

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86/2

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PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

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January 28, 1977

House Special Committee and
Senate Special Committee to
Consider the Sale of Royalty Gas
The Legislature of the State of Alaska
State Capitol
Juneau, Alaska 99811

Gentlemen:

You have requested my review and analysis of the contracts by and between the Commissioner of Natural Resources of the State of Alaska acting pursuant to AS 38.05-.183(d), seller, and Tenneco Alaskan, Inc., El Paso Natural Gas Company and Southern Natural Gas Company, buyers. The contracts in question are each in two parts, one part denominated "General Terms and Conditions," and the other denominated "Royalty Gas Sales Agreement."

I express no opinion on matters relating to title, taxes, or compliance with State contracting requirements. My opinions here offered are limited, as requested, to a legal analysis of the contracts, and an assessment of the merits, and demerits, of the various provisions thereof.

To submit my opinions in these areas, I have reviewed the contracts in question, and a summary of Commissioner Martin's negotiations as furnished to me by the Office of the Attorney General of the State of Alaska. I believe these materials to be sufficient to render the requested analysis, but my comments are necessarily limited to the materials which were available to me for review.

I wish to make clear also that I do not arrogate to myself the formulation or expression of an opinion as to whether the contracts in question should, or should not, be approved by the Legislature. The vote of each member must necessarily be cast in terms of his own appraisal of the contracts, giving due and

appropriate regard to the constituency which he represents, their wishes and best interests, and his perception of where the interests of the State lie. It would be most presumptuous for me to offer an opinion on a matter so peculiarly within the responsibility of elected representatives, particularly when my exposure to the people, the economy and the planning of the State of Alaska is as limited as it is.

Finally, it must be clearly recognized that an analysis of contracts already negotiated, and an appraisal of whether those contracts are, on balance, "good" or "bad," if undertaken as an abstract proposition, can be most misleading and unfair to the negotiators. A contract takes shape through a process of bargaining, and many provisions may not be precisely as one of the contracting parties would wish. The provisions are forged through negotiation and compromise, and if one gauges the contract only by reading the final contract after the negotiation process has run its course, it might appear that certain agreements have been embodied in the contract which are less than desirable and which should be modified or eliminated. Were one familiar with the negotiation process, however, he might realize that the apparently undesirable provisions were in fact necessary if an agreement was to be reached. I would caution, therefore, against an interpretation of my comments and opinions as critical of the officials who negotiated on behalf of the State.

Having offered these preliminary explanatory comments, let me turn to the contracts themselves.

I append, as Attachment A, a detailed summary of the contracts, section by section. Rather than reiterate this summary, I would prefer to offer my generalized perception of the relative merits and demerits of the contracts in terms of probable benefits and areas of concern. The Committee may wish to explore the concerns which I set forth with the Commissioner of the Department of Natural Resources, for indeed his experience in the negotiation process may well substantiate the view that the contracts as presented to the Legislature, even though containing certain problem areas, do in fact represent the best bargain that could have been struck under all of the attendant circumstances.

* * * * *

I would speak first on a positive note, addressing the obvious benefits which accrue to the State under the contracts as submitted to the Legislature for approval. I suggest that the benefits are material and substantial and, specifically, there are the following factors to be considered:

1.

The State has secured an agreement for full reimbursement of all costs related to the State's taking of its gas in kind. (Article II, Sections 2.2 and 2.3.) I consider this to be a significant concession in behalf of the State. When the State takes its gas in kind, it is quite possible that the taking will occur at the point of production, so that all costs incurred downstream from that point, such as for transportation to a processing plant, processing, and redelivery to a pipeline transporter, must be borne by the State in ratio to its percentage of the production taken. I do not believe that anyone can guarantee that the State would not be exposed to claims for substantial costs resulting from the in-kind taking. The royalty sales agreement clearly insulates the State from cost exposure with respect to the initial arrangements necessary to an in-kind taking, whether or not the costs reimbursed to the State by the buyers of the royalty gas are collectable by the buyers in their jurisdictional resale rate structure.

2.

The State has sold only a portion of its Prudhoe Bay royalty gas, and has secured the contractual right to withdraw volumes sold under the contract for Alaska in-state needs. (Article III, Sections 3.1 through 3.6.) If an alternate market for the State's royalty gas develops between the present time and the time when the buyers under the contract are in a position to take delivery, the State may take and dispose of its royalty gas in any manner that it chooses, so long as such taking and/or disposition does not interfere with the State's ability to deliver to the buyers when they are in a position to take. (Section 3.8.) The State is not committed by contract to a warranted volume of gas to be sold and delivered under the contracts, and has no stated minimum delivery obligation. (Section 3.2.)

I consider these provisions to be extremely favorable to the State. It is prudent to retain a portion of the State's royalty gas even when a decision has been made to sell part of that royalty gas, since holding a portion free of commitment permits negotiation at a later time when operating conditions have been established, and when circumstances may indicate that significantly different contractual arrangements are in order. Thus, sale of 2.6 Tcf under the contracts in question, rather than a sale of all of the State's Prudhoe Bay royalty gas is, in my judgment, proper.

It has, of course, been essential from the outset that the future needs of the State for natural gas for in-state uses must be in some manner accommodated throughout a royalty gas sales arrangement. It would obviously be unacceptable for the State to sell its royalty gas for transportation out of the State without some provision for meeting future natural gas needs within the State. The arrangement worked out in the contracts to accomplish this objective is favorable to the State. The State may withdraw, over time and upon suitable notice, up to 100 percent of the gas contracted for sale under the instant agreements; the rights of withdrawal must, of course, be exercised for the sole purpose of the State meeting the intrastate domestic and industrial needs of the State of Alaska, and the withdrawal is scaled from 25 percent through 100 percent over 20 years; nonetheless, the withdrawal provisions are more favorable than I would have anticipated and they represent a major element of strength in these contracts.

3.

The State has excepted and reserved from the sale, all liquids removed from the State's royalty gas prior to its delivery to the pipeline (Article IV, Section 4.4), and the State has retained processing rights for the recovery of liquefiable hydrocarbons other than methane, whether exercised before or after delivery to the buyer. (Article IX.) If the liquids are not removed from the gas stream so that the liquid content of the gas stream delivered for sale produces a higher than 1,000 Btu per cubic foot average, the State will be compensated for the greater heating content through adjustment of the sales price. (Article VI, Section 6.6.)

These arrangements for the State to retain the benefits of the liquid content of the gas stream should prove beneficial to the State over the life of gas production from Prudhoe Bay. Liquids and liquid products can provide a significant source of additional revenue to the State if they are sold on the open market and, conversely, if there is need for liquid products in the State (such as a need for propane for its multiple uses, or a need for butane and natural gasoline as feedstocks for petrochemical or other operations), the State is free to direct the liquids and the liquid products to their highest and best use. The inclusion of these provisions in the contract is a distinct plus.

