

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

480 SCOMM14: JOINT GAS PIPELINE COMM. (FINANCING) 1979-80

in other pipeline corridor communities may be only marginally economical. However, the report does not include any analysis of the effects of the recent OPEC oil price increases. Northwest reiterated its support for establishing gas taps along the pipeline corridor, suggesting that the next step is "an economic feasibility analysis by the State." The price of gas depends on three factors: (1) field price; (2) pipeline transportation costs; and (3) distribution costs. The distribution costs are likely to be the major cost for any instate use.

Fairbanks Area Markets: If electrical power generation is part of the Fairbanks area demand, then, the report suggests, an adequate market for natural gas exists in the area. Electrical generation at Ft. Wainwright and Eielson Air Force Base is expected to remain coal-based. Northwest found "a strong interest in the private sector" in natural gas distribution "provided the gas can be competitively priced relative to other fuels."

Delta Area Markets: Northwest identified these possible markets: grain drying complex; space heating for Ft. Greeley, Delta Junction and Big Delta; and electrical generation for the Delta area. Promoters of Delta agricultural growth are interested in using natural gas, and two of the three proposed sites for a grain drying/elevator complex are "only 600 feet from the pipeline right-of-way."

Tok Area Markets: Possible space heating and electrical generation use exists in the Tok area. "The use of natural gas to generate electricity appears more promising than home heating distribution."

The Northwest report briefly discusses the factors affecting the economic feasibility of local gas distribution systems. The "load," the volume of demand and whether it is sufficient to pay for delivery costs, is the key economic factor. The delivered gas price cannot be more than the price of No. 2 home heating oil on a BTU-equivalent basis if it is to be economically attractive.

The high volumes of gas required for Alaskan winter heating would leave the system operating "at much less than capacity for the remainder of the year." Without local industrial customers to take up the offseason load, the corridor gas distribution systems "would face severely low load factors (that) would greatly increase their cost per million Btu delivered."

Another factor in instate gas use would be the timely conversion of existing heating systems to gas usage, and the economics of making the conversions. The report also indicates that additional industrial use, such as electrical generation and grain drying, improves the economics of pipeline corridor gas distribution systems. The report concludes, however, that in communities other than Fairbanks, "economic feasibility is marginal."

In a cover letter accompanying the report, Northwest noted, however, the following:

- (1) The report does not include any economic analysis of the effects of the recent OPEC oil price hikes (or projected growth in oil prices over the next few decades);
- (2) The report does not anticipate any major new industrial markets, except the Delta grain drying complex;
- (3) The report does include the use of gas for electrical generation as it appears that the Federal Energy Regulatory Commission may allow such use for power generation in lieu of heating oil use.

It should also be noted that the report examines only the use of natural gas through direct taps and distribution systems, not the potential uses of such gas-based products as propane for instate heating.

GAS SALES

With Atlantic Richfield's recently announced gas sales, all Prudhoe Bay gas (except the State's royalty share) is now covered by sales contracts, tentative as those contracts may prove to be. The total estimated volume of Prudhoe Bay gas is about 26 Trillion cubic feet, or 2.4 Billion cubic feet/day. Of that total ARCO owns 31.5%; EXXON, 31.5%; SOHIO, 23.5%; and State of Alaska, 12.5%.

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As a result of the three producers' tentative sales, the Prudhoe Bay natural gas should go to the following gas transmission companies: *Northern Natural Gas, 18.3%; Columbia Gas Systems, Inc., 15.5%; Michigan Wisconsin, 10.5%; *Pacific Gas & Electric, 10.5%; *Pacific Interstate Transmission, 10.5%; *Panhandle Eastern Pipeline, 6.3%; *United Gas Pipeline Co., 4.73%; Texas Gas Transmission Corp., 3.78%; and Texas Eastern Gas Pipeline Co. and Transwestern Pipeline Co. (both subsidiaries of Texas Eastern Transmission), 3.15% each. The State has not entered into sales contracts for its 12.5% share of the total volume.

Those companies starred with an asterisk (*) above are current partners in the Northwest Natural Gas Transportation Co., sponsors of the Alaska segment. Of the pipeline project partners, only Northwest Energy Co. has not purchased North Slope gas, nor is it expected to. Those companies which have agreed to purchase North Slope gas but which have not become Northwest partners are Columbia, Michigan Wisconsin, Texas Gas, and the two subsidiaries of Texas Eastern Transmission.

This report was prepared on behalf of the Joint Gas Pipeline Committee by Mary Halloran, Research Analyst.

Joint Gas Pipeline Committee
Alaska State Legislature

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MID-INTERIM REPORT

Joint Gas Pipeline Committee
Alaska State Legislature

October 10, 1979

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The Joint Gas Pipeline Committee met formally June 4, 1979, in Anchorage to organize the Committee's work for the interim. (A report on that meeting is attached). Since that time Committee members have had informal discussions with the new Federal Inspector for the Pipeline, John Rhett; Canadian Pipeline Commissioner, Mitchell Sharp; and, on more than one occasion, Northwest Energy president, John McMillian.

The Committee co-chairmen, Sen. Mike Colletta and Rep. Bill Miles, served on the Governor's Blue Ribbon Working Group on the Gas Conditioning Plant for Prudhoe Bay Gas. In addition, Rep. Miles and House members, Speaker Terry Gardiner and Rep. Sam Cotten, traveled to New York and D.C. to discuss the gas pipeline project with major Wall Street investment firms, members of the Federal Energy Regulatory Commission (FERC), and White House and Congressional staff.

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Recently Sen. Colletta and Don Wold of the Alaska Royalty Oil and Gas Development Advisory Board traveled to Tulsa, Oklahoma, and Houston, Texas, to investigate the interest of major petrochemical firms in gasline-connected petrochemical development in Alaska.

Members of the Committee have worked extensively on gasline-related issues through other forums. A two-day hearing on the management of the Prudhoe Bay reservoir was held by the House Resources Committee, under the direction of Co-chairman Miles, during the August Special Session. Several Committee members, as well as other legislators, presented testimony at the September 4-6 FERC hearings on the Draft Environmental Impact Statement for the gas conditioning plant and pipeline pressure issues.

GAS PIPELINE FINANCING

The Committee has received much informal and formal information on different aspects of the gas pipeline financing, and the State's options for participation in project financing. The following sections will review that information.

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1. Regulatory issues:

In a major ruling, the FERC issued a final Incentive Rate of Return (IROR) order September 6. The order sets a 17.5% rate of return as a centerpoint for equity investors in the Alaska and Northern Border segments of the project. The order, however, may be indirectly challenged in other FERC proceedings as it sets the framework for gas producers to pay gas conditioning costs, an item of strong contention. Another still unresolved tariff-related concern is tracking -- how to allocate costs to consumers and gas service companies for Canadian gas flowing in the pipeline system before the full system goes into operation. On the strength of the IROR and other favorable regulatory decisions, Northwest currently plans to have a financial plan in place by the end of this year and to talk with investment markets during the first quarter of next year.

2. Constitutionality of Using State General Obligation Bonds for Equity Participation in the Gas Pipeline

In a July 9, 1979, memorandum, State Bond Counsel Wohlforth and Flint confirmed the earlier conclusions of Billy Berrier, Director, Division of Legal Services, Legislative Affairs

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Agency. In brief, Wohlforth and Flint stated that the constitutionality of using State General Obligation bonds for equity participation in the gas pipeline would rest on two points:

"First, the project so financed must constitute an asset of relatively permanent value; and, second, the issuer of the bonds must retain some legal interest in the project."

That legal interest, suggested Wohlforth and Flint, could be through a "tenancy in common, mortgage, deed of trust, or other security interest in the pipeline."

The memorandum made clear that the spinoff benefits of the pipeline construction and operation are not sufficient legal grounds to render General Obligation bonds constitutional.

"Mere general improvement of public prosperity and welfare, and even removal of economic insecurity, while viewed as laudable purposes, do not in themselves constitute capital improvements."

After examination of the related court cases, Wohlforth and Flint concluded that investment of State General

Obligation bonds could probably meet the "physical" requisites of the "capital improvements" restriction on such bonds. They added,

"However, the state must acquire sufficient legal interest in the capital improvement to overcome the constitutional deficiencies set forth in Hixson. An investment by the state of bond proceeds in 'equity related securities' does not meet this test. The financing must be accompanied by some form of interest in the pipeline. Clearly, the interest would have to be equivalent in value to the amount of bond proceeds devoted to its acquisition."

3. Bonding Authority

In 1978, the State Legislature passed AS 44.55, establishing the Alaska Gas Pipeline Financing Authority, commonly referred to as the Bonding Authority. The Authority is a mechanism by which the State may issue up to \$1 billion in tax-exempt bonds for construction of the gas pipeline.

Northwest Pipeline Company sought to have consideration of revisions in the Bonding Authority legislation placed on the August Special Session agenda. Although that step was not

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taken, consideration has been given to technical changes which may be needed to clarify the Authority's legal ability to issue bonds.

In a September 21, 1979, report to Revenue Commissioner Tom Williams, Director of the Bonding Authority, Attorney John Messenger outlined those technical changes. Messenger did not discuss, nor was he asked to review, the policy matters inherent in the financial and Alaska impact plan called for under AS 44.55.

In general, the possible technical changes Messenger reviewed include:

(1) clarification and broadening of the purposes for which bonds of the Authority may be issued;

(2) a. provision that legislative approval of the financing and Alaska impact plan (hereinafter referred to as the Plan) and legislative approval of bonds be contained in separate concurrent resolutions;

b. provision that legislative approval of the bonds may contain such limitations as the Legislature deems appropriate;

c. elimination of the requirement that bonds be issued and sold in accordance with the Plan;

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- (3) revision of the statute sections dealing with refunding bonds so that confusion over the approval process for such bonds is eliminated;
- (4) provision for amendments of the Plan after passage by the Authority of a resolution authorizing sale of the bonds;
- (5) provision for approval of the Plan (or a conditional Plan) by concurrent resolution;
- (6) addition of language excluding the Authority or its bonds from AS 37.10.085 which prohibits the State from lending its credit or borrowing money for the use of a corporation;
- (7) revision of AS 44.55 to include certain requirements which would meet proposed IRS regulations concerning the Authority's ability to act "on behalf of" the State and thus to issue tax-exempt bonds;
- (8) modification of the Legislative findings to support the conclusion that gas pipeline financing by the Authority is for a public purpose; and
- (9) other minor textual changes.

Messenger is drafting legislation embodying these changes for consideration by the Administration and the Legislature.

4. Availability of State Funds for Investment in the
Gas Pipeline Project

In an August 3, 1979, memo, Fiscal Analyst Milt Barker, of the Legislative Finance Division, reviewed whether projected FY 80 State revenues would permit an appropriation of \$500 million for a direct investment in the gas pipeline. Barker concluded sufficient funds do exist whether such an appropriation was paid over at once or drawn down over a period of time. He cautioned, however, that FY 80 receipts depend, in substantial part, on the results of pending litigation over the petroleum income tax.

The Legislative Finance Division did not analyze -- nor was it asked to do so -- the financial policy implications of a \$500 million direct appropriation to the pipeline project or the economic opportunity costs to the State of taking that action. The Division has been asked to prepare -- and the Committee expects to receive shortly -- an analysis of all projected revenues, both direct and indirect, the State would obtain from the successful construction and operation of the gas pipeline.

5. Federal Assistance to the Gas Pipeline

A July 27, 1979, report by the law firm of Birch, Horton, Bittner and Monroe examined current prospects for federal assistance to the gas pipeline. Prepared by attorney Joseph Chomski, with the assistance of Richard Haggart and Lisa Nelson, the report described possible forms of Federal financial participation as follows:

- (1) Direct loans to the project;
- (2) Loan guarantees for the project;
- (3) Federal guarantee of the prices of the gas supplies;
- (4) Federal guarantee of Federal government purchases of such gas supplies.

