be diverted from other, less efficient energy projects. Adequate equity and debt capital should be available, given the market's judgment that the project is economically feasible. Under such circumstances, the project would be financed and would benefit the economy.

In this regard, the Economic Recovery Tax Act of 1981 will play a role in determining the project's feasibility. While the Investment Tax Credit may be available to project sponsors during the construction phase, this availability was not appreciably altered by the Economic Recovery Tax Act of 1981. The Act does provide more generous cost recovery than was available under prior law in that the cost recovery period is reduced. However, as under prior law, cost recovery is not allowed prior to the year in which the property is placed in service.

We concur in the judgment of private financial advisers to the pipeline sponsors and gas producers participating in the project that Congressional adoption of the waiver package is essential to developing any possible plan to finance the project privately. While we cannot be completely assured of private financing if these waivers are adopted, we are certain that the project will not be financed without the waivers. I therefore urge Congress to approve the proposed waivers.

I would be happy to answer any questions.

STATEMENT OF JOHN T. RHETT
FEDERAL INSPECTOR
OFFICE OF THE FEDERAL INSPECTOR
FOR THE ALASKA NATURAL GAS TRANSPORTATION SYSTEM

Before the House Energy and Commerce Subcommittee
on Fossil and Synthetic Fuels
and the
House Interior and Insular Affairs
Subcommittee on Energy and Environment
October 30, 1981

Mr. Chairman and Members of the Committee, I am pleased to have the opportunity to appear before you today. I am John T. Rhett, Federal Inspector for the Alaska Natural Gas Transportation System. To assist in your evaluation of the proposal before you today, I would like to take this opportunity to explain the Office of the Federal Inspector (OFI) and its past and future relationship to the Alaska Natural Gas Transportation System. This project has received much attention and Presidential and Congressional support for the expeditious construction and initial operation of this vital, national energy project has been voiced on a number of occasions.

The Alaska Natural Gas Transportation System (ANGTS) is one of the most ambitious construction projects undertaken in modern times. It will be the largest privately financed project ever constructed and the first buried, chilled gas pipeline ever built in permafrost. Prudhoe Bay contains 26 trillion cubic feet of recoverable natural gas and is the largest U.S. reserve. The pipeline will deliver approximately 4 percent of the annual needs of the United States. Because the design of the Alaska Natural Gas Transportation System will allow it to carry up to 3.2 billion cubic feet per day with additional compression, production from other reserves can also be transported to further supplement our domestic supplies.

The project entails construction of approximately 4,800 miles of large diameter pipeline. The system is commonly divided into four segments: the Alaskan Leg, the Canadian Leg, the Western Leg, and the Eastern Leg. It will traverse eleven states and four Canadian provinces, from the north slope of Alaska to the Chicago and San Francisco areas. The pipeline route starts at Prudhoe Bay, Alaska and parallels the Trans-Alaska Pipeline System to Delta Junction, southeast of Fairbanks. From that point, it parallels the Alaska Highway through Alaska, the Yukon Territory, British Columbia, and Alberta. At James River, Alberta, it divides into two delivery legs. The Western Leg begins in Alberta and continues through British Columbia, Idaho, Washington, Oregon and California before terminating near San Francisco. From James River, Alberta, the Eastern Leg of the system crosses Alberta, Saskatchewan, Montana, North Dakota, South Dakota, Minnesota, and Iowa before terminating near Chicago, Illinois. This project is being constructed in two phases. Construction of Phase I, sometimes called "prebuild", has been financed and is underway. Phase I consists of construction of parts of the Canadian section south of James River and construction of parts of the Eastern and Western Legs in the United States. Phase I will deliver Canadian gas exported from the Province of Alberta to the West Coast and the mid-West.

On October 1, 1981, Alberta gas began flowing through the Western Leg of the Alaska Natural Gas Transportation System. Existing U.S. and Canadian pipelines were expanded, or looped, to carry this gas. This work represents successful completion of approximately 290 miles of the total project. An additional 395 miles were completed on the Western Delivery System, a related facility in the U.S. Some work on ancillary facilities remains on the U.S. portion of the Western Leg and the Western Delivery System, but

this did not impair the system's ability to transport gas on the scheduled operation date.