4.

The contract permits State withdrawal from the contract, without penalty, in the event of the occurrence of several different circumstances: If the State is prevented from taking its gas in kind by federal action, the sales agreements shall be void (Article II, Section 2.1); the contracts can be terminated if a decline in production results in nonprofitability to the State (Article VIII); the sales agreements may be terminated by the State if the State so elects following Federal Power Commission certification of an Alaskan gas transportation proposal, except that this right of termination would not exist if the Commission's grant of a certificate is to the El Paso project (Article XI, Section 11.5); and the State may terminate the royalty sales contracts if, by January 1, 1979, all regulatory approvals which the State deems necessary to enable the State to perform its obligations under or receive the benefits of the contract have not been received (Article XI, Section 11.2).

The cumulative effect of these termination options is sufficient, in my opinion, to safeguard the State against reasonably foreseeable adverse developments which might occur. Their inclusion in the contracts is of significant value to the State.

* * * * *

I must now turn to certain aspects of the contracts which are of concern to me. These relate to the pricing of the State's royalty gas when sold to the buyers under these contracts.

1. Section 6.1 imposes an upper limit on the price which the state will receive for its royalty gas, and this limitation will be operative unless and until appropriate Federal legislation deregulating Alaska gas is passed. The Section 6.1 limitation, in full, is as follows:

"In consideration thereof, the price which buyer shall pay seller for gas purchased hereunder shall be determined in accordance with Section 6.2 or Section 6.3 or Section 6.4 or Section 6.5 and shall be subject to the adjustment as provided in Section 6.6; however, the price paid seller for gas which buyer reflects in its rates to jurisdictional customers shall never be higher than the price buyer is permitted to retain in its jurisdictional resale rates so long as such rates are subject to regulation by the Federal Power Commission (or any successor governmental authority having jurisdiction in the premises)."

The underscored proviso is thus given controlling affect, irrespective of the price indicated under Section 6.2 (price fixed at the highest price permitted by the Federal Power Commission to any working interest seller from the Exhibit A reservoirs); irrespective of the price indicated under Section 6.3 (in the event of deregulation at the time of first deliveries, the price is fixed at the level of the highest price being paid by any interstate gas purchaser for gas produced from the Exhibit A leases); irrespective of the price indicated under Section 6.4 (in the event of the cessation of federal regulation after such has once commenced, the price is to be fixed by redetermination and/or arbitration); and irrespective of the price which would result from redetermination in accordance with Section 6.5

The limitation holds as a ceiling on the State's sale price "so long as such rates (buyer's jurisdictional resale rates) are subject to regulation by the Federal Power Commission"

It is inescapable that the buyers under these contracts will become transporters of natural gas in interstate commerce, and that they are purchasing gas for resale in interstate commerce. The rates at which the buyers sell for resale will be within the jurisdiction of the Federal Power Commission under the Natural Gas Act, and I know of no foreseeable set of circumstances that would produce legislation, or a Commission decision, changing this result.

Section 6.1 may not be unduly burdensome if legislation is passed which denies the Federal Power Commission the power to refuse recovery of purchased gas costs in an interstate transporter's jurisdictional resale rates, for then it could be argued that the buyers under this contract must necessarily be "permitted to retain" in their jurisdictional resale rates the amounts paid to the State and, therefore, the ceiling limitation in the Section 6.1 proviso would not interfere with operation of the other pricing alternates in the contracts. Such legislative language was employed in the bill which passed the United States

Senate in October 1975, S. 2310, and the same type of language now finds expression in the most recent deregulation legislation offered in the current Congress by Senators Pearson and Bentsen, S. 256.

I do not think the language of the contracts to be altogether clear, however, that Section 6.1 becomes inoperative in the event of Congressional deregulation. If it is the intent of the contracting parties that "flow through" language in a deregulation bill would effectively eliminate the Section 6.1 proviso, then I would suggest that an appropriate letter be obtained and made a part of the contracts before they become effective.

2. Even if Section 6.1 is clarified as suggested, you must understand that Section 6.1 will still subject the State's royalty sales to FPC rate regulation, and such will continue unless and until the Congress enacts appropriate deregulation legislation.

While the State has uniformly and steadfastly maintained that its sales of royalty gas are not subject to direct regulation by the Federal Power Commission because the State is not a person within the meaning of the Natural Gas Act (and I agree with this position), the State does by these contracts consent to indirect rate regulation by the Commission by conceding that the State's sale price is limited to that amount which the Commission will permit the buyers to retain in their jurisdictional rates.

3. At this time, the State cannot determine its sale price, or anticipated revenues at time of first delivery. Section 6.2 does not yield a present price, for there are no FPC-set rates for Alaska gas at this time. Neither Section 6.3 nor 6.4 yields a present price, for their conditions precedent (deregulation) have not occurred. I am at a loss, therefore, to advise the Committee on the sale price which will be applicable at the time of first delivery. If the status quo prevails through the time for first delivery, I assume -- although the contract is silent on the point -- that the buyers and the State would agree to an interim price which would be paid to the State, subject to refund.

4. You should note that the pricing mechanism agreed to in Article VI results, in every reasonably probable circumstance, in the State's sale price being determined by parties other than the State. If federal regulation continues, or if deregulation legislation is not appropriately drafted, the FPC sets the rate for the State. If deregulation occurs, before or after first delivery, the sales price negotiated by private firms making comparable sales will determine the State's sales price.

5. I cannot guess what rate the FPC will set for private sales of natural gas from Prudhoe Bay, but the prospects for a relatively low rate -- because the gas is associated and many costs can be allocated to oil, and because the size of this discovery and these reserves may operate to distort initial well-head rates downward -- are not to be ignored. It will, in my judgment, be easier for the FPC to find reasons why a private seller's rate should be low than it would be for the Commission to deny to the State public funds for public needs. Thus, the contract tying arrangement to private firms' prices -- not yet negotiated -- may deprive the State of a strong argument for adequate prices: namely, that State revenues will be public monies devoted to public needs and public uses, and that, therefore, the State's sales rate should not be judged by traditional FPC concerns of windfall profits to private firms.

6. In Article VI, redetermination rights under Section 6.5 are not clearly granted if deregulation occurs prior to first deliveries. Such rights should exist to protect the State adequately over the twenty-year term of these agreements, and should be provided in Section 6.3, or through re-wording of Section 6.5. Incidentally, re-determination downward at the buyer's request, as permitted in Section 6.5, is not frequently seen. If Section 6.5 is modified, revision to eliminate the possibility of price reductions in the future should be explored.

7. Under the pricing scheme in the contracts, the probable mechanism for Federal Power Commission review of the State's royalty sales rate will be either (a) in the various pipeline rate cases where the cost of purchasing gas from the State is submitted to the Commission as a recoverable item by the pipeline in its resale rate structure; or (b) in a producer sales proceeding where one of the Prudhoe Bay working interest owners requests FPC sales authority; or (c) a rule-making procedure to determine an Alaska ceiling rate for producer sales. The State will be forced to seek intervention, and participate forcefully if allowed to intervene, in one or more of these proceedings in order to have an opportunity of making a direct presentation to the FPC on the appropriate rate level for sales by the State.