These forms of federal support could be possible through Congressional passage of President Carter's proposed Energy Security Corporation legislation.

The most likely form, Chomski concluded, is provision of loan guarantees for at least a portion of the pipeline project. The loan guarantees would be structured within the parameters proposed in the Energy Security Corporation legislation, the report suggested.

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Another "much more remote" possibility for federal assistance would be provision of purchase guarantees for some or all of the North Slope gas. Such an approach would involve a "subsidy loss to the Treasury," an alternative the report authors find "extremely unlikely."

Regardless of the form, the probability of federal financial assistance "has become quite likely." The report states,

"Thus, in the event that the project fails to finance privately, as now seems likely based on numerous expressions from the financial and energy community, federal financial support would seem to be very likely in that federal assistance to the project would result in the easiest, least expensive (to the federal government), earliest, largest, and -- most importantly -- surest single increment to the nation's energy supply of any of the options available to the federal government."

Federal participation is unlikely to be forthcoming "until Northwest concedes that it cannot finance the line privately (as promised to Congress) and either directly or via the Administration requests federal assistance." Congressional

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feeling, the authors found, towards federal backstopping remains negative as does public support for such action. In addition, no evidence was found of a White House initiative to change its stated policy opposing federal financing for the project.

The report analyzed Northwest's reasons for not changing its position with regard to requesting federal assistance. The reasons are twofold:

(1) A Northwest request for federal assistance "will create major political problems for the project and for the existing project management."

"Consequently, we believe one major motivating factor for Northwest's not throwing in the towel on the private financing approach at this time is the fact that they must appear to have foreclosed every reasonable alternative to federal assistance before they return to Congress."

(2) Northwest wants to establish a clear public record that any failure of private financing is not the fault of project sponsors but rather of the federal regulatory process, and perhaps also of the oil companies (the gas producers) and the State of Alaska.

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For a number of reasons, the report authors believe that provision of federal financial assistance to the project will not occur before spring 1980 and more likely in 1981.

In conclusion, the report suggests steps the State may take in support of federal financing and of the project in general:

- (1) Provide Congress and senior Energy officials with information of positive State actions taken with respect to the project;
- (2) Conduct private and frank discussions with Northwest officials about the need for federal assistance; and
- (3) Take steps to protect the State's interests by positive action on Alaska's own program of financial assistance.

The need for eventual federal assistance to the project stated in the Chomski report was, in large part, substantiated by the findings of Rep. Miles from May visits with Wall Street investment firms, federal energy officials and White House and Congressional staff. In a June 18, 1979, memo, Miles reviewed several issues, including federal guarantees, Alaska's role, Canada's role, the Federal role, regulatory activity, conditioning plant, producer participation, expansion of the Northwest partnership, the El Paso proposal and future action. As that memo was distributed to all legislators, only brief

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mention of its contents will be made in this report.

Miles indicated that Wall Street firms believe that some form of federal financing for the project will probably be needed. In contrast, the federal officials stated that the Federal government's goal is still a "purely privately-financed project." Alaska's financial participation at this time was generally seen by Wall Street as a cosmetic or psychological gesture, but not as an action which would "make or break" the project. Such participation, however, was strongly encouraged by the federal officials.

According to Wall Street, the most necessary components needed by the project at this time are:

- (1) producer participation;
- (2) a reasonable attitude by regulatory agencies;
- (3) Canadian-U.S. interaction, especially on the Eastern leg; and
- (4) additional expenditures by the project sponsors for design, engineering and other technical work.

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The federal officials, Miles found, felt the four components vital to the project at this time are:

- (1) producer participation;
- (2) State of Alaska equity participation;
- (3) an expanded Northwest partnership; and
- (4) more aggressive assistance from the Federal administration.

In addition, federal officials predicted that the major regulatory issues, such as conditioning costs, rate of return, and pipeline pressure, would be both ruled on and litigated by this fall.

6. Northwest's Stance Toward State Participation in the Gas Pipeline

On August 29, 1979, John McMillian, Northwest president, sent letters to both President Jimmy Carter and Governor Jay Hammond about Northwest's "lack of success in obtaining financial commitments from the State of Alaska in a timely manner." To Hammond, McMillian wrote, "Therefore, we hereby withdraw the proposed financing plan and the other arrangements based thereon which we have with the State of Alaska."

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McMillian presented, however, two other financing concepts for the Governor's consideration:

(1) State participation in the entire project in relation to its 1/8th royalty gas,

"The state could provide 1/8th of the debt permanent structure, 1/8th of the construction overrun contingency fund, and some acceptable form of completion guarantee;"

(2) Structure State participation on the basis of participation by the oil companies,

"Another thought would be to wait and see what the final participation of the oil companies in the project will be and the state could then be expected to have a financing package similar to that of the oil companies."

In the letter to President Carter, McMillian stated that Northwest's original proposal to the State "is, as evidenced by two years of frustrating delays, evidently not acceptable to the State." He went on to say,

"We have never been able to explain the concept of tax-exempt bonds to the legislative members.

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Therefore, we are now suggesting another plan whereby the State participates in 1/8th of the debt structure, 1/8th of the construction overrun contingency fund, and some form of completion guarantee."

McMillian called the 1/8th concept "a fair and reasonable request," and asked Carter to make a request to Governor Hammond and Alaska for Alaska's participation in project financing. He concluded,

"If, even after your recommendations, we are not successful in obtaining the State's help and participation in project financing, it may be necessary to consider special federal legislation which will ensure that the State does not retain all of the project benefits, such as intrastate use of Alaska gas for Alaskans, and a very favorable wellhead gas price, without sharing in the debt structure of the project."

In his remarks to an Anchorage gathering October 5, 1979, McMillian reiterated his withdrawal of Northwest's previous financial proposal (\$1 billion in tax-exempt bonds and \$500 million in equity from the State) and mentioned the 1/8th approach as Northwest's new concept for financing. Everything, said McMillian, is open to renegotiation.

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OTHER REPORTS

In addition to the above-mentioned reports on gas pipeline financing, the Committee has received several reports on related issues. Those reports are reviewed in this section.

1. Final Report, West Coast Oil Surplus by Arlon Tussing

In an August 20, 1979, memorandum economist Arlon Tussing submitted his final report on the West Coast oil surplus issue. Tussing was under contract to help develop a strategy to solve the problem of "loss of state royalties and production taxes caused by the high cost of shipping 'surplus' Prudhoe Bay crude oil to Gulf and East Coast markets."

The problem was "solved," so to speak, by the agreement of North Slope oil producers to pay state royalties on the basis of the federal ceiling price, as of July 1, 1979, regardless of the oil's destination or transportation cost. The producers will also pay production taxes at the same rate. "Hence, exports or exchanges can no longer improve the state's immediate royalty and tax position," said Tussing.

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The State's effort to negotiate and get federal approval for international exchanges of Prudhoe Bay royalty oil would have been stalled, in any case, by the Congressional adoption of restrictive amendments to the Export Administration Act. The U.S. Senate, for example, adopted the Riegel Amendment which will make any future exchanges of North Slope crude difficult. The "surplus" problem will resurface for the State when federal price ceilings on crude oil prices are removed. The decontrol of crude oil prices, now scheduled for June 30, 1981, will make the Prudhoe Bay wellhead price again a netback price, determined by the oil's market value, less transportation costs. Under those circumstances, the State's fiscal interests would again be served by exports or international exchanges (as long as North Slope crude cannot be delivered to the nearest markets on the West Coast).

Tussing assessed the State's efforts to date to liberalize federal export restrictions as follows:

- (1) The efforts resulted in the Department of Energy conducting a formal study of the issue and DOE's ultimate position in favor of exports;
- (2) The proposed PEMEX exchange allowed the State to explain its case to a national audience and to receive national editorial endorsement;

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(3) Meetings between Alaska and California officials gave Alaskans "better insight into both the economics and the politics of petroleum on the West Coast and nationally;"

(4) Sohio's active cooperation, essential to the PEMEX proposal, was not realized, and Sohio's termination of the PAC-TEX project created Congressional ill-will toward any future exchanges which might benefit Sohio;

(5) The efforts "clearly failed" in Congress and "we may have failed only for lack of trying." Administrative and legislative indecision over whether to launch a serious lobbying effort led to no campaign by default.

Tussing also reviewed related issues, such as the use of North Slope crude in West Coast refineries, refinery modifications and grassroots refineries on the West Coast, and West-to-East oil pipelines..

The California Energy Commission, Tussing indicated, is today concerned about California refineries' high dependence on North Slope crude. The Commission wants to reduce that dependence and have contingency plans to deal with a possible cutoff. A North Slope cutoff would cause California to suffer "noticeable shortages in about seven days, and would result in serious economic disruption within two weeks."

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The picture for West Coast refinery modification and grassroots refineries is more complex. The growing scarcity of light crudes calls for major modifications in refineries. But, the fact is that present US and West Coast refineries may "already have as much gasoline capacity as the industry will ever need." Contributing to investor uncertainty are unsteady federal policy with respect to future production standards for gasoline and other regulatory restrictions.

The West-to-East oil pipeline proposals are not economically competitive with expansion of existing midcontinental pipelines without supplies of additional overseas crude oil. Such additional foreign supplies have been ruled out by President Carter with an announced ceiling on imports set at the 1978 levels.

2. Producer Benefits Model; Sadelrochit Formation, Prudhoe Bay Field: A Description of a Policy Evaluation Model,
by Lawrence Eppenbach

Through work begun with the Division of Legislative Research and completed under contract to the Department of Natural Resources, Eppenbach has set up a computer program series. The "Producer Benefits Model" evaluates Prudhoe Bay geological

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information along with the costs of alternative methods of developing the reservoir. Based on data prepared by H.K. Van Poollen and Associates and, to a limited extent, information provided by the field operators, the model can be used to "forecast state revenues and industry cash flows associated with alternative policy options. It also calculates the net present values of these future returns in order to compare the value of one policy option to another."

In addition, the series of computer programs allows the operator to set varying parameters for the analysis:

- whether to use constant dollars or to include the effect of inflation;
- how the producers expect to finance their capital expenditures;
- what future wellhead values are likely to be; and
- what discount rate should be used to calculate the net present values.

The model results should provide useful comparisons between one field development plan and another. It will also clarify any differences in economic incentives between the State and the industry. The scope of the model is limited, however,

to the Sadelrochit formation and only to field economics. Also it does not examine the economics of gas liquids production. Although more basic data is needed before the model can begin producing useful results, the model is now operational. It is available through the Division of Minerals and Energy Management, Department of Natural Resources.

Eppenbach's report includes sample outputs and contains program listings.

3. Progress Reports - The Doschers Group

Dr. Todd Doscher provides the Committee with an ongoing written overview of the work of H.K. Van Poolen and Associates on the State's three-dimensional reservoir model of Prudhoe Bay. Based on his work to date, Dr. Doscher's central conclusion is "that gas sales should not be committed until the need for water injection to at least compensate for gas withdrawals is firmly established, and still not then."

Gas withdrawals should not take place, Doscher indicates, until sufficient Prudhoe Bay reservoir performance history can be accumulated so that the effects of such withdrawals can be adequately inferred.

Other areas of concern to Doscher are Prudhoe Bay reservoir pressure maintenance, the "nebulous plans" of the operators with respect to water flooding, and the need for the State to assure the ultimate Prudhoe Bay oil recovery efficiency will be increased from the base 20% level to 40%. These and other concerns prompt Doscher to not only recommend no gas sales at this time, but to "express grave concern about increasing oil withdrawal rates."

Major technical problems in the three-dimensional work thus far have been "the assignment of permeabilities and the positioning of shale barriers in the model of the reservoir."