Construction of Phase I of the Eastern Leg is proceeding ahead of schedule in both the U.S. and Canada. Foothills Pipelines Company, Ltd., the sponsor of the Canadian portion, has completed construction of about 268 out of a total of 397 miles of pipeline. Clean-up activities, hydrostatic testing, and compressor and meter station construction are scheduled to be completed in 1982. On the U.S. portion, about 580 of the total 823 miles are finished. By the end of this year, it is expected that about 78 percent of the U.S. portion and about 68 percent of the Canadian portion will be completed. The Eastern Leg is scheduled to begin operations in September 1982. The Eastern Leg will carry 975 million cubic feet per day of Alberta gas to U.S. consumers in the midwest. When Phase I is finished, almost one-third of the mileage of the Alaska Natural Gas Transportation System will be completed. At this time, it appears that both the Eastern and Western Legs will be completed under budget.

The Office of the Federal Inspector (OFI) is a separate Federal agency created by Reorganization Plan No. 1 of 1979 solely to expedite and oversee the planning, construction, and initial operation of the Alaska Natural Gas Transportation System. It will cease to exist one year after initial operation of the pipeline system. In recognition of the specific problems encountered during construction of the Trans-Alaska Pipeline System, as well as the general difficulties encountered on many large energy projects, the President and the Congress gave the OFI broad authority covering every Federal regulatory responsibility related to the Alaska Natural Gas Transportation System.

First, although the Federal agencies retain the responsibility to issue the necessary permits, the OFI is charged with assuring that these permits are issued in a timely fashion. To manage this complex process for the Alaskan Leg, the OFI acts as the focal point, or "one window," during the permitting process, thus relieving the sponsors of the burden of dealing with many agencies. The OFI also reviews the permits to assure that no conflicting or unreasonable conditions are attached. Our efforts are focused on assuring that the process runs smoothly and that problems are identified and resolved early. Extensive coordination with the sponsors and the Federal and State agencies is necessary to achieve an equitable balance among all objectives. Through this process, three important objectives are being achieved. First, the regulatory burden on the sponsors is reduced. Second, the Federal permitting process does not delay work on the project. Third, through OFI's review, the potential for conflicting and unreasonable Federal requirements is reduced.

Obviously, achievement of these objectives requires extensive coordination with the Federal agencies. Through Reorganization Plan No. 1 of 1979 and Executive Order No. 12142, two special mechanisms were created to assure that this coordination occurs. First, an Executive Policy Board composed of senior policy-level representatives of the involved agencies was created to advise the Federal Inspector. Second, each agency was required to appoint an Agency Authorized Officer to act as the focal point for all agency activities on the project. To date, OFI has had extremely good cooperation from the Federal agencies involved in the project. The experience on Phase I has shown that, when the pace of the project accelerates, the agencies will put narrow interests aside and work constructively toward the common goal of expediting the project. I am confident that we can expect the same level of cooperation on Phase II.

To achieve its mission, the OFI must also work closely with the state governments involved in the project. Overall, we have been extremely pleased with our experience on Phase I. We have received outstanding cooperation and have been able to work with the states to minimize duplicative and conflicting monitoring efforts. Even though certain jurisdictional disputes between the Federal government and the State of North Dakota resulted in court actions, the State and OFI have since established very positive relations and we do not anticipate any difficulties during construction in that State. Due to the sensitive environment and large amount of State land crossed by the project, the President and the Congress recognized that special efforts should be taken to assure that the Federal Government's and the State of Alaska's monitoring efforts are compatible. Thus, the Alaska Natural Gas Transportation Act and the President's Decision directed the Federal Inspector to establish a Joint Federal/State Monitoring Agreement with the State of Alaska. In addition to conducting initial negotiations on this Joint Agreement, the OFI has established a number of special procedures to assure that the State's concerns are fully represented during the early planning, permitting, and design processes.

Before construction, the OFI is also required to approve the project sponsor's management plans, designs, final cost estimates, construction schedule, cost and schedule control systems, and quality assurance plan. These are unique requirements, designed specifically to achieve two objectives:

- 1) to assure that the necessary planning is complete before construction begins; and
- 2) to define--in advance and as precisely as possible--the conditions under which the project will be constructed.