Are these problems sufficient to condemn the contracts as improvident? To some -- those whose sole concern is specificity of price and certainty of revenue -- the answer will be "Yes". But that answer may apply too narrow a standard if -- as may well be true -- there are no reasonable pricing alternatives available to the State.

If all prospective pipeline buyers, present and future, would insist on a pricing structure similar to the one in these contracts, then the alternative to rejection of these contracts

is the alternative of having no contract for the sale of the State's royalty gas. Viewed in this light, the pricing structure before you may be unpalatable, but it may be necessary. If you say "no" to this pricing structure, you may really be saying that the State should not contract at all; that the State should play a less affirmative role in the routing decision; and that the State can strike a better bargain for its gas after the Federal decisional process has run its course.

This choice is yours to make. It requires a broader understanding of the State's goals and needs than I possess, and accordingly, I would be foolish to attempt to recommend a course of action to you. The best I can do is make you aware of the problems, so that your decision will be an informed one.

I would add two footnotes. If these contracts are approved, appropriate deregulation legislation by the Congress becomes terribly important to you. If Alaska gas is deregulated, most of your pricing problems disappear. On the other hand, if deregulation does not occur, the FPC becomes terribly important to you. That agency's pricing regulations will directly impact on your revenues. In the absence of deregulation, the State will be required to become an active, and effective, advocate at the FPC.

* * * * *

As a final area of general discussion, I would like to call the Committee's attention to several of the provisions in the contract which I think are significant. I do not classify these provisions as being either "good" or "bad" since, in most instances, one's perception of the provisions will depend upon considerations other than legal analysis.

In Article XI, Section 11.4, it is provided that the Governor of Alaska may give notice to the buyers of his decision to support a project other than the trans-Alaska pipeline, and if the Governor does so, with appropriate notice to the buyers, then the newly selected project will be considered the "pipeline" for the purposes of the contract. The buyers need not concur in this change in the State's official position, and if they do not agree, then they are given the right to terminate the contracts.

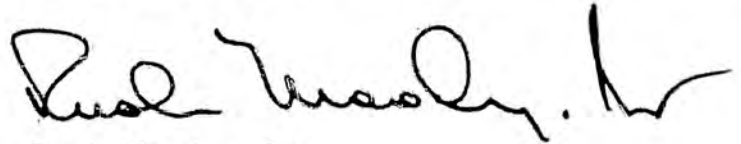
Second, the selection by the State of Tenneco and Southern as buyers of a portion of the State's royalty gas brings a promise of support by those two organizations of the trans-Alaska gas pipeline system. The involvement, and support, of these two concerns adds a new element to decisional process in Washington with respect to the selection of the routing of a North Slope gas transmission system.

Third, it should be noted that the contracts grant certain options on State royalty gas which are triggered if the State effects a withdrawal of all or any portion of the gas committed under these contracts in order to satisfy in-State needs. The options are not exercisable unless the gas covered thereby is surplus to the needs of the State, and unless the surplus gas is to be transported to market through the trans-Alaska pipeline system. I do not find the option provisions objectionable, but I felt that they were significant enough to require separate mention.

Finally, the contract does not speak to one element of revenue loss that the State will probably sustain by reason of an in-kind taking. The severance tax payable on the State's royalty gas if the State did not take in kind will probably be lost if the State does take in kind. No treatment of this problem appears in the contract.

I will stand ready to respond to such questions as the Committee might have during its hearing on February 2, 1977, and if there are any matters contained in this letter or in its attachment which are not clear, I trust that I will have an opportunity to speak to any such problem at that time.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Rush Moody, Jr.", with a stylized flourish at the end.

Rush Moody, Jr.

RM:bw
Atch.

ATTACHMENT "A"

SUMMARY OF MAJOR CONTRACTUAL PROVISIONS

A. "General Terms and Conditions"

Section 1 defines the terms essential to an understanding of the contract. The definitions are standard, and require no comment except to note the definition of the term "domestic and industrial needs of the State of Alaska" as set forth in Section 1.11. This term is defined to mean "those present and projected residential, commercial and industrial uses for gas within Alaska as determined by the Alaska Royalty Oil & Gas Development Advisory Board in accordance with AS 38.05-.183(d)."

This definition is critical to the structure of the royalty gas sale inasmuch as it forms the basis for the State's rights of withdrawal of royalty gas from the contract as set forth in Article III of the various royalty gas sales agreements.

Section 2 delineates the respective responsibilities of buyer and seller for damage or injury occurring in connection with the movement of royalty gas. The State is responsible prior to delivery to the buyers, and the buyers are responsible after receipt of the gas, except that while the gas is being processed by or on behalf of the State, the buyers are not responsible.

The contract does not fix responsibility, as between buyer and seller, for the processing stage.

Section 3 governs metering of gas sold under the contract; the provisions which essentially require the buyers to install necessary meters to measure accurately the gas purchased under the agreement, but which permit the State to install check meters and otherwise periodically review the accuracy of the purchaser's metering activities, are standard and reasonable. In one respect these provisions are more favorable to the State than might be expected; the contract calls for correction of inaccuracies, when they occur, for a period extending back one-half of the time elapsed since the date of last calibration of the metering equipment. Frequently, gas sales contracts limit the period of time of recalculation, with it being fairly standard that such period is limited to a correction period of two weeks, or at most one month.

Section 4 contains standard provisions relating to the definition of the unit of volume sold.

Section 5 sets forth technical standards for gas measurement, and is standard in the industry.

Section 6, dealing with billing and payment, provides for the rendition of monthly statements, by the 15th day of each

month, setting forth the amount of gas delivered by the State and purchased by the buyers during the preceding calendar month, and for payment to be made by the 25th day of the calendar month in which the run statement is rendered. These provisions are standard.

Section 7, entitled "Receipt of Available Gas," imposes upon the buyer the obligation to proceed diligently to seek such authorization as required to receive gas then available for delivery by the State. As will be discussed later, the intent of Section 7 with respect to Tenneco Alaskan, Inc. and Southern Natural Gas Company is not altogether clear since neither of these buyers appears to be so situated that an authorization "to receive gas" would be required. Neither of these two buyers is in the present posture of seeking certificates permitting the transportation of royalty gas, or permitting construction of facilities to transport gas in interstate commerce and, accordingly, Section 7 is probably inappropriate in their contracts.

Section 8 contains a standard warranty of title by the State.