4. Progress Report - H.K. Van Poollen and Associates
and the Alaska Oil and Gas Conservation Commission

H.K. Van Poollen and Associates, under the direction of the Alaska Oil and Gas Conservation Commission, are responsible for a three-dimensional reservoir simulator model of the Prudhoe Bay reservoir and its performance. The purpose of the study is threefold:

- (1) should there be gas sales or not, and, if so, how much;

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(2) should pressure maintenance be employed, and if so, how much; and

(3) are the field oil and gas maximum production rates allowed under Oil and Gas Conservation Order 145 still valid.

Confirming match runs between the earlier two-dimensional computer model and the three-dimensional model are being run at this time, with comparison runs scheduled soon. These latter runs will look at ultimate oil recovery, with and without gas sales, and with and without water injection. A report is expected to be released by the end of this month on this work. Then, it is planned to do a series of "what if" runs which will explore questions such as the effect of rate of production on ultimate oil recovery. A report on these latter findings is expected by the end of November.

5. Progress Reports - Arctic Environmental Information and Data Center (AEIDC)

The AEIDC is collecting information on the status of technical, environmental and other matters relating to the pipeline project.

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Under AEIDC review are the right-of-way and proximity issues affecting the design and construction schedule of the project. The materials submitted with the AEIDC reports to date indicate that many specific technical issues still require resolution prior to a final right-of-way decision by the Department of Interior. One major concern is the risk to the TAPS oil line from building the gas pipeline in close proximity.

Another technical issue is the lack of definitive data on how the project sponsors will handle the problems of pipeline construction and operation in permafrost soils. Other issues include liability of TAPS owners with respect to joint use of the right-of-way, mitigation of impacts to fish and wildlife, and minimization of gas pipeline crossings with the TAPS oil line and the North Slope haul road.

A full report will be prepared by the AEIDC by October 15, 1979.

CONDITIONING PLANT

An issue which generated considerable discussion has been FERC's August 6, 1979, pipeline pressure order, its impact on the eventual location of the gas conditioning plant for the project and its effects on the viability of future instate use of North Slope natural gas. Also at issue are the conclusions and much of the content of FERC's Draft Environmental Impact Statement released July 27, 1979.

In response to widespread concern, Governor Jay Hammond appointed a Working Group on the Gas Conditioning Plant. The group's members included Sen. Colletta and Rep. Miles as well as administrative officials who are ex officio members of the Joint Gas Pipeline Committee. During September subcommittees of the Working Group met in several sessions to review the following:

- (1) the State's progress to date in the FERC proceedings;
- (2) benefits and costs of locating the conditioning plant in the Interior instead of Prudhoe Bay;
- (3) alternatives for instate use of Prudhoe Bay natural gas and/or natural gas liquids;

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- (4) the likelihood that the State would prevail in an appeal of the FERC size and pressure order; and
- (5) the effects on the gas pipeline project -- especially in terms of delay -- if the State were to appeal the FERC size and pressure order.

Based on its review of these items, the Governor's Working Group made several findings and resolved the following:

- (1) the subcommittees' reports, approved by the full Working Group, be transmitted to the Governor as the preliminary report of the Working Group;
- (2) the Governor be requested to determine the present-day feasibility of an instate petrochemical industry, particularly by actively contacting and soliciting the interest of major petrochemical companies with regard to the feasibility of such development; and
- (3) the Governor be requested to preserve the State's options by requesting FERC to re-open for hearing the size and pressure issue for the project and, failing that, filing an appeal of the FERC size and pressure order no later than October 5, 1979.

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Joint Gas Pipeline Committee
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The Working Group's September 21 resolution was accompanied by another asking the Governor to continue the Working Group, by allowing its members to serve as ex officio members of the Legislature's Joint Interim Gas Pipeline Committee.

CURRENT CONTRACTS

Many of the reports discussed earlier in this document were completed under FY 79 contracts. Currently, the Committee has the following firms and/or individuals under contract:

(1) The law firm of Birch, Horton, Bittner and Monroe - a \$25,000 contract to provide written monthly reports on matters affecting approval and effectuation of the proposed gas pipeline. The contract runs September 1, 1979, through June 30, 1980. Project directors are Sen. Colletta and Rep. Miles;

(2) The Doschers Group - completion of an extended FY '79 contract for \$20,000 which calls for Doscher to act as an independent technical advisor on matters related to oil and gas reservoir management policy. The contract ends December 31, 1979. Project director is Rep. Miles;

MID-INTERIM REPORT
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(3) H.K. Van Poolen and Associates - completion of an extended FY '79 contract for \$60,000 which calls for Van Poolen to develop a methodology for analyzing the development options of the Prudhoe Bay reservoir, i.e. the three-dimensional reservoir simulator computer model. The contract runs through December 31, 1979. The work is being carried out under the direction of the Alaska Oil and Gas Conservation Commission. Rep. Miles is the project director;

(4) Arctic Environmental Information and Data Center - a \$15,000 contract to provide information on technical and environmental issues related to construction and operation of the gas pipeline. The AEIDC final report is due October 15, 1979. Rep. Chat Chatterton is the project director; and
(5) Lazard Freres - a \$50,000 contract to provide analysis and examination of a possible State equity investment in the gas pipeline project. The contract ends June 30, 1980.

MID-INTERIM REPORT
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A CLOSING NOTE

Copies of many of the documents mentioned in this report are available through the Legislative Library, Legislative Affairs Agency, Pouch Y, Juneau, Ak. 99811. All documents are also on file with the Joint Interim Gas Pipeline Committee, 727 N St., Suite 2, Anchorage, Ak. 99501. This report was prepared by Mary Halloran, Research Analyst, on behalf of the Joint Gas Pipeline Committee.

**Joint Gas Pipeline Committee
Alaska State Legislature**

SEN. MIKE COLLETTA
CO-CHAIRMAN

REP. BILL MILES
CO-CHAIRMAN

SEN. FRANK FERGUSON

REP. C.V. CHATTERTON

SEN. BILL SUMNER

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May 20, 1980

To: Legislative Reference Librarian
From: Mary Halloran¹¹¹, Research Analyst

Attached are a set of the key memos and reports from
the 1979 interim work of the Joint Gas Pipeline Committee.

Legislative Reference Library
Legislative Affairs Agency
Pouch Y State Capital
Juneau, Alaska 99811

AGO 532893

Joint Interim Gas Pipeline Committee

SEN. MIKE COLLETTA REP. BILL MILES
CO-CHAIRMAN CO-CHAIRMAN

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June 15, 1979

REPORT FROM THE JOINT INTERIM GAS PIPELINE COMMITTEE
Alaska State Legislature
727 N St., Suite 2, Anchorage, Ak. 99501
By Mary Halloran, research analyst

The Joint Interim Gas Pipeline Committee met June 4, 1979, in Anchorage, taking the following actions:

COMMITTEE ACTIONS:

1. The Gas Pipeline Committee requested that the Legislative Finance Division, working with Legislative Research, make a formal presentation at the next committee meeting, tentatively scheduled for the beginning of August.
The report is to follow up on earlier Legislative Finance forecasts that state general fund revenues will be insufficient to support a direct cash investment of \$500 million in the Northwest gas pipeline project, even under the most optimistic circumstances.
Commissioner Tom Williams, Dept. of Revenue, stated that the Dept. of Revenue's next quarterly report will be available by mid-June for the Committee's review.
2. The Gas Pipeline Committee and Commissioner Williams also agreed that \$60,000 allocated to the Dept. of Revenue for financial and legal work regarding the gas pipeline could be used, in part, to obtain for the committee:
 - (1) a formal opinion of bond counsel on whether general obligation bonds may be legally used to finance state equity participation in the gas pipeline; and
 - (2) if bond counsel determines that the use of general obligation bonds would be legal for this purpose, expert financial opinion on how the issuance of bonds would affect the state's ability to finance other needed capital projects.

The work is to include a consideration of the effect also of tax-exempt bonds on the state's participation in the bonding market. Tax-exempt bonds have been authorized under the Gas Pipeline Financing Bonding Authority, given the fulfillment of several specific conditions.

The Gas Pipeline Committee committed \$5,000 to the work, with the understanding that Reps. Chat Chatterton and Charlie Parr would work with the Dept. of Revenue on the project.

GAS PIPELINE COMMITTEE REPORT - 2

3. Attorney Ron Birch was asked to prepare a tentative report on the possibility of federal participation in the gas pipeline project financing. Birch will prepare the report for the committee's August meeting. Preliminary work on the subject done by consultants to the Dept. of Revenue will be shared by Revenue with Birch.
4. A \$15,000 contract with the Alaska Environmental Information and Data Center (AEIDC) was approved by the committee. AEIDC will investigate the current status of unresolved technical issues in relation to construction of the gas pipeline.

A report by AEIDC will be submitted to the Legislature October 15, 1979. The report will cover areas such as thermal regime effects, hydrology and ground water concerns, proximity to TAPS (criteria and risk analysis problems), work pad criteria, construction issues, design pressure determinations and effects. Rep. Chatterton is the contract project director.

5. The Gas Pipeline Committee will also work with the state administration and Northwest Alaska Pipeline Company to study the conditioning and processing issues of the gas pipeline project. The committee committed \$25,000 to the study, with another \$25,000 coming from the Dept. of Revenue and another \$25,000 from Northwest. Rep. Bill Miles will work with Commissioner Williams and Jack Bachman, Northwest representative, on the study.

In addition, the Dept. of Revenue also has current contracts to continue work begun earlier by Purvin and Gertz on the concept of a publicly owned conditioning plant.

Committee members at the meeting were Sen. Mike Colletta, Rep. Bill Miles, Rep. Charlie Parr, Rep. Chat Chatterton, Commissioner Robert LeResche (ex officio) and Jack Bachman, Northwest (ex officio).

Also present were Commissioners Tom Williams and Charles Webber; Gregg Erickson and Larry Eppenbach, Legislative Research; John Sund, counsel to the Speaker of the House; Mary Halloran, research analyst; and Ron Birch and Lisa Nelson, legal consultants.

The committee's next meeting is tentatively scheduled for early August.

UPDATE ON GAS PIPELINE EVENTS

EXXON SELLS GAS; BUYERS TO PAY CONDITIONING COSTS

Pacific Gas and Electric, Northern Natural and Michigan-Wisconsin Gas Transmission Company have each concluded contracts with EXXON for one-third of its interest in Prudhoe Bay gas production.

PG&E and Northern Natural are partners in the Northwest consortium, while Michigan-Wisconsin, according to Northwest representative Jack Bachman, has approached Northwest about joining the group.

A significant contract stipulation is that the gas purchasers would pay for conditioning costs, contrary to the Federal Energy Regulatory Commission's ruling that producers, not purchasers, would bear the burden of conditioning costs.

EXXON would assume the costs of gathering lines, dehydration equipment, field compression equipment, cooling facilities, and related facilities. It has also, under the contracts, agreed to shoulder any future costs associated with artificial lift and water injection programs. While the gas purchasers would pay for conditioning costs, they would own any liquids collected during the conditioning process.

The contracts indicate, according to legislative consultants Chomski and Haggart, "the willingness of at least one producer to oppose the FERC position directly, by adding treatment costs on top of Section 109 ceilings."

In an April 27, 1979, report to the legislature, Chomski and Haggart further concluded, "Simultaneously, we have seen no signs to date that the FERC is willing to modify its position on treatment conditioning costs to the satisfaction of the producers. While predicting the outcome of any regulatory proceeding is always hazardous, we see little prospect in the current dispute other than extended litigation. To the extent that this is the case, neither gas sales contracts nor financial commitments to the pipeline project can be finalized."

The State of Alaska joined EXXON and other major gas producers in filing comments with FERC earlier in opposition to FERC's conditioning costs proposal.

ALASKA GAS COULD BECOME POOR BUY FOR AMERICAN CONSUMERS

The Alaska gas pipeline "is likely to provide significant economic benefits to the nation," according to a study by ICF Inc. Commissioned by FERC, the study states, however, that benefits to the consumers may hinge on changes in construction costs and the value of gas.