The OFI is responsible for enforcing all Federal laws, regulations, and permits governing the project. This enforcement responsibility was transferred to the OFI by law and covers, among other areas, environmental protection, pipeline integrity, equal employment opportunity, and minority business enterprise participation. This centralization of authority is unique. During construction, only the Federal Inspector enforces the legal requirements imposed on the project by the Federal agencies' permit conditions. The Executive Policy Board may offer advice to the Federal Inspector, but the Federal Inspector is the sole Federal decision-maker for construction. Because the Federal Inspector is responsible for assuring that the sponsors build the project in a cost-effective and expeditious manner, in addition to the traditional governmental responsibility for public and pipeline safety and environmental protection, his decisions must reflect a careful balancing of all objectives. Moreover, because the Office of the Federal Inspector's authorities cover nearly every aspect of the project from the early planning stage through initial operation, its decisions will have a broader perspective and more continuity and consistency than those of an agency with a more limited focus of responsibility.

The OFI was established in July 1979. In December 1980, when construction began on the Western Leg, this experiment in public administration began to be tested. Although various refinements will have to be made to accommodate the complexity of the Alaskan Leg, I believe that our experience on Phase I of the Alaska Natural Gas Transportation System has shown that regulatory requirements and construction realities can be responsibly balanced, without unduly restricting industry's activities. The OFI's project oversight philosophy centers around my firm belief that the Federal government can work cooperatively with the sponsors and the Federal and

State agencies while still protecting the public interest by assuring that the pipeline is built safely and expeditiously in a cost-effective, environmentally sound manner. I firmly believe that cooperation is essential, but I have never believed that elimination of all conflicts is possible. When agreement cannot be reached through hard bargaining, OFI has the authority -- and the responsibility -- to assure that an acceptable solution is implemented. The responsibility for building this project lies with the sponsors; the OFI is responsible for overseeing their work to assure that it conforms to applicable requirements. This is an unusual role for the Federal Government and one that demands careful control to assure that the OFI's regulatory responsibilities are fulfilled and the public interest protected, without the Federal Government unnecessarily directing private enterprise's efforts to accomplish the job.

Because Phase II of the project is of critical concern in these proceedings, I would like to discuss the status of design and planning for the Alaskan Leg. Before they may begin construction, the project sponsors need three major permits. One, the Department of the Interior's Right-of-Way Grant which authorizes the crossing of Federal land, was issued on December 1, 1980. The State of Alaska must also issue a Right-of-Way Lease to authorize the crossing of State land. The OFI will continue to assist the State's and the sponsor's efforts to work out the detailed provisions of this Lease. Work on the Federal Energy Regulatory Commission's (FERC) Certificate of Public Convenience and Necessity, is underway. In July 1980, when the project sponsors filed the cost estimate for the Alaskan Leg, a special process was established to review this estimate. This included a joint FERC/OFI staff review. This review is now complete and the FERC has received comments on the report. In addition to a final decision

on the cost estimate, the Certificate proceedings will include review of the sponsor's tariffs, financing plan, marketability analysis, and net national economic benefit and cost-of-service calculations. The sponsors have not yet filed these elements of their Certificate application.

As you may know, in July 1980, the sponsors and the producers agreed to jointly fund the design of the Alaskan Leg and the gas conditioning plant. The effort expended to date will help avoid future problems and ultimately assist in achieving cost-effective design and construction. This effort has included a substantial amount of money spent to conduct a number of field programs designed to gather geotechnical and environmental data necessary for design. These field programs have included pipe stress tests, borehole drilling programs, fisheries surveys, endangered species studies, trench stability tests, blasting studies and detailed alignment surveys. This pre-design work is essentially completed thus enabling the sponsors to finalize the design criteria and proceed with the detailed pipeline design. Design of the Compressor Stations and the gas conditioning plant has progressed far enough to allow the sponsors to develop detailed specifications and assemble the initial procurement documents.

The ability to develop a design that will adequately protect the pipeline from the effects of frost heave has been the major technical concern from the beginning. Because this will be the first buried, chilled pipeline and because it will pass through frost-susceptible soils, this is the first time that this problem has been encountered. During the past two years, industry, government, and academic permafrost experts have worked on this problem together. The basic scientific problems have been resolved and only development of the detailed engineering remains. These efforts have demonstrated that the sponsors possess the technical capability