Section 9, force majeure, permits either party to the contract to suspend its performance if reasons force majeure supervene. The force majeure provisions are standard, but it is

interesting to note that, in a case such as this where the State is a contracting party, the State can effectively relieve itself of any obligations under the contract by the imposition of "future rules, regulations, orders, laws or proclamations." The State can thus create a force majeure situation through its own action, and if the effect of force majeure is to require suspension of the State's performance under the contract, the State incurs no liability by reason of nonperformance to the buyers. Conversely, if the State, by future rule, regulation, order, law or proclamation makes it impossible for the buyers to perform, the buyers have no liability for nonperformance to the State.

Section 10 makes the contract subject to all present and future valid laws and valid regulations of the United States, the State of Alaska or any duly constituted agency thereof. This is a standard provision.

Section 11 permits assignment of rights under the contract; it is expressly provided that either buyer or seller may assign its rights under the agreement to a security holder without such security holder incurring personal obligation under the contract, and without such security holder being required to qualify to do business in the State of Alaska.

Section 12 is not a standard contractual provision normally encountered in gas contracts. Section 12 provides, in essence, that if a producer of gas, of which the State's in-kind royalty gas is a part, enters into a contract of sale which contains provisions more favorable to the seller than the terms and conditions set forth in Sections 3, 5 and 6 of the "General Terms and Conditions," then the State has the option to include such more favorable terms and conditions within this contract "within 90 days after approval by the Federal Power Commission of said working interest owner's contract for the sale of its gas." The limitation of the State's right to move to more favorable terms is, as noted, limited to changes in the sections of the State's contract dealing with metering, measurement, and billing, and since these provisions are fairly well standard, it is doubtful that Section 12 will be of consequence. It should also be noted that if deregulation of new gas occurs, and if Prudhoe Bay gas is included within the definition of new gas so that the producer sales of that gas never become subject to FPC review, then Section 12 becomes meaningless inasmuch as the State would never have a matured right to demand favorable changes in Sections 3, 5 and 6.

Section 13 contains miscellaneous provisions to aid in the interpretation and application of the contract. The provisions of Section 13 are not remarkable.

B. "Royalty Gas Sales Agreement"

Three separate "Royalty Gas Sales Agreements" have been negotiated, but all are identical in terms, with the exception that Tenneco Alaskan, Inc. is the buyer of 50 percent of the State's royalty gas covered by the total sales transaction, Southern Natural Gas Company is the buyer of 25 percent, and El Paso Natural Gas Company is the buyer of 25 percent. Since all contracts are identical, the following summary of the provisions of the El Paso contract will apply to the others also.

Article I sets forth the mutual promises of buyer and seller each to support actively and seek before appropriate authorities the ultimate selection and implementation of a trans-Alaska gas pipeline system. For purposes of this article, "pipeline" means a large diameter gas pipeline commencing at Prudhoe Bay, crossing Alaska in approximately the same route as the present trans-Alaska pipeline system oil pipeline, and terminating in the Prince William Sound area.

Article II, denominated "seller's royalty gas," covers several matters: Section 2.1 sets forth the State's warranty of

its right to take royalty gas in kind, and its royalty share as being 12-1/2 percent. The leases identified in Exhibit A to the agreement set forth the specific acreage and royalty shares covered by the contract. If the State is prevented by federal action from taking its gas in kind, the gas sales agreement shall be void. [It should be here noted that Exhibit A was not furnished to me for review; I have assumed it to be no more than a listing and description of those State leases from which royalty gas will be sold under this contract.]

Section 2.2 provides that in addition to the sales price provided for elsewhere in the contract, the State will be reimbursed for the State's pro rata share of costs attributable to "the preparation and transportation of gas to be delivered hereunder." These costs are identified as being those costs which the State may incur as a result of its election to take its gas in kind, and which costs would not have been incurred if the State had not elected to take the royalty gas in kind.

Section 2.3 provides, however, that if the buyer is not able to include within its jurisdictional cost of service as determined by the Federal Power Commission, the cost reimbursement provided for in Section 2.2, then the buyer may terminate the gas sales agreement six months after giving notice of termination. If the

right of termination is exercised, the buyer must nonetheless reimburse the State for those costs identified in Section 2.2 which become due and payable by the State prior to termination.

Article III governs the quantity of gas to be sold under the sales agreement. The structure of this article is as follows:

Section 3.1 establishes the State's agreement to sell 25 percent of seller's royalty gas available at the prescribed delivery points. (The Southern contract also calls for 25 percent of seller's royalty gas, while the Tenneco contract calls for 50 percent of the State's royalty gas.)

Section 3.2 establishes the base volume of gas to be sold by the State and purchased by the buyers during the term of the gas sales agreement. For El Paso, the base volume may be less than, but under no condition shall it be in excess of, 650 Bcf. The same base volume applies in the Southern contract, while the Tenneco contract specifies a maximum base volume of 1,300 Bcf.

Sections 3.3 and 3.4 relate to the right of the State to withdraw from the contract certain volumes to meet the present and future needs of the State. The schedule of reductions is as follows:

From date of first delivery through the fifth anniversary thereof, the State has the right to reduce the

quantity of royalty gas otherwise available for sale under Section 3.1 by up to and including 25 percent.

Commencing on the fifth anniversary date of first delivery and continuing through the tenth anniversary date thereof, the State has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 50 percent.

Commencing on the tenth anniversary date of first delivery and continuing through the 15th anniversary date thereof, the State has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 75 percent.

Commencing on the 15th anniversary date of first delivery and continuing until termination of the agreement, the seller has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 100 percent.

Reductions by the State of the quantity of royalty gas available for sale and delivery shall not become effective until after 12 months have elapsed from the date that the State gives written notice to the buyers of its desire to reduce deliveries.

It is further provided that the State may change the percentages set forth above at any time during the term of the gas sales agreement, but such changes cannot become effective prior to the expiration of 24 months following the State's written notice to the buyer of its modification of the percentages.

Section 3.5 limits the State's rights of withdrawal of royalty gas volumes by stating that the rights of the State "shall be for the sole purpose of the State meeting the intra-state domestic and industrial needs of the State of Alaska" It will be recalled that the phrase "domestic and industrial needs of the State of Alaska" is specifically defined in the "General Terms and Conditions." The right of the State to withdraw gas from the contract for certain uses is further explained by the following provision in Section 3.5:

"This provision shall not limit the right to export from the State any products manufactured from said gas."

Section 3.6 requires the State to reduce, pro rata, deliveries to all three purchasing companies in the event that a State decision to withdraw gas from any of the contracts is made.

Section 3.7 has the effect of granting to the buyers an option on State royalty gas other than that produced under the leases identified on Exhibit A to the gas sales agreement. Under

the provisions of 3.7, if the State in fact withdraws royalty gas to meet State needs and if, during the term of this agreement and five years thereafter, the State has additional royalty gas which is surplus to State needs, and which will be transported by a trans-Alaska pipeline, then the State agrees to offer to sell to the buyers under the provisions of this agreement (except as to price and term) such additional and excess royalty gas. The option is granted to the three purchasers ratably. As to such "option gas," the price to be paid is the highest price available to the State for such gas from any other interstate bona fide purchaser; if there are no other such purchasers, the price for such "option gas" will be the price then being paid under the instant gas sales agreement.