The May report assumed a gas conditioning charge of zero to the consumers, adding that that assumption is "especially critical" to its analysis. "Specifically, imposition of the full costs of gas conditioning on gas purchasers would reduce the consumer share of benefits considerably, with consumers being worse off, relative to using distillate fuel oil by more than \$1.9 billion (mid-1979 dollars)."

Besides conditioning costs, the other major factor impacting the benefits of gas consumers is construction costs. The report states, "This conclusion-that the Alaskan gas project should be in the interest of both the nation and the nation's gas consumers- is valid if the ANGTS were constructed at a cost in line with current estimates. Consumers, however, could lose \$2.2 billion if construction problems lead to the high cost case for the pipeline construction."

The report goes on to say that other parties - gas producers, the Alaskan and federal governments, and the pipeline owners - would still benefit even if construction costs rise.

ALASKA RATE OF RETURN SET BY FERC

A 17.5 percent center rate of return on investors' money has been set by FERC if project construction costs are 30 percent higher than estimated in March 1977. At that time, the cost was pegged at \$10.5 to \$13.9 billion by Alcan, Northwest's predecessor.

In earlier comments on FERC's proposal, Northwest objected to tying the incentive rate of return to the March 1977 cost estimates as that approach ignores changes which have taken place since that time.

The rate of return is variable, with the profit rate declining as costs exceed 30 percent. In addition, FERC ruled that money used in cost overruns should yield only 8 percent return, rather than the 12 percent "marginal" rate requested by Northwest.

FERC also ruled that pipeline owners may charge "cost-of-service" transportation rates for gas shipped through the pipeline rather than adhering to a fixed transportation charge.

RHETT NOMINATED AS FEDERAL INSPECTOR; BEHLKE TAKES STATE
COORDINATOR SPOT

The long-expected nomination of John T. Rhett as federal inspector for the gas pipeline was made recently by President Carter. An engineer and former colonel in the Army Corps of Engineers, Rhett has worked as the deputy assistant administrator for water programs at the Environmental Protection Agency since 1973. His nomination is still subject to Senate confirmation.

Dr. Charles Behlke, dean of the University of Alaska school of engineering, has been chosen as the state pipeline coordinator. Behlke also serves as chairman of the board of the Alaska Power Authority and chairman of the Capital Site Planning Commission. He begins his latest post as pipeline coordinator July 2.

CANADIAN SEGMENT READY TO GO

The Alberta segment of the gas pipeline may be under construction next year, according to Commissioner Mitchell Sharp of the Northern Pipeline Agency of Canada. Sharp's comments were echoed by British Columbia Sen. Ed Lawson who spoke in Anchorage in early June.

Both Lawson and Sharp indicated that "all systems are go" for pipeline construction in Canada. Lawson stated that some government financial assistance in Canada may be necessary to complete the project. The Alberta segment would initially move surplus Alberta gas, if approved by the Canada National Energy Board.

In the meantime, workers for Foothills, the sponsors of the Canadian segment, may be laid off while the Foothills group reduces its budget for preliminary work on the project. A company spokesperson announced June 7 that as many as 30 of the 225-member staff will be laid off. In an Associated Press report, the official explained, "Foothills was merely recognizing the 22-month delay that has occurred because of regulatory delays in the United States."

NO SPENDING BY NORTHWEST

Northwest partners have withheld action on the Alaska project budget of \$38 million for this year, confirmed company representative Jack Bachman at the Joint Gas Pipeline Committee meeting in Anchorage June 4th. Bachman also stated that Northwest needs to know by the end of this year whether Alaska will contribute towards the project's financing. Northwest plans to file its financial plan with FERC in the first quarter of 1980.

Joint Interim Gas Pipeline Committee

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M E M O

To: All Legislators
From: Bill Miles
Re: Northwest Gas Pipeline
Date: June 18, 1979

Two weeks ago, Speaker Gardiner, Rep. Cotten and I traveled to New York and Washington, D.C. to work on a number of items. At separate meetings during the trip, we discussed the gas pipeline with the following:

New York

Loeb Rhodes
Lazard Freres
Merrill Lynch White Weld
Solomon Brothers
Kidder Peabody

Washington

Alaska's Counsel before Federal Energy Regulatory Commission (FERC)
FERC Counsel
FERC Staff
FERC Commissioner
Department of Energy
White House Aide for Domestic Affairs

The issues we discussed are summarized herein. Not all of the issues were discussed with each entity named above; the brief summaries below are meant to give an impression of the feelings of the majority of the people with whom we met.

1. FEDERAL GUARANTEES

Wall Street indicated that some form of federal financial aid to the line would probably be needed, although a slight chance existed for private financing if a number of things fell into place.

Memo to all Legislators - 2

In one case, a cost overrun for the Alaska segment by the federal government was indicated as the most likely form of federal aid. It was unanimously agreed that if the federal government became financially involved in the project, the cost of financing the line would be decreased. And, therefore, the project would be speeded up and the cost to consumers would be reduced.

The Federal Government indicated that its goal was still a purely privately-financed project as this has been the stated policy of the President and Congress. Federal representatives said that, of late, they had aggressively been pursuing various means to make private financing a possibility, and that they would continue to do so, using all the means available to them.

However, they acknowledged the problems facing a purely privately-financed project, noting a reservation to that conclusion by one Federal Energy Regulatory Commissioner. Additionally, in order for private financing to be available, a number of things were necessary: financial participation by the producers and the State of Alaska, and an expanded gasline partnership. Even these components, however, could not guarantee private financing.

2. ALASKA'S ROLE

Wall Street generally indicated that financial participation in the project by the State of Alaska would be helpful from a cosmetic or psychological standpoint, but would not "make or break" the project. Some representatives indicated other financial commitments should be in place prior to Alaska's possible participation. Some said it should come concurrently with other commitments. Some indicated Alaska should not participate in an equity manner. No one suggested Alaska make an equity commitment now.

The Federal Government strongly urged Alaska's financial participation as the State was one of the major beneficiaries of the project. Surprisingly, some federal representatives were unaware of the creation of the Alaska Gas Pipeline Bonding Authority which enables the State to place up to one billion in debt for the project. They also felt that a contribution by the State of Alaska to the project was a private financing tool as opposed to public financing.

3. CANADIAN ROLE

Wall Street felt that there were fewer inherent risks in the Canadian portion of the projects yet indicated a major concern over the length of Canada's National Energy Board (NEB) commitment to the Eastern leg of the project. The current six year commitment may be insufficient to finance the Eastern leg but the NEB has "left the door open" for increasing that term, provided all the other components of the full transportation system (conditioning plant, Alaska segment, Canadian segment and Western leg) fall into place.

4. FEDERAL ROLE

Wall Street indicated federal help will be necessary in a number of areas, including the financing aspects, regulatory aspects and the timing of the project. Wall Street realized the current active role the federal government was beginning to play in the project.

The Federal Government, in both its regulatory and administrative areas, is starting to move quickly on the project, i.e., the nomination of the Federal Inspector, the establishment of the rate of return, etc. However, a number of unresolved issues are still apparent, such as the allocation of conditioning costs (now estimated to be \$2.8 billion), resolution of the pipeline routing questions, etc.

Additionally, the Department of Energy appears to be increasing its efforts in many areas to resolve other problems facing the project: the size of the pipeline partnership, the role of the producers, etc.

5. REGULATORY ACTIVITY

Wall Street indicated that the gasoline tariff is causing potential lenders concern. Tariffs are set by regulatory agencies, one investment house argued, and they can be modified by regulatory agencies. On smaller projects, lenders are willing to take this risk so long as the record is clear on the importance of maintaining the rate. On this project, the willingness to risk the uncertainty of regulatory changes will be less. Hence, a clear record and possible legislation may be needed.

The Federal Government acknowledged the Wall Street concerns and that regulatory rules can have a re-hearing and be changed.

6. CONDITIONING PLANT

One Wall Street firm suggested that potential Alaskan equity might be better placed in the conditioning plant (now estimated at \$2.8 billion) than in the gasline itself as any equity the State might produce would be lost in a multi-billion dollar project. Another firm indicated it had heard of a company that was willing to build the conditioning plant. Negotiations among the various interested parties are presently taking place in a more serious vein than earlier this year.

The Federal Government indicated the conditioning cost allocation question will be expedited in the courts this summer. Further, it confirmed negotiations concerning the conditioning plant are underway.

7. PRODUCER PARTICIPATION

Wall Street indicated a strong need for producer participation. In fact, several people said producer commitments to the project's financing were the next big step necessary toward completion of the line. Only then should the State consider financial participation.

The Federal Government also indicated a strong need for producer participation and further indicated it would do everything possible to see this aspect of project financing fall into place.

8. EXPANSION OF THE PARTNERSHIP

Wall Street indicated several potential new partners were considering joining the gasline partnership. This expansion would greatly assist the project by adding needed capital, markets, etc.

The Federal Government strongly supports adding new partners to the Northwest group. In fact, the government is actively seeking additional partners. One person made the assumption that a number of potential partners have not heretofore joined the partnership because many of the regulatory rules have not been set. As these issues are resolved, an expanded partnership is expected.

Memo to all Legislators - 5

9. EL PASO PROPOSAL

The Federal Government indicated there was no possibility of re-opening the All-Alaska (El Paso) gasline proposal. Nor would there be any consideration given to other similar LNG proposals.

10. FUTURE ACTION

Wall Street generally agreed that the most necessary components needed by the project at this time are:

1. Producer participation;
2. A reasonable attitude by regulatory agencies;
3. Canadian/US interaction, especially on the Eastern leg;
4. Additional expenditures (approximately \$200 million) for design, engineering and other technical work.

The Federal Government predicted that by the fall of this year conditioning costs, rate of return, pipeline pressure and the like will not only be ruled on but will have been litigated. Additionally, the federal government felt four components are necessary at this time and that it would work toward:

1. Producer participation;
2. State of Alaska equity participation;
3. Expanded partnership;
4. More aggressive assistance from the federal administration.

Joint Gas Pipeline Committee
Alaska State Legislature

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July 3, 1979

GAS PIPELINE UPDATE

ALASKA GAS RESERVES AMPLE BUT INACCESSIBLE

Alaska holds 18.5% of the nation's potential gas supply, but almost 70 percent of the Alaskan reserves probably lie in less accessible offshore areas. The figures were part of testimony offered by Dr. Harry Kent, Director of the Potential Gas Agency, to the House Energy and Power Subcommittee last month.

The Agency estimates that domestic gas supplies are 199 Tcf probable, 399 Tcf possible and 421 Tcf speculative. About 41% of that total potential lies in shallow onshore reservoirs in the lower 48 while Alaska contains some 18.5% or 189 Tcf. Kent noted that the proposed Alaskan land withdrawals would affect some gas development, possibly 10 Tcf of Alaska's potential.

Other witnesses commented on the Alaska gas pipeline situation, with AGA President George H. Lawrence urging speedup of the regulatory process, expedition of the Alaska gas pipeline system, and encouragement of use of Mexican and Canadian gas.

Chaired by Rep. John Dingell, the subcommittee is holding further hearings on natural gas markets, potential oil and gas supplies from Mexico, the Alaska gas pipeline and future Canadian gas exports to the U.S.

JACKSON SAYS "NO" AGAIN TO FEDERAL FINANCING

At a Senate Energy Committee hearing last month, Sen. Henry Jackson reiterated his opposition to federal financing for the Northwest gas pipeline project. Jackson stated, "I am told by the project sponsors that private financing is still possible...I take them at their word and give no encouragement to those who wish that financing will come from the federal Treasury." Jackson also indicated that he may make inquiries into the EXXON gas sales contracts which make gas conditioning costs the buyer's responsibility, contrary to an initial regulatory decision making conditioning costs the gas producers' responsibility.