Under Section 3.7(b), an additional right of first refusal is granted to the buyers. If royalty gas becomes available to the state which, in the State's sole discretion, is determined to be surplus to the intrastate domestic and industrial needs of the State of Alaska, the buyers under the instant agreement are given a right of first refusal to purchase additional royalty gas from the State to the extent of one-half times the volume that the State's exercise of its rights of withdrawal under Sections 3.3

and 3.4 in fact diminishes the amount of gas the buyer would otherwise have purchased and received under the instant agreement.

Section 3.8 permits the State to take and dispose of its royalty gas produced under the leases identified in Exhibit A at any time after the effective date of the instant agreement and prior to the time of first deliveries hereunder; the State may utilize, market or otherwise dispose of its royalty gas in any manner it chooses, at its own expense, so long as such taking or disposition does not prevent the State from making available for sale to the buyers on the date of first deliveries the quantity of gas committed under the contract.

Section 3.9 commits the State to the burden of advising the buyer at the beginning of each calendar year its best estimate of volumes which will be available under the agreement during each calendar year of the next succeeding five calendar years.

Section 3.10 expresses the agreement of buyer and seller to cooperate in minimizing "any charges levied on gas liquefied and transported from Alaska to the contiguous 48 states."

Section 3.11 provides that if the State exercises its rights of withdrawal of gas from the agreement, then the State will reimburse the buyer for a percentage of any then undepreciated investment made by the buyer in any facilities upstream of the

pipeline. The percentage of reimbursement is the percentage that the State's reserved gas is of the total gas which otherwise would have been sold to the buyer under the agreement.

Article IV of the royalty gas sales agreement deals with delivery points and delivery pressures. Section 4.1 provides that the State's royalty gas shall be delivered at the point where the working interest owners of the leases make delivery of gas to their purchaser, or at any other point mutually agreed upon by the buyer and seller under this agreement.

Section 4.2 provides that if the State is required to take delivery of its royalty gas at a point upstream from the delivery point determined under Section 4.1, then the buyer under this agreement is required to accept delivery at the point where the State receives its royalty gas.

In Section 4.3, it is provided that gas sold and delivered by the State under this agreement shall be received by the buyers at the same pressure as the pressure the working interest owners deliver their gas to their purchasers, or at the pressure the State receives its gas from the working interest owners if delivery is made upstream of the specified delivery point.

Section 4.4 reserves to the State the right to receive all liquids removed from the gas prior to its delivery to the

pipeline, whether the liquids are removed before or after delivery of the gas to buyer.

Article V of the royalty gas sales agreement specifies that the gas delivered by the State shall conform to the quality specifications applicable to the gas sold by the working interest owners at the same delivery point.

Article VI of the royalty gas sales agreement is concerned with price. Three alternate methods of determining the sales price are set forth in Sections 6.2, 6.3 and 6.4. Price redetermination rights are set forth in Section 6.5. Irrespective of which section governs the manner of establishing price, the sales price is subject to two important limitations:

Section 6.6 requires that the sales price reflect 1,000 Btu's per cubic foot, and if the heating value of the gas actually delivered is either greater than or less than 1,000 Btu's per cubic foot, then the price will be adjusted upward or downward.

Secondly, and more importantly, Section 6.1 sets forth an absolute upper limit on the price paid to the State. It is there provided that the price paid the State shall never be higher than the price which the buyer is permitted to retain in its jurisdictional

resale rates "so long as such rates are subject to regulation by the Federal Power Commission"

The four alternative methods of pricing are as follows:

Section 6.2 provides that if at the time of first delivery of gas, the price of gas purchased under the contract is subject to FPC regulation because of the Commission's authority to regulate resale rates, then the initial price to be paid shall be the highest rate allowed by the Commission to be paid by any interstate gas purchaser to any working interest owner in the leases identified in Exhibit A under contracts where at least 50 Bcf of gas are sold. Thereafter, the price to be paid would change in accordance with the applicable and governing portions of the rules and regulations of the Federal Power Commission. In the event any producer sells gas from the leases identified in Exhibit A at a price higher than the generally applicable FPC ceiling rates, through utilization of FPC special pricing procedures, then the State sales price would escalate to that higher price. In no instance will the State receive less than the price paid producers for their gas from the same reservoir for same or similar sales in interstate commerce.

Section 6.3 provides that if at the time of first deliveries of gas under the agreement the price of gas sold from the leases

identified in Exhibit A is not regulated by the FPC, then the initial price for gas delivered under the agreement shall be the highest price being paid by any interstate gas purchaser for gas under contracts of at least 50 Bcf and produced from the leases identified in Exhibit A.

Section 6.4 deals with the eventuality of deregulation at the federal level; if the FPC ceases to exercise jurisdiction over interstate sales for resale after having once commenced jurisdiction, and if deregulation is in such form that it prevents the FPC from excluding the price the buyer pays under this agreement from its cost of service, then the State may elect, by the giving of written notice, to call for redetermination of the sales price as permitted in Section 6.5.

Section 6.5 sets forth redetermination rights of both buyer and seller. Each party has the option to cause the price being paid for gas sold under the agreement to be redetermined every 12 months, such redetermination to be effective on the anniversary of such redetermination. If either party requests redetermination, the parties shall attempt to agree on a new price, and in doing so shall observe the following: The redetermined price shall be the higher of (1) the highest price being paid for gas sold in interstate commerce from Prudhoe Bay of Alaska under a

contract selling at least 50 Bcf of gas executed in the previous 12 months, or (2) the highest price being paid under a renegotiation or redetermination clause of any contract for gas sold in interstate commerce from the North Slope covering the sale of at least 50 Bcf of gas. If there are no comparable contracts executed in this one year period, or no contracts under which the price has been renegotiated or redetermined, then the parties are to attempt to agree to a new price, but failing this, the matter will be submitted to arbitration as provided in Article VII of the royalty gas sales agreement. In no event shall the redetermined price be less than the price being paid to the State immediately preceding the initial redetermination.

Article VII of the royalty gas sales agreement covers arbitration procedures. Any dispute arising under the agreement can be settled by arbitration if either party requests arbitration. Normal arbitration procedures are set forth, whereby each party names one arbitrator and the two so named select a third. The action of a majority of the board of arbitrators and their decision on matters submitted to them for adjudication shall be final and binding on the parties.

Article VIII of the agreement specifies that the agreement shall become effective upon execution and approval, and shall

continue for twenty years from the date of first deliveries or until the base volumes of gas set forth in Section 3.2 have been delivered, whichever is earlier. Earlier termination can occur if, for any reason, a decline in production is sustained to the extent that further production of gas would no longer be profitable for the State, or further operation of the transportation facilities would no longer be profitable to the buyer.