AGO 532904 +

FERC FAVORS TRADITIONAL 1260 PSIG PRESSURE PIPELINE

Although a final decision is still to come, it appears that an operating pressure of 1260 psig will be authorized for the Northwest gas pipeline by the Federal Energy Regulatory Commission (FERC). The 1260 psig recommendation by FERC's Alaska Delegate concurs with Northwest's preference for a traditional operating pressure.

The State of Alaska is also conditionally supporting 1260 psig operating pressure if provisions are made for instate use of natural gas liquids as feedstock for petrochemical manufacturing.

Arguing for a higher pressure system have been two North Slope gas producers, Exxon and Arco, and the U.S. Dept. of Transportation. A higher pressure line, testified Exxon, would result in a more fuel-efficient system and a higher throughput capacity, thus allowing a lower cost of service. (Initially Exxon proposed a higher pressure line as a way of eliminating the need for a North Slope conditioning facility. A higher pressure line, such as 1680 psig, would have the capability of transporting heavier gas liquids which the 1260 psig line will not be able to do). The Dept. of Transportation argued that technical and economic data support building a 1680 psig system and having more throughput capacity available would encourage further development and exploration in the North Slope.

Northwest's opposition to the higher pressure systems (1440 psig or 1680 psig) was based on the belief that the testing necessary to validate the higher pressure systems could cause a construction delay of up to two years. Northwest estimated additional carry charges of up to \$1 billion would result from such a delay.

FERC agreed that the longer the project is delayed, the more significant the probable cost overruns. Also, the Delegate found, the pressure decision will impact Northwest's ability to obtain private financing, with any departure from a traditional pressure system making investors reluctant to participate in financing.

Still unresolved issues include the disposal of produced butanes (a product of gas conditioning) and the level of CO₂ permissible in the system. The CO₂ level will impact capital costs and operating costs of the conditioning plant and the line itself.

In related testimony, Prudhoe Bay gas producers indicated that the conditioning plant should be located at Prudhoe Bay rather than at an inland location. Sohio and Arco maintained that coastal locations have lower construction costs as they can be served by barges transporting modules for any large facility. ARCO estimated construction costs at 50% higher in Fairbanks or Haines than at the North Slope.

RULING LOWERS COST OF INSTATE USE OF ALASKAN GAS

Future instate use of gas from the Northwest gas pipeline will be less costly because of a federal regulatory decision made recently. The FERC action declares that cost-of-service tariffs for gas taken off inside Alaska will be calculated on a cents per mile basis.

The ruling went against Northwest's proposal for a two-zone tariff, with all charges within one zone to be the same regardless of the distance between the offtake point and the Prudhoe Bay reservoir. Northwest proposed establishing two tariff zones, one from Prudhoe to Delta Junction and the second from Delta Junction to the border. FERC, however, was not satisfied that the proposed zones would "result in equitable distribution of costs."

The cents-per-mile formula lessens the possibility of future struggle between the State and Northwest such as is now occurring over oil pipeline tariffs. Currently Alyeska Pipeline Company wants to charge the same tariff for oil shipped to North Pole as for oil transported to Valdez, another 400 miles south.

The gas tariff formula will also include costs allocated on the heat energy units shipped through the line.

SENATE ENERGY BILL MAY IMPACT GAS PIPELINE PROJECT

Provisions of the Energy Supply Act, a bill under consideration now by the U.S. Senate Energy Committee, may strongly impact the Northwest pipeline project. The bill, testified Northwest President John McMillian at a June 20th hearing, could make the difference between public and private financing of the project.

McMillian's testimony centered on the "regulatory risks" the project is encountering, delays resulting from the federal regulatory process which are creating uncertainty about the project in the financial community. The delays, said McMillian, are adding \$3 million a day to project costs or \$1.2 billion a year. He took FERC to task for taking 13 months without reaching a final decision on the rate of return for the Alaska segment.

"With the delays we have now, we are looking at '84, '85, a two to three year delay in the project," said McMillian. He affirmed that the financial market could not be approached for project investments until the rate of return and tariff are firmly fixed.

The delay has led to a lower level of sponsor support, McMillian indicated, leaving Northwest facing "some \$400 million in development expense before we can start our first stage of construction."

In response to a question from Alaska Senator Ted Stevens about Alaska involvement in the project, McMillian said, "...and we hope to establish a plan to take to the Alaskan people for their referendum type of a vote. What we are asking the State of Alaska for is a billion dollars worth of tax-free bonds. We are also asking the State of Alaska for \$500 million of preferred equity in the project."

The Energy Supply Act (S 1308) would expedite non-nuclear energy projects determined to be in the national interest through a speeded-up regulatory process. The bill allows for exemptions from portions of environmental laws and limitations on the rights of environmentalists to challenge the actions in court. Further, it gives the President authority to grant necessary federal permits to a project if any federal agency takes too long to grant the permit.

In a provision which may spark extended comment, the bill also requires the Department of Energy to report to Congress on any state actions which hold up priority projects with recommendations on federal action to override state authorities.

The legislation was co-sponsored by 14 of the 19 members of the Senate Energy Committee. The bill will probably be before the Senate for a vote before the August recess. The House is considering similar legislation.

CANADIAN PREBUILDING PROPOSAL UP FOR HEARINGS

Extensive hearings are underway as Canadian authorities consider the tolls and tariffs to be established for the Canadian portion of the gas pipeline project. An additional series of hearings is to begin at the end of July to consider a Foothills proposal for pre-building portions of the pipeline.

The pre-building proposal depends on the Foothills group gaining Canada's National Energy Board approval to export surplus Alberta gas to the northern U.S. If approved, the exports could begin as early as 1981. Pro-Gas Ltd., a consortium of 26 Alberta gas producers, is supporting the proposal for prebuilding the Canadian and necessary lower 48 portions of the project.

In a separate action the Canadian Northern Pipeline Agency (Canada's equivalent of the Alaska State Pipeline Coordinator's Office) rejected Foothills' environmental studies on the Canadian segment. The Agency called for a second round of hearings, stating that Foothills had not provided adequate information for the Agency to complete its environmental assessment.

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July 5, 1979

To: Members of the Joint Gas Pipeline Committee
From: Mary Halloran, Research Analyst HH

A review of Exxon's gas sales contract with Northern Natural Gas shows the following:

The contract is for one-third of Exxon's natural gas from Prudhoe Bay; it's estimated to be 290,000 Mcf/day of gas with a gross heating value of 1060 Btu/cubic foot.

The contract places the responsibility for arranging the gas transportation system (i.e. the gas pipeline, including the conditioning plant) with the buyer, Northern Natural. Northern Natural and the other gas buyers are to have completed contractual arrangements for the transportation system by January 1, 1980. The sales contract may be terminated by March 1, 1980, if arrangements for the gas transportation system are not in place. Also the contract may be cancelled at any time if FERC makes a ruling on the conditioning costs question which is unsatisfactory to either Exxon or Northern Natural.

In addition, the contract calls for Northern Natural and the other gas buyers to get the official certificate of public convenience and necessity by January 1, 1982; otherwise, again Exxon can cancel its sale. The contract calls for the delivery of gas to Northern Natural "no later than January 1, 1986."

The delivery point is "at or near the inlet of the gas conditioning facility," --that is, before conditioning. As buyer, Northern Natural is to provide all facilities at the delivery point for receipt and measurement of Exxon's gas and all downstream facilities necessary for the transportation of such gas.

Before delivery, Exxon will dehydrate the gas and cool it to 120°F, separating oil, condensate and nonhydrocarbon liquids, and objectionable solids from the gas. All such liquids and solids so separated become Exxon's property.

However, natural gas liquids produced through conditioning (not separation) will belong to Northern Natural (except those removed for "efficient pipeline operation.") With three months' notice, Northern Natural can return undisposed natural gas liquids to Exxon for Exxon's use or transport in an oil pipeline.

Still at issue is the level of CO₂ which the conditioned natural gas will contain. The question is important because the CO₂ level not only impacts the cost of the conditioning plant but also affects the pipeline's ability to transport heavier gas liquids, such as butanes.

The sale is subject to the State's right, as lessor, to take its royalty share of gas in kind. The price is the maximum ceiling price allowed by FERC. In

AGO 532908

Exxon contract review - 2

addition, Northern Natural is to reimburse Exxon 100 percent for all the following state and federal taxes: production, gathering, delivery, sales, severance, excise and other taxes of a similar nature. (There's no reimbursement for ad valorem and general property taxes, income taxes, franchise taxes or other similar assessments).

Joint Gas Pipeline Committee
Alaska State Legislature

SEN. MIKE COLLETTA
CO-CHAIRMAN

REP. BILL MILES
CO-CHAIRMAN

SEN. FRANK FERGUSON

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EX-OFFICIO MEMBERS

MR. ROBERT LERESCHE MR. JACK BACHMAN



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(907) 276-4340

July 25, 1979

To: Members of the Joint Gas Pipeline Committee
From: Mary Halloran, Research Analyst

On June 8, the Federal Energy Regulatory Commission (FERC) issued Order No. 31 establishing the Incentive Rate of Return (IROR) for the Alaska Gas Pipeline. The order is to become final on August 6, 1979.

At a June 21 meeting, the Northwest board of partners voted to withhold further equity support for the project after August 6 (except money necessary to pay off already-incurred debts) and to hold further work on the project in abeyance if FERC fails to change Order 31. The hold on further work will continue, says Northwest, "until such time as the President, the Congress, or the courts correct the errors of Order No. 31."

On July 9, Northwest submitted a formal motion for rehearing the IROR order. The "errors" of the IROR order, according to Northwest's motion, are as follows:

1. The IROR is tied to the March, 1977 cost estimate. Northwest states that the March 1977 estimate does not consider costs such as the estimated \$55 million needed to purchase subsoil and other data from Alyeska, the estimated \$150 million needed to purchase the Alyeska camps and \$4.2 million needed for field programs/technical studies necessary for the right-of-way.

Governmental indecision, says Northwest, is making a reasonably definite cost estimate impossible. The pipeline's final design, the routing and proximity of the line to the oil pipeline issue, and the terms and conditions of the right-of-way stipulations are matters which affect the cost and which need governmental decisions.

In addition, Northwest states, "It now appears very clear that a reasonable estimate for the Alaskan segment of the project will exceed the March 1977 cost estimate by more than 30 percent." *

Instead of using the March 1977 estimates as the basis for the incentive rate of return, Northwest suggests that FERC use the certification cost estimate to measure cost performance. No certification cost estimate is yet available; once made, it must be approved by FERC before construction may begin.

*The March 1977 costs ranged from \$10.5 to \$13.9 billion.

AGO 532910

July 25, 1979 - 2

2. According to Northwest, the current IROR order will adversely impact project costs and the cost estimation process by not protecting against cost escalations resulting from force majeure, inflation, field conditions discovered during construction and government-ordered changes.
3. The current IROR order permits only a "negative one-time adjustment to rate base under certain conditions," an unacceptable procedure from Northwest's perspective.
4. Northwest protested the 8% minimum rate of return on equity, requesting instead a minimum rate of 12 percent.
5. Northwest asked for removal of the portion of the ruling which says that all developmental costs are at risk under all circumstances. The company seeks, instead, a ruling which would not jeopardize their seeking amortization of equity funds in the event of project abandonment.
6. A protest was also lodged against FERC's decision not to allow charges to begin until the whole gas pipeline system is complete and tested, and not to allow equity return until gas flow commences.
7. A protest was also lodged against the possible forfeiture of equity during any period of interrupted service of more than 30 days.
8. Finally, Northwest objected that the IROR order does not establish any legal basis to minimize the risks of future changes in tariffs and service agreements.

FERC has not responded to the motion.