Article IX reserves certain rights to the State. The State retains the right to process the gas or have the gas processed before and/or after delivery to buyer for the recovery of liquefiable hydrocarbons other than methane; the State agrees that such processing shall not reduce the heating content of the residue gas below 1,000 Btu's per cubic foot, and the State agrees to reimburse the buyer for all transportation charges, liquefaction charges and regasification charges attributable to volumes removed by processing, including fuel and shrinkage.

Article X of the royalty gas sales agreement specifies the form of notices to be used in those instances where formal notification is required by the agreement.

Article XI specifies certain "conditions precedent." First, the buyer has no obligation to perform any of its undertakings in the agreement, other than its agreement to support the government's

selection of a trans-Alaska pipeline, unless and until all necessary government approvals for building, construction and operation of the pipeline are granted. The only exception here is that any costs incurred by the State by reason of the State's election to take its royalty in kind shall be reimbursed by the buyer as provided in Section 2.2.

Second, if all necessary regulatory approvals have not been issued and accepted by December 31, 1978, either party to the agreement may thereafter terminate the agreement by giving 10 days written notice.

Third, after approval of the agreement by concurrent resolution of a majority of each house of the Alaska State Legislature, the buyer is to proceed with diligence in the filing and prosecution of such pleadings and applications with the FPC as may be required to obtain all necessary rate, tariff and certificate authorizations related to the buyers' obligations under the agreement.

Fourth, it is provided in Section 11.4 that prior to the time that a Federal Power Commission order granting a certificate of public convenience and necessity to the pipeline becomes final and nonappealable, the Governor of the State may give written notice to the buyer of his decision to support a project other than the trans-Alaska pipeline as defined and identified in the

agreement. Such notice is not a default by the State under the agreement, but if the buyer decides not to concur in the Governor's change of position, then the buyer may terminate the agreement in its entirety. If the buyer agrees to support the project designated in the Governor's notice, the new project shall be considered the "pipeline," and the agreement remains in force.

Fifth, the royalty gas sales agreement may be terminated by directive of the Governor and service of notice on the buyer if the Federal Power Commission denies the El Paso-Alaska application in Docket No. CP75-96, or if the Commission grants a certificate of public convenience and necessity to a project or system other than the "pipeline" as defined in the agreement.

Finally, it is stipulated that the agreement shall not take effect until approved by concurrent resolution of a majority of each House of the Alaskan Legislature.

Article XII incorporates the general terms and conditions and Exhibit A into the agreement and makes them a part of the agreement for all purposes.

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

May 26, 1976

The Honorable Chancy Croft
President, Alaska State Senate
Juneau, Alaska 99801

Dear Chancy:

The following is a personal account; in response to your request, of my own views on the merits of competing proposals for a transportation system to carry natural gas from Alaska's North Slope to markets in the Lower 48 states.

Over the last year I have devoted considerable attention to proposals for the transportation of natural gas from the North American Arctic to the population and industrial centers of the United States and Canada. During that time I arrived at evaluations of several major issues which were in some respects contradictory to the assumptions on which the major private interests and governmental authorities (U.S., Canadian and Alaskan) were proceeding.

I have of course taken for granted your acquaintance with:

(1) The two principal transportation systems proposed to the Federal Power Commission before May 1975: El Paso-Alaska's "trans-Alaska" pipeline and LNG tanker system, and Arctic Gas' overland pipeline system across Canada which would also carry natural gas from the Mackenzie Delta to Canadian markets;

(2) Foothills Pipeline's proposal for an all-Canadian, "Maple Leaf" pipeline to carry Mackenzie Delta gas;

(3) The principal advantages and disadvantages argued for both proposals;

(4) The rationale for the State of Alaska's endorsement of the El Paso system; and

(5) My own concern with the issue of transportation systems as a consultant to the State of Alaska and to the U.S. Senate Committee on Interior and Insular Affairs, and as a public member of Alaska's Royalty Oil and Gas Development Advisory Board.

I have, as you probably know, no financial stake in any of the proposals, nor have I had any business relationship with any of the systems' sponsors or participants.

From the time they were initially proposed, I have had serious questions about the viability of the transportation systems proposed by both Arctic Gas and El Paso for taking Alaska North Slope natural gas to Lower 48 markets. An investigation I conducted on the economics of the two proposals for a State of Alaska task force in early 1975 raised the possibility that the cost of delivering the gas might actually exceed its value to consumers. [Excerpts from my report are appended to this letter.] Subsequently I have become quite convinced that both projects as proposed by their sponsors are so risky that they could not be privately financed, even if their political and regulatory problems could be overcome -- itself a questionable issue.

Risk Factors

Both projects face the following risks:

(1) Gas supplies: production from the Alaska North Slope (and in the case of the Arctic Gas proposal) from the Mackenzie Delta may be substantially less than the design capacity of either transportation system, meaning that each unit actually carried would have to bear a larger portion of the system's fixed costs than projected by its sponsors.

(2) Delays and Capital cost overruns: Actual construction costs may exceed estimated costs by substantially more than the effect of general inflation. The Arctic Gas project would use a chilled gas pipeline concept untested in North America, while its route traverses hundreds of miles of difficult Arctic terrain where there has been no previous construction of either pipelines or roads. El Paso proposes a system of unprecedented pipeline pressures and a huge scale-up

of existing LNG technology. New technology, unfamiliar environments and a large scale relative to previous projects are exactly the ingredients for the most spectacular cost overruns. For these reasons I would not be surprised to see the total cost of either project exceed \$20 billion, including interest on funds used during construction. [See Appendix 2.]

(3) Market: Both El Paso and Arctic Gas insist that the natural gas shortage in the United States is an absolute one, and that Lower 48 markets will accept North Slope natural gas at any price. Not everyone agrees; the Federal Energy Administration, for example, estimates that no market for Prudhoe Bay gas would exist in 1985, at a "city gate" price exceeding \$2.40 per million BTU (in 1975 dollars). The Interior Department's study reaches a similar conclusion. This price could easily be exceeded even without implausibly large cost overruns or shortfalls in gas supplies to the system.

(4) Political, regulatory and other institutional issues: Each project would face serious political and legal obstacles, even after it received a certificate from the Federal Power Commission. Lack of coordination in U.S. and Canadian approvals, for example, could block or delay construction of the Arctic gas system, while there is some chance that resistance in California to port and terminal facilities would jeopardize completion of the El Paso system. The Arctic Gas system is, significantly, opposed by the governments and the preponderance of public opinion in both Alaska and Alberta, and the El Paso system is opposed by the state of California. The major environmentalist organizations are hostile to both projects. Neither they nor various local interest groups are likely to abandon every attempt to obstruct or delay construction simply because one system had been sanctioned by the Federal Power Commission.