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August 2, 1979

REPORT ON INFORMAL MEETING OF THE JOINT GAS PIPELINE COMMITTEE
By Mary Halloran, Research Analyst

On July 31, 1979, newly appointed Federal Inspector John Rhett met with members of the Joint Gas Pipeline Committee in Anchorage. The discussion covered several items:

STATE HELP FOR THE PROJECT -- Rhett stressed that one major thing the State can do is "get the point across that Northwest is the only game in town." An All-Alaska line is not a possibility. Another aid is the State's "one window" permit approach being headed by Chuck Behlke, new State Pipeline Coordinator.

FEDERAL COMMITMENT -- The project is the only energy project specifically mentioned by President Carter in his recent energy speech. The federal government, says Rhett, is moving more quickly on several regulatory decisions still pending. The Incentive Rate of Return issue is to be finally decided August 8. The gas conditioning costs question is to be wrapped up September 1 "except for legal action." And the Carter-requested meeting with producers to discuss debt financing overrun guarantees will take place soon. The State will not be included among the producers in that instance, Rhett indicated.

FINANCING -- Rhett stressed the federal government's continued conviction that the line will be privately financed. "We're not convinced today-- we may be a month from now -- that it cannot be privately financed." Talk of a need for federal guarantees may be a self-fulfilling prophecy, Rhett suggested, with a need for federal guarantees created by people saying there is a need for federal guarantees.

In regard to possible state financing, Rhett responded, "We'd love to see it." The proposed state revenue bonds are "probably pretty well expected in the financial community." It would, said Rhett, "put a shock through the system" if the bonds are not issued. However, he added, no federal/congressional action has been taken on the change in the IRS Section 103 code change necessary for the state bonds to be issued. The request for a change in the code "has never been asked. It really has not been formally presented within the federal government."

A state equity investment would be a "much tougher" issue, Rhett said, noting that equity investments must be "prudent" and involve major philosophical questions.

"Any financial occurring at this time is a conditional form of financing...You're not dead certain whether you're buying a pig in a poke," said Rhett.

REPORT ON INFORMAL MEETING OF THE
JOINT GAS PIPELINE COMMITTEE - 2

PROJECT TIMELINE --Preliminary financing must be arranged by December 31, 1979, Rhett stated. "I feel that by December 31 this year, it's either going to be positive or we've got real problems and we're going to slip another year." Asked if Alaska financial commitment was also necessary by December 31, Rhett replied, "What we're talking about this fall is not that tight a package." Alaska, he indicated, would not lose out by making a decision about state participation in project financing at a later date.

Other project dates, as outlined by Rhett, are as follows:

Preliminary financing by December 31, 1979.

Northwest application for certification by June, 1980.

Federal Energy Regulatory Commission processing of the certification application will take one year, with an additional five months allowed for litigation, bring completion of the certification process to October, 1981.

Design on the Alaska segment will be seventy percent done in 1982. Until then, Rhett said, no completely good financing estimate for the project will be available. By that time Northwest will have spent an estimated \$400 million.

FEDERAL FINANCING -- In response to questions about the federal government's reluctance to participate in project financing, Rhett said that consideration of federal guarantees raises both philosophical and monetary problems. "You start guaranteeing these bonds for natural gas, what does that do -- downgrade every other federal bond for natural gas? Does this mean every major project has to have federal guarantees?"

TECHNICAL ISSUES --The proximity issue (how close the project will be constructed to the existing Alyeska oil pipeline) will ultimately be resolved, Rhett said. "There are some knotty issues there-- technical and legal, particularly liability." By federal law, Alyeska has unlimited liability for the oil pipeline.

OTHER ITEMS -- Rhett regarded as "very controversial" reports indicating that early gas withdrawals may damage ultimate oil recovery at Prudhoe Bay. In regard to the Canadian segment, Rhett reaffirmed the federal support for that project, although he admitted "some stagnation" in Canadian progress. Promising an open exchange of information, Rhett plans to headquarter in D.C. until after the Canadian segment of the line is built.

Present at the meeting were Sen. Mike Colletta, Rep. Bill Miles, Sen. Bill Sumner, Rep. Chat Chatterton, Rep. Joe Hayes, Attorney General Av Gross, and State Pipeline Coordinator Chuck Behlke.

For the Governor's Task
Force on Gas Conditioning
September 20, 1979

INSTATE OPTIONS FOR USE OF NORTH SLOPE NATURAL GAS

Per the request of Joint Interim Gas Pipeline Committee co-chairmen, Sen. Mike Colletta and Rep. Bill Miles, this paper outlines the instate options for use of North Slope natural gas and the policy questions inherent in those options.

INSTATE OPTIONS

Several options exist for the possible use of North Slope natural gas instate, including new industrial development, direct residential and commercial use, electrical power generation, and expansion of existing industry. Among the possibilities are the following:

1. New industrial development

A. Gas conditioning plant at Prudhoe Bay, with a gas liquids line from Prudhoe to Fairbanks;

B. Gas conditioning plant at Prudhoe Bay, with a gas liquids line from Prudhoe to tidewater;

C. Gas conditioning plant at Prudhoe Bay, with a gas liquids line from Prudhoe to tidewater, and a petrochemical complex at tidewater;

INSTATE OPTIONS - 2

D. Gas conditioning plant at Prudhoe Bay, with a gas liquids line from Prudhoe to the Interior, and a petrochemical complex in the Interior;

E. Gas conditioning plant at Prudhoe Bay, straddle plant in the Interior, with a gas liquids line from Interior to tidewater;

F. Gas conditioning plant at Prudhoe Bay, straddle plant in the Interior with a petrochemical complex in the Interior;

G. Minimum conditioning facility at Prudhoe Bay, gas conditioning plant in the Interior, with a petrochemical complex in the Interior. (The current plan is for a gas conditioning plant at Prudhoe Bay with gas liquids transported in vapor stage through the gas pipeline).

2. Direct residential and commercial use

A. Takeoff taps and distribution lines for residential and commercial use for communities along the gas pipeline route;

B. Distribution system for delivery of gas to the entire Railbelt area and to communities along the gas pipeline route;

C. Small scale turbo-expander plants to separate propane and butane from the gas stream for direct instate consumption, primarily for heating.

3. Electrical power generation

A. Generation of electricity from gas on the North Slope for transmittal to the entire Railbelt area;

INSTATE OPTIONS - 3

B. Generation of electricity from gas at specific locations along the gas pipeline route, including Fairbanks;

C. Trade of Prudhoe Bay royalty gas for Cook Inlet gas, which then could be used by existing utilities for electrical generation in Southcentral.

4. Expansion of existing industry

A. Expansion of the existing ammonia and urea industry;

B. Other agriculture-related uses such as grain drying, controlled environment enterprises and greenhouse operations.

POLICY ISSUES AND RECOMMENDATIONS

Each of the options for instate use of natural gas has inherent policy implications. Choosing to pursue one course of action may, in fact, preclude active consideration of other instate use options, due to a quantitatively limited amount of natural gas.

The first obvious policy consideration, then, and probably the most important, is how to use the resource to benefit the maximum number of residents on a long-term basis. Although there has been considerable discussion about some of the options, an up-to-date analysis comparing the costs and benefits of the different options is not available. Nor is there a current comparative analysis of the economic, legal and political feasibility of the various options.

INSTATE OPTIONS - 4

The option which has captured public attention at the moment is new industrial development, either a gas liquids line or a large-scale petrochemical complex, or some combination of the two. Although the actual industrial activity would presumably be a matter for private enterprise, the choice to help promote new petrochemical industry carries with it both potential benefits and risks to the State.

In recent discussions, the potential benefits to the State or to certain regions of the State have been well defined. Longterm employment, stable tax bases and spinoff business opportunities lead the list. Not so well defined at this time are the possible risks. For example, if the State choose to pursue modification of the Federal Energy Regulatory Commission (FERC) order regarding pipeline pressure, what are the chances of predisposing FERC to act contrary to the State's interest on other issues, such as the State's right to withdraw methane at any time or the CO₂ standard for the gas stream? Or, to take another example, could the State be forced to make an equity investment, which it might not consider a prudent business investment, in the gas pipeline project in order to gain the opportunity for instate petrochemical industry? In other words, what tradeoffs would the State have to make to ensure, as much as possible, that a petrochemical industry would have the highest odds for successful operation in Alaska?

INSTATE OPTIONS - 5

In addition to a thorough analysis of the possible legal and political tradeoffs, the State also needs to closely examine the economic benefits and risks in new petrochemical development. A review of the research on the feasibility of such industry in Alaska reveals that most consider it marginal, although it may be more attractive in the future. Given the still inconclusive economics, is there a risk that Alaska could be put in a position where a state subsidy of petrochemical industry is necessary? On the other hand, what incentives could the State offer to promote petrochemical industry on a self-sustaining basis?

The extent to which a petrochemical project is feasible can be measured, of course, by exploring the free market support for such a venture. With the estimated capital investment for an Alaska petrochemical system quite high, only very large scale companies would appear to be able to handle the construction and operation. What interest do the major petrochemical firms, such as Dow, Dupont or Union Carbide, have in industry development in Alaska? Open and direct discussions with the major firms, initiated by the State, could explore whether interest exists and under what conditions the firms would consider investment here.

INSTATE OPTIONS - 6

Another mechanism could also be used to gauge commercial interest in instate petrochemical development --- promotional contracts for the sale of State royalty gas. The contracts, as now drafted, propose to sell the State's royalty gas on the condition that the buyer construct and operate processing facilities instate. A further stipulation is that the gas, and any products or liquids derived from the gas, may not be sold outside Alaska unless they are unable to be sold at a reasonable price for use or consumption within the State. Opening the contracts up for consideration by the private market could enable the State to examine commercial interest.

At the same time, direct discussions, also initiated by the State, need to take place with the gas producers on the possibility of trading the State's share of methane for the producers' gas liquids. Analysis to date indicates that Alaska's royalty share of the North Slope natural gas liquids is not sufficient for feasible petrochemical development. These discussions should take place prior to the next legislative session.

The State faces other policy considerations in addition to the direct economic, legal and political feasibility of petrochemical development. The Alaska economy rests solely on an oil and gas basis which a petrochemical complex would fail to diversify. An assessment is needed of whether promotion of petrochemical industry

INSTATE OPTIONS - 7

would hinder the State's ability to encourage other more diversified industry. A further consideration is how the development of a gas-based petrochemical complex will impact the Alpetco project. Although the products produced from the two facilities would presumably not conflict in the marketplace, would there be competition for available capital, resources and supplies?

In short, the issue of new petrochemical development is uncertain and cloudy. Although the odds against successful new petrochemical industry appear to be heavy, the potential longterm benefits are substantial enough that decisions must be made on more information than is currently known -- first-hand information that can be made available only through direct discussions with both the gas producers and the major petrochemical firms. The discussions should be initiated by the State immediately.

It is clearly time for the State to get a comprehensive, comparative and realistic picture of the options for instate use of natural gas. Regardless of the choice or choices made for further State action, it is also clear that Alaskans feel strongly that any project which moves all the North Slope natural gas out of the State is not in Alaska's best interests.

Joint Gas Pipeline Committee
Alaska State Legislature

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October 15, 1979

MEMO

TO: Members of Joint Gas Pipeline Committee

FROM: Mary Halloran, ^{MA} Research Analyst

Enclosed are copies of recent reports on the possible effects of the State issuing up to one billion dollars in revenue bonds for the Northwest gas pipeline project.

AGO 532921 F+

nuveen

John Nuveen & Co. Incorporated

209 South LaSalle Street, Chicago, Illinois 60604

(312) 621-3000

September 24, 1979

RECEIVED
SEP 28 1979

OFFICE OF THE COMMISSIONER

Thomas K. Williams
Commissioner
Department of Revenue
State of Alaska
Pouch "F"
Juneau, Alaska 99811

Dear Tom:

In our capacity as financial advisor to the State of Alaska, you have asked us to assess the effect on the State's general credit standing of a \$1 billion tax-exempt revenue bond issue for the Alaska Natural Gas Pipeline. In responding to this request, we have assumed that Congress will enact the necessary amendments to the Internal Revenue Code to assure that interest on the bonds will be exempt from Federal income tax.