Financing Problems

The financial consequences of the risks I have listed are magnified by the fact that neither project can be built in smaller self-sustaining stages. Either would be a large integrated system which could not carry any gas or produce any cash flow until it was completed. All the capital invested (\$10 to \$20 billion or more) would therefore be exposed to these risk factors for at least the entire planning and construction period.

Private lenders simply will not accept risks of this sort, and neither projects' sponsors are financially large enough to carry them, even if they were willing to do so. They do not in fact seem to be willing, as they both propose tariff conditions which would protect their own profits as well as their debt service obligations against "all events." Only the federal government and/or (perhaps) potential gas consumers are in a position to carry financial risks of the size associated with either of the systems.

Accordingly, El Paso proposes to use federal loan guarantees (under an existing program) for its LNG tankers, and spokesmen for Arctic Gas have suggested that government indemnify the sponsors against cost overruns exceeding 40 percent (nearly certain, in my judgment). But, more importantly, each applicant proposes to rely on "full cost of service all-events tariffs" to cover their debt service obligations and to assure a return on their equity. These tariffs provide, in brief, that consumers be required to pay the debt service and operating costs of the transportation system (plus a profit to the owners) no matter how great these costs are and whether or not the customers receive any gas. Arctic Gas' tariff would begin to run as soon as gas was first delivered; El Paso's would begin 60 months after approval of its project, even if it were never completed.

The proposition that consumers should bear or share in the risks associated with a project which benefits them is not in itself unreasonable, provided that the economic expectations of the project are clearly favorable and the risks of a reasonable magnitude. But with these projects there are good reasons for doubt on both scores. Moreover, even if the Federal Power Commission were to approve all events tariffs, local gas distributors would not sign contracts containing such tariffs unless they were assured in advance by their state regulatory commissions (as well as by their own market analyses) that they would be able to pass these charges through to their own customers. Responses by the state commissions to Federal Power Commission inquiries suggest that there is almost no chance that they would give such advance approval.

These considerations lead inexorably to the conclusion that neither system can be built without either substantial federal financial backing, Federal Power Commission authority to preempt the jurisdiction of state utility commissions over the tariffs of local distributors, or both. No plausible proposals

of either sort have yet been made, either by the applicants or by any of the responsible federal agencies. Moreover, either project would be of questionable economic viability -- even if the question of who will bear the risk were resolved. In addition, there is still a significant possibility that either project could effectively be blocked or delayed indefinitely by legal or political obstructionism by its opponents.

In summary, there seem to be two problems that work together to make questionable the completion of either project as proposed: each of them requires too large an initial capital, and that capital would be exposed to too many large risks. Once these are recognized as the critical problems to be overcome, it is obviously worthwhile to investigate whether there might not be some alternative system (or modification of one of the applicants' systems) which could begin with a smaller investment and perhaps be expanded in stages after gas and income begin to flow, a system with a smaller potential for cost overruns, and one which would have fewer opponents on environmental, developmental or economic nationalist grounds.

Transportation of North Slope Gas as Methanol

As of the beginning of 1976, two proposals, neither of them in the form of applications to the Federal Power Commission, seemed to have some such potential. Firstly, a group of firms headed by the Westinghouse Oceanic Division have been advocating converting North Slope natural gas within Alaska into fuel grade methanol, which could be blended with motor gasoline, burned in combustion turbines, or used as chemical feedstock. Westinghouse's main interest in this system was in developing submarine tankers to haul the product, and its promotions seemed directed mainly at getting Maritime Administration funds for construction of a prototype tanker. Methanol could, however, also be transported in batches through the Trans-Alaska oil pipeline with conventional technology, and carried to ports elsewhere in the United States by conventional products tankers.

A methanol system would need no fixed transportation system of its own (other than additional storage tanks at both ends of the pipeline) until the oil pipeline reached full capacity, a date that seems to be steadily receding because of construction problems and the lack of transport facilities to move Alaska crude oil beyond the West Coast. Unlike the El Paso

and Arctic gas systems, which would require all the gas from the main Prudhoe Bay reservoir (at least 2 billion cubic feet per day, and perhaps more) to be even arguably feasible, the least-cost methanol conversion facility would require only 25-150 million cubic feet per day. One to three pilot conversion trains could be installed at an initial risk of perhaps a few hundred million dollars; there would thereafter be plenty of time to be sure of the amount of gas available, conversion and transport technologies, markets and the economics of the system before investment gradually (if ever) reached the many billions of dollars proposed for either of the gas pipeline systems.

Wentworth Brothers has proposed a complex variation on the methanol conversion concept that would use natural gas (including the natural gas liquids and carbon dioxide produced together with the methane, but which would otherwise have to be removed from the gas stream) together with coal to produce fuel grade methanol, which would then serve as the vehicle for a coal slurry. Significantly, however, Wentworth (like Westinghouse) has advanced its concept as a rationale for getting government research and development money, not as an immediately commercial practicality. The methanol concept need not be pursued further here, because if it indeed makes sense, there seems no reason why private enterprise cannot take the initiative and establish a pilot facility, without a guarantee of all the Prudhoe Bay gas, without a Federal Power Commission certificate of public necessity and convenience, and without federal or state financial assistance. [See my testimony for the Alaska Senate State Affairs Committee, which is appended to this letter.]

The Alaska Highway Route

The second system which seemed to have a possibility of meeting some of the criteria mentioned above would be an overland natural gas pipeline along the general route of the Trans-Alaska oil pipeline to Fairbanks, and along the general route of the Alaska Highway into Northern British Columbia or Alberta. Such a route has been suggested as an alternative for the Arctic Gas system by various parties, including the FPC environmental staff. Simply as a variant to the Arctic Gas proposal, adoption of the Alaska highway route would result in higher costs, because it would require an additional separate pipeline leg to serve the Mackenzie Delta gas reserves, its length depending upon whether it came

- (1) Southwesterly into the Yukon along the Dempster Highway,
- (2) South into Alberta as proposed by the Foothills group,
- or (3) Westward across the Arctic Slope to Prudhoe Bay.

Use of the Alaska highway routing would at first seem to have only two advantages over the system proposed by Arctic Gas: (1) a reduction of the likelihood of major cost overruns because the new system would follow existing transportation corridors, where construction conditions are less extreme and better known, and (2) less intense environmentalist opposition because the alternate route has far fewer river crossings and would not invade the Arctic Wildlife Range.

Coupled with two other changes relative to the Arctic Gas proposal, however, an Alaska highway system would appear to be considerably cheaper in initial capital outlay, and still competitive or even superior in terms of expected transportation tariffs for Prudhoe Bay gas. The first of these two variations is to use, as much as is practical, conventional technology and existing transportation facilities in the United States and Canada. The second is to postpone construction of a transportation system to serve the Mackenzie reserves.