A revenue bond financing of this magnitude would have no significant effect on the general credit of the State, provided the bonds do not create any direct or contingent liability against State revenues and the bonds are adequately secured by a combination of pipeline revenues and the financial resources of the other participants. However, the State's credit standing could be altered to the extent that the bonds benefit from security features similar to the following:

- 1) A full faith and credit guarantee of the State,
- 2) A guarantee by the Permanent Fund,
- 3) A "make up" provision to restore deficiencies in reserve accounts, or
- 4) An obligation to issue or purchase completion bonds.

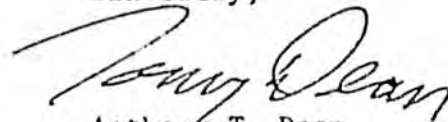
If the State were to provide such additional security, the nature and magnitude of any impact on Alaska's credit would be a function both of the economic and financial strength of the pipeline project and of the extent to which other participants have assumed risks associated with the project, including:

- 1) Completion delays
- 2) Cost overruns
- 3) Start-up difficulties and failure to achieve design performance,
- 4) Casualty losses,
- 5) Adverse political or regulatory decisions.

We understand that project participants have not at this time provided appropriate assurances regarding these risks. When such assurances are forthcoming we would be pleased to assist your office in evaluating the proposed apportionment of project risks and to advise you of their implications for the State's financing activities.

If we can be of further assistance, please don't hesitate to call upon us.

Sincerely,



Anthony T. Dean
Asst. Vice President

ATD:Lmc

Dillon, Read & Co. Inc.

46 William Street

New York 10005

September 19, 1979

Mr. Thomas K. Williams
Commissioner
Department of Revenue
State of Alaska
Pouch SB
Juneau, Alaska 99811

Dear Tom:

You have asked whether the issuance of \$1 billion tax-exempt revenue bonds by an Alaskan state authority for financing a portion of the Alaskan segment of the Alaskan Northwest Natural Gas Transportation System would have an adverse effect on the State's credit.

Based on our knowledge of the tax-exempt bond market, it is our opinion that so long as the bonds are truly revenue bonds, that is, the revenues to service the bonds will come strictly from funds generated from the use of the project, and that no state sources will be pledged to the repayment of the bonds, such bonds will not have an adverse effect on the State's credit. We would note, however, that the ability of the authority to issue and market such bonds would appear subject to several threshold questions, including, among others, the following:

1. The Congress would have to pass legislation providing for exemption from Federal income taxes of the interest paid on the bonds. Under current law, bonds so structured would not be tax-exempt.
2. Financing commitments for all other portions of the gas pipeline including the Canadian segment, would have to be in place.

Dillon, Read & Co. Inc.

-2-

3. A creditworthy entity would have to agree either to pay off the bonds in the event that the project or any related critical element is not completed or, alternatively, to provide the necessary funds to complete any such uncompleted element.
4. There would have to be a reasonable expectation that revenues from the project would be sufficient to pay all operating costs, scheduled debt service on the revenue bonds and to provide a reasonable margin of revenues in excess of operating costs and debt service requirements.

Needless to say, the above does not represent an exhaustive list of the key requisites to successful financing. However, at a minimum these considerations would have to be dealt with fully before any financing by the authority could be contemplated.

Please let us know if we can be of further assistance.

Very truly yours,

Robert A. Gerard
Senior Vice President

Joint Gas Pipeline Committee
Alaska State Legislature

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October 16, 1979

TO: Members of the Joint Gas Pipeline Committee

FROM: Mary Halloran, Research Analyst

RE: Gas Sales Contracts

With Atlantic Richfield's recently announced gas sales, all Prudhoe Bay gas (except the State's royalty share) is now covered by gas sales contracts, tentative as those contracts may prove to be. This paper reviews which companies have purchased the gas and whether the purchasers are members of the current Northwest partnership.

The total estimated volume of Prudhoe Bay gas is about 26 Tcf, or 2.4 Bcf/day. Of that total, ARCO owns 31.5%; EXXON, 31.5%; SOHIO, 23.5%; and State of Alaska, 12.5%.

ARCO Sales

ARCO has sold its 31.5% to six companies:

1. Pacific Interstate Transmission (a subsidiary of Pacific Lighting) - 33% of ARCO's share;
2. United Gas Pipeline Co. - 15% of ARCO's share;
3. Texas Gas Transmission Corp. - 12% of ARCO's share;
4. Panhandle Eastern Pipeline Co - 20% of ARCO's share;
5. Texas Eastern Gas Pipeline Co. (subsidiary of Texas Eastern Transmission) - 10% of ARCO's share; and
6. Transwestern Pipeline Co. (subsidiary of Texas Eastern Transmission) - 10% of ARCO's share.

EXXON Sales

EXXON has sold its 31.5% to three companies:

1. Pacific Gas and Electric - 33 1/3% of EXXON's share;
2. Michigan Wisconsin Pipeline - 33 1/3% of EXXON's share;
3. Northern Natural Gas - 33 1/3% of EXXON's share.

Gas Sales Contracts
October 16, 1979
Page Two

SOHIO Sales

SOHIO has sold its 23.5% to two companies:

1. Northern Natural Gas - 33 1/3% of SOHIO's share; and
2. Columbia Gas Systems, Inc. - 66 2/3% of SOHIO's share.

The State of Alaska has not entered into sales contracts for its 12.5% share of the total volume.

Who Owns How Much

As a result of the tentative sales, the ownership of Prudhoe Bay natural gas rests with the following gas transmission companies:

<u>Company</u>	<u>Percentage of total volume (rounded figures)</u>
*Northern Natural Gas	18.3 %
Columbia Gas Systems, Inc.	15.5 %
Michigan Wisconsin	10.5 %
*Pacific Gas & Electric	10.5 %
*Pacific Interstate Transmission (a subsidiary of Pacific Lighting)	10.5 %
*Panhandle Eastern Pipeline	6.3 %
*United Gas Pipeline Co.	4.73 %
Texas Gas Transmission Corp.	3.78 %
Texas Eastern Gas Pipeline Co. (a subsidiary of Texas Eastern Transmission)	3.15 %
Transwestern Pipeline Co. (a subsidiary of Texas Eastern Transmission)	3.15 %

The companies marked with an asterik (*) are current partners in the Northwest Natural Gas Transportation Co., sponsors of the Alaska segment. Five of the six partners have entered into gas purchase contracts for North Slope gas; Northwest Energy Co. has not entered into such a contract nor is it expected to. Those companies which have entered contracts but which have not become partners in the Northwest Transportation Co. are Columbia, Michigan Wisconsin, Texas Gas, and two subsidiaries of Texas Eastern Transmission, Texas Eastern Gas Pipeline Co., and Transwestern Pipeline Co.

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October 26, 1979

GAS PIPELINE UPDATE

The Joint Gas Pipeline Committee continues to receive much informal and formal information about the progress of the gas pipeline project. This paper reviews some of the information received since the publication of the Joint Gas Pipeline Committee's Mid-Interim Report on October 10, 1979.

GAS PIPELINE FINANCING

1. Report to the Bonding Authority by John Nuveen & Co.

In a September 24, 1979, letter to Bonding Authority Director Tom Williams, Nuveen Co. indicated that a \$1 billion tax-exempt revenue bond issue could affect the State's general credit if it were accompanied by security features similar to the following:

- (1) a full faith and credit guarantee of the State;
- (2) a guarantee by the Permanent Fund;
- (3) a "make up" provision to restore deficiencies in reserve accounts; or
- (4) an obligation to issue or purchase completion bonds.

With no such features and provided the bonds are secured by pipeline revenues and the financial resources of other participants, the revenue bond financing would not significantly affect the State's general credit.

However, Nuveen pointed out that if the State provided such additional security, impact on Alaska's credit would depend on the project's financial strength and "the extend to which other participants have assumed risks associated with the project." Those risks include: completion delays; cost overruns; start-up difficulties and failure to achieve design performance; casualty losses; and adverse political or regulatory decisions. "We understand that project participants have not at this time provided appropriate assurances regarding these risks," concluded Nuveen.

2. Report to the Bonding Authority by Dillon, Read & Co.

In a September 19, 1979, letter to Bonding Authority Director Tom Williams, Dillon & Read concluded that so long as the proposed \$1 billion tax-exempt revenue bonds are "truly revenue bonds," they will have no adverse effect on the State's credit. "True" revenue bonds have no State sources pledged to repayment of the bonds; and revenues to service the bonds "will come strictly from funds generated from use of the project."

Dillon & Read noted at least four conditions which need to be met to enable the Bonding Authority to issue and market revenue bonds:

- (1) Passage of federal legislation providing for tax-exempt status for such bonds;
- (2) Financing commitments for all other portions of the project, including the Canadian segment, in place;
- (3) Agreement by a creditworthy entity either to pay off the bonds in the event the project is not completed, or, to provide the funds necessary for completion; and
- (4) Existence of a reasonable expectation that project revenues would be sufficient to pay all operating costs and debt service, and provide a "reasonable margin" of revenues beyond the operating costs and debt service requirements.

TECHNICAL AND ENVIRONMENTAL ISSUES

1. "Status of Technology: Alaska Natural Gas Transportation System"
by the Arctic Environmental Information and Data Center, October,
1979

In brief, the major technical issues remain unsettled, including the central issue of proximity of the gas pipeline to the TAPS oil pipeline. The lack of resolution will impact both the project's completion date and project sponsors' efforts to obtain financing.

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October 26, 1979
Page Four

The lack of cooperative effort by the involved parties and the project's "sheer complexity" leave the identification of an alignment for the gas line unresolved, despite the Department of Interior's "provisional approval" last summer. "The potential for physical damage to TAPS during construction " remains a strong concern of TAPS owners.

On September 10, 1979, Northwest released an "Outline-Pipeline Design Process," an "extremely optimistic viewpoint." Upon examination of the proposed Northwest schedule and activities, the Arctic Environmental Information and Data Center (AEIDC) noted,

"Northwest Alaskan is just now beginning to address some of the real problems that must be resolved before they receive approval on final design and begin construction...."

Thus, the projected 1984-85 completion date is "unrealistic." Instead, AEIDC estimates that the gas deliveries will be at least a year or two later than currently projected. The lag in resolving technical problems will impact project financing:

"Cost of the project cannot be determined with any certainty until the proximity question is resolved. Such factors as pipeline thickness, quantities of gravel required, construction schedules, and the question of liability between TAPS and ANGTS must also be resolved."

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Page Five

The lag appears not to stem from disinterest in the technical questions on the part of Arctic scientists. Papers presented at the 30th Alaska Science Conference this fall dealt extensively with building a chilled gas pipeline in an arctic environment. The AEIDC comments,

"The science and technology of construction and other factors of energy development in an arctic environment are certainly moving forward. The degree to which Northwest Alaskan is participating with the science and government community in this endeavor, however, appears to be minimal, at best."

The report reviews nine areas of current studies and testing:

(1) burst tests; (2) blasting tests; (3) frost heave testing; (4) work pad considerations; (5) hydrology; (6) proximity to TAPS; (7) risk analysis; (8) design pressure; and (9) corrosion.

Other administrative and political decisions may also impact the project's completion date. Three such upcoming items include:

(1) GAO report on the economics and other matters; (2) reimbursement of costs for the permitting process; and (3) industry's planning and other work relating to the gas conditioning plant.

Gas pipeline planning to date "is fragmented and ill-planned, both by government and industry." The establishment of the office of Federal Inspector should improve matters, but many problems may have to be resolved before that office becomes an effective

operation. Thus, AEIDC recommends that the State address major issues such as cost reimbursement, gas conditioning plant, and the pipeline design process in the Joint Federal-State Cooperative Agreement or in other ways.

In general, North Slope gas is desirable. The questions are when it will be delivered and at what cost. International scientists apparently believe that a chilled gas line can not be buried except at great cost, although a buried line is what Northwest proposes. In conclusion, AEIDC states,

"The development of the necessary technology for the design and construction of this project has not kept pace with the rhetoric of the statements by Northwest Alaskan that they can complete the project efficiently and in an acceptable way (both technically and environmentally) with the stated time frames."

INSTATE USE OF NORTH SLOPE NATURAL GAS

1. "Preliminary Analysis of Markets for Gas Distribution to Pipeline Corridor Communities" by Northwest Alaskan Pipeline Company, May, 1979 (released July 27, 1979)

The Northwest Alaskan report concludes from its preliminary analysis of instate markets that use of North Slope natural gas for heating and electrical generation in the Fairbanks area appears economically feasible. Similar use of the gas

in other pipeline corridor communities may be only marginally economical. However, the report does not include any analysis of the effects of the recent OPEC oil price increases. Northwest reiterated its support for establishing gas taps along the pipeline corridor, suggesting that the next step is "an economic feasibility analysis by the State." The price of gas depends on three factors: (1) field price; (2) pipeline transportation costs; and (3) distribution costs. The distribution costs are likely to be the major cost for any instate use.

Fairbanks Area Markets: If electrical power generation is part of the Fairbanks area demand, then, the report suggests, an adequate market for natural gas exists in the area. Electrical generation at Ft. Wainwright and Eielson Air Force Base is expected to remain coal-based. Northwest found "a strong interest in the private sector" in natural gas distribution "provided the gas can be competitively priced relative to other fuels."

Delta Area Markets: Northwest identified these possible markets: grain drying complex; space heating for Ft. Greeley, Delta Junction and Big Delta; and electrical generation for the Delta area. Promoters of Delta agricultural growth are interested in using natural gas, and two of the three proposed sites for a grain drying/elevator complex are "only 600 feet from the pipeline right-of-way."

Tok Area Markets: Possible space heating and electrical generation use exists in the Tok area. "The use of natural gas to generate electricity appears more promising than home heating distribution."

The Northwest report briefly discusses the factors affecting the economic feasibility of local gas distribution systems. The "load," the volume of demand and whether it is sufficient to pay for delivery costs, is the key economic factor. The delivered gas price cannot be more than the price of No. 2 home heating oil on a BTU-equivalent basis if it is to be economically attractive.

The high volumes of gas required for Alaskan winter heating would leave the system operating "at much less than capacity for the remainder of the year." Without local industrial customers to take up the offseason load, the corridor gas distribution systems "would face severely low load factors (that) would greatly increase their cost per million Btu delivered."

Another factor in instate gas use would be the timely conversion of existing heating systems to gas usage, and the economics of making the conversions. The report also indicates that additional industrial use, such as electrical generation and grain drying, improves the economics of pipeline corridor gas distribution systems. The report concludes, however, that in communities other than Fairbanks, "economic feasibility is marginal."

In a cover letter accompanying the report, Northwest noted, however, the following:

- (1) The report does not include any economic analysis of the effects of the recent OPEC oil price hikes (or projected growth in oil prices over the next few decades);
- (2) The report does not anticipate any major new industrial markets, except the Delta grain drying complex;
- (3) The report does include the use of gas for electrical generation as it appears that the Federal Energy Regulatory Commission may allow such use for power generation in lieu of heating oil use.

It should also be noted that the report examines only the use of natural gas through direct taps and distribution systems, not the potential uses of such gas-based products as propane for instate heating.

GAS SALES

With Atlantic Richfield's recently announced gas sales, all Prudhoe Bay gas (except the State's royalty share) is now covered by sales contracts, tentative as those contracts may prove to be. The total estimated volume of Prudhoe Bay gas is about 26 Trillion cubic feet, or 2.4 Billion cubic feet/day. Of that total ARCO owns 31.5%; EXXON, 31.5%; SOHIO, 23.5%; and State of Alaska, 12.5%.

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As a result of the three producers' tentative sales, the Prudhoe Bay natural gas should go to the following gas transmission companies: *Northern Natural Gas, 18.3%; Columbia Gas Systems, Inc., 15.5%; Michigan Wisconsin, 10.5%; *Pacific Gas & Electric, 10.5%; *Pacific Interstate Transmission, 10.5%; *Panhandle Eastern Pipeline, 6.3%; *United Gas Pipeline Co., 4.73%; Texas Gas Transmission Corp., 3.78%; and Texas Eastern Gas Pipeline Co. and Transwestern Pipeline Co. (both subsidiaries of Texas Eastern Transmission), 3.15% each. The State has not entered into sales contracts for its 12.5% share of the total volume.

Those companies starred with an asterisk (*) above are current partners in the Northwest Natural Gas Transportation Co., sponsors of the Alaska segment. Of the pipeline project partners, only Northwest Energy Co. has not purchased North Slope gas, nor is it expected to. Those companies which have agreed to purchase North Slope gas but which have not become Northwest partners are Columbia, Michigan Wisconsin, Texas Gas, and the two subsidiaries of Texas Eastern Transmission.

This report was prepared on behalf of the Joint Gas Pipeline Committee by Mary Halloran, Research Analyst.

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Alaska State Legislature

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November 9, 1979

TO: Members of the Joint Gas Pipeline Committee

FROM: Mary Halloran, Research Analyst

Enclosed is a copy of a November 6 report by Chomski and Haggart regarding the Canadian segment of the proposed Northwest gas pipeline project. In brief, it appears that the Canadian government will hold up its approval of prebuilding the Eastern Leg (Northern Border) segment of the gas pipeline "until the Board is satisfied that...North Slope gas will actually flow."

Also yet to be resolved in Canada is the Indian land claims. The Indian groups appear ready to exert pressure to have the issue resolved prior to gas pipeline construction, following the often cited example of Alaskan natives and the oil pipeline. The issue is complicated by questions of jurisdiction of the various parties, with possible conflict between the provincial and federal governments over which has the authority to settle with the Indian groups.

Despite the unresolved issues in Canada, Canadian financing "prospects should be fairly solid," as the project has extensive national backing. Rumors of the "fragility" of Canadian financing appear unfounded.

Chomski and Haggart also describe the recent EXXON proposal, remarking that it "does little to clarify the financing outlook for the pipeline." It, in fact, places the Carter administration in a difficult spot as it is designed to pass conditioning costs on to the American consumer. "Seen in the context of an upcoming election, it is difficult to predict what choice the Carter Administration might make between having producer financing available and enduring the wrath of consumer and liberal advocates."

Chomski and Haggart conclude that the critical time for financing the project, and for making a decision about State participation in the project, continues to be this coming spring. However, they also add, "it remains very questionable whether this project will succeed during 1980." Most likely, they conclude, will be renewed activity and a "possible reformulation of the project" after the 1980 elections. Alaska, in the meantime, may find itself the subject of strong Carter administration pressure to participate in the project.

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MEMORANDUM

To: JOINT INTERIM PIPELINE COMMITTEE

Date: November 6, 1979

Canada

The National Energy Board is continuing its consideration of applications to export surplus Canadian natural gas to the continental United States. This surplus gas will be the basis for the "pre-build" sections of the Alaska Natural Gas Transportation System. All parties to the proposed system agree that early approval of the pre-build segments will provide significant assistance in terms of project financing, both by spreading out construction costs (and hence, capital market effects) over a longer period of time, and by providing early cash flows to project partners.

The NEB, however, has been moving slowly on the approval of gas exports. The Canadians have been frank that their foot-dragging is due to a perceived lack of progress on the U.S. side of the project and that they have no intention of making major commitments of gas sales to the United States as long as the ability of the U.S. side of the gas project to be successfully completed remains in question. There are two basic steps the Energy Board must take before gas can flow to the United States:

1. Approval of gas exports to the United States by selecting among competing company applications for such exports. (The identity of competitors does not seem to be dispositive with respect to the export issue.)

2. Approval of construction of necessary Canadian facilities to transport the export gas.

The approval of facilities construction on the Western Leg involves relatively minor looping operations, while on the Eastern Leg, more extensive pipeline construction is necessary. There are also significant volume differentials between the two systems, with projected throughput of the Western Leg being 200 mcf per day, while that of the Eastern Leg is 800 mcf per day.

The current estimate is that the Energy Board will approve gas exports for both the Eastern and Western Legs of the project by the end of November. However, the requisite facilities approval will not be forthcoming for the Eastern Leg until the Board is satisfied that progress on the American side of the project indicates a high likelihood that North Slope gas will actually flow. Thus, the Canadian strategy appears to be approval of the Western Leg with its relatively small construction requirements and its relatively smaller throughput, while continuing to hold the Eastern Leg facilities hostage until the U.S. side of the project makes further progress. The Canadian's prime concern is the inability of the project to attract financial support. It is illuminating to note that the Energy Board held hearings on the financing difficulties being encountered on the U.S. side on October 29, 1979. The hearings also included discussion of the possibility of the need for U.S. Government guarantees, as well as FERC's authority to enforce purchase requirements upon local utilities.

As Rhett indicated in our meeting, the Canadians are seeking "assurances" with respect to the completion of the Alaska segment of the line before going ahead in any major way with the pre-build segments. However, the Ottawa government is still vague as to what such assurances might entail. In our judgment, the Canadians will remain vague on this issue to appear flexible and to avoid giving U.S. bureaucrats a stationary target. It seems most likely that the Canadians will reach an independent determination with respect to the financing status of the pipeline sometime next spring and will proceed accordingly.

The major potential obstacle to the project on the Canadian side is the unresolved question of Indian land claims along the pipeline right-of-way. This issue has been quiet recently, because the change in Canadian governments resulted in a break-off of talks between the two groups while the Clark government developed its policy with respect to land claims settlement. Reportedly, the Clark position was originally designed to be "tougher" than that pursued by Trudeau. However, recent indications by the Council of Yukon

Indians (among others) are that they are ready and willing to block any pipeline -- oil or gas -- if construction is attempted before the land claims issue is settled. The Indian groups in Canada have been extremely explicit regarding what they view as the parallel between the proposed gas pipeline and the Trans-Alaska Oil Pipeline. Specifically, they note that settlement of Alaska Native land claims was speeded, and possibly was entirely due to the fact that the Alaska Native groups were capable of holding the pipeline hostage to legal action for an unacceptable period of time. The Canadian Indians believe that a similar strategy will serve them well, and according to the Canadians, the CYI is well prepared to go to court (to the extent of having briefs drafted) if the government should attempt to move ahead on the pipeline prior to a land claim settlement. In addition, the Indian groups have threatened (at least informally) to pursue judicial "guerilla action" against Canadian gas transmission companies in Western Canada. Such efforts would consist of attempting to tie up company activities on minor zoning regulations, environmental regulations, etc., to provide added impetus for the government to settle.

Apparently, the level of preparation among the Indian groups and their willingness to take drastic action to halt or delay pipeline construction has impressed Clark's government. There has been a fairly significant change in the attitude in Ottawa toward a settlement and as of the end of last week, after three days of intensive talks between Indian groups and the federal government, the situation appears to be "very much in hand". While this sounds suspiciously like the bland assurances available from Jack Rhett, it is at least encouraging to note the Canadian government's realization of the enormous potential for the land claims issue to imperil project success. A further complication exists in terms of the jurisdiction of the various parties to land claims issues. The basic land claims problem exists in the Yukon Territory and in British Columbia. The Yukon land settlement appears to be purely a federal question, although a delay in the settlement could cause jurisdictional problems since Clark has promised to move the Yukon to provincial status. In British Columbia, there is apparently a jurisdictional dispute between the provincial and federal governments regarding authority to settle the land claims issue. It is possible that a major dispute between Victoria and Ottawa on this issue could involve further delay.