Maximum Use of Existing Facilities

Arctic Gas originally proposed to build an entirely new trunkline system extending from Prudhoe Bay through the Mackenzie Delta into California on the West and Pennsylvania on the East. The Interior Department, among others, criticized this proposal for unnecessarily duplicating hundreds of miles of existing pipelines. As a result, the applicants have made some reductions in the scope of their proposal in the Lower 48, but there still appear to be significant opportunities for reducing first costs by using existing facilities, both in the United States and Canada.

The system with the lowest initial capital costs seems to be one which would tie into (1) the Westcoast Transmission system in Northern British Columbia and thence the Northwest Pipeline system for transportation of part of the gas to Western United States markets, and (2) the Alberta Gas Trunkline (AGTL) system and the Trans-Canada pipeline to the Great Lakes pipeline and other connections in the mid-western and eastern United States. These facilities would of course require some expansion and elimination of bottlenecks.

The Mackenzie Connection

The second departure from the general strategy of Arctic Gas concerns postponing a pipeline connection to the Mackenzie Delta and Canadian Beaufort Sea areas. If the reserves in this region were large enough to support half the total design capacity of the Arctic Gas pipeline, and if there were a Canadian or authorized export market for this much additional gas, the least expensive way of moving the Canadian gas would probably be to route the pipeline from Prudhoe Bay through the Mackenzie Delta and to provide sufficient capacity at the outset to carry the gas from both sources, in other words to adopt Arctic Gas' strategy.

But presently proved Mackenzie reserves fall far short of the Arctic Gas system's Canadian design capacity (2.24 billion cubic feet per day); the Interior Department estimates that proved and probable reserves in that area will support production of at most .9 to 1.1 billion cubic feet per day. At the same time, anticipated Canadian demand, plus existing contractual commitments to United States consumers, can be met for at least the next ten years from existing and anticipated reserves in the Western Provinces. On the other hand, even if there were enough Mackenzie gas to fill the pipeline, it would likely not be enough to induce the Canadian authorities to increase exports to the United States beyond those existing contractual commitments. All these propositions are conjectures, but the fact is that there is a good likelihood that a Mackenzie gas pipeline -- or at least a substantial part of its design capacity -- would be economically superfluous for many years after Prudhoe Bay gas began to flow. If this is the case, as seems probable, the Arctic Gas strategy is actually less economical than building a pipeline to carry exclusively Prudhoe Bay gas, by the least problematical route, and then to build a separate link later to connect the Mackenzie, when and if reserves and markets clearly indicate that it is justified.

At the beginning of this year these notions were only abstract possibilities because of the lack of any serious corporate interest in them. As one of the original participants in the Arctic Gas study groups, however, AGTL had advocated using existing pipeline facilities, including its own, to carry Alaska gas. The decision of Arctic gas to build a separate, competing trunk line was one of the reasons AGTL left the study group and (with Westcoast)

established the Foothills Pipeline Company to promote an all-Canadian "Maple Leaf" project for the Mackenzie Valley.

An inquiry in connection with the U.S. Senate hearings to Robert Blair, President of AGTL, about the probable costs of using existing Canadian transportation facilities was apparently one factor encouraging the Foothills group to appear at those hearings and at hearings of a committee of the Alaska legislature, where they set out their own rationale for a pipeline along the Alaska Highway route, which would maximize the use of existing Canadian pipeline facilities.

About the same time, some of the major environmental organizations began to explore the potentials of the Alaska Highway route, which they (along with the Federal Power Commission's environmental staff) regarded as far superior to either Arctic Gas' or El Paso's proposals, and a representative of one of the Midwestern governors started making similar inquiries. Similar but isolated interest began to appear on the part of business groups in Fairbanks and Yukon Territory, Provincial officials in Eastern Canada and gas utilities on both coasts. This alternative seemed to have a great deal of latent support. It lacked corporate sponsorship, however, and as late as March of this year it was not clear (1) that there was any way a third alternative could be seriously considered by the Federal Power Commission and Canada's National Energy Board, or (2) that Canadian authorities would consider approving any system principally designed to serve United States needs which did not result in an early connection of the Mackenzie reserves to Canadian Markets.

Procedural Feasibility of the Alaska Highway Alternative

Each of these doubts can be resolved, at least in part. The Foothills group (AGTL and Westcoast) is prepared to undertake construction and operation of the Canadian portion of the system. Northwest Pipeline, brought into the project by the Canadian companies, has announced its intention to apply to the Federal Power Commission by

July 9 for a certificate to build and operate the Alaska portion of the system, and is negotiating with other pipeline companies who might participate.*

It appears that both the Federal Power Commission and the National Energy Board can (and there are grounds for believing they must), consider a new application competitively. It is not clear whether addition of a third applicant in either case would necessarily mean a great delay in arriving at a decision. FPC Chairman Dunham estimates only a one to two month delay if Northwest files an application and all parties "cooperate."

Since a gas pipeline along the Alaska Highway route would traverse an established utility corridor and would not carry natural gas of Canadian origin, application to build such a pipeline apparently would not invoke Canada's elaborate Guidelines for Northern Pipelines, but could be treated as an expansion of Westcoast's existing system. The route has, moreover, already been thoroughly considered by the Berger Commission, which is investigating the implications of northern pipelines for the environment, Native welfare, and development of the Territories.

In the United States, procedural legislation will probably be approved which would much reduce the likelihood of administrative, regulatory or judicial delays arising from either two or three competing applications. Even if

*Perhaps it is not too heretical to suggest that Northwest's natural partners in this venture seem to be El Paso and Tenneco. Northwest's application significantly weakens both the rationale and the potential base for El Paso's own LNG proposal, yet the Northwest system is the logical route for delivering gas overland into El Paso's market area. Much of El Paso's engineering effort North of Fairbanks, moreover, could be transferred to the system proposed by Northwest.

Tennessee Gas Pipeline Company is not a sponsor of either the El Paso or the Arctic Gas application, but has been negotiating for Alaska's royalty gas on the basis of support for the El Paso proposal. Tennessee, however, now exports natural gas into the Trans-Canada system, and this connection may be a logical basis for serving its own market area with North Slope gas by displacement. Tenneco, moreover, is a participant in the Polar Pipeline project to deliver gas from the Canadian Arctic islands, a project which might benefit substantially from a delay in development of Mackenzie Delta reserves.

Northwest Pipeline had not decided to file an application, the legislation would be likely to require the Federal Power Commission and the President to consider all reasonable alternatives, which would clearly include the Alaska Highway route and maximum utilization of existing facilities.

What's in it for Canada?

The probable reception by Canadian authorities has been in my opinion the most difficult issue to judge. A major appeal of the Arctic Gas proposal is purportedly its early (if not necessarily more economical) attachment of the Mackenzie reserves. Without this feature, it may be asked, what is the advantage to Canada of accommodating the United States in moving Alaska gas?

The attachment of the Mackenzie reserves is, on the other hand, also a disadvantage of the Arctic Gas system, from one Canadian standpoint. There is no particular reason why Canada should not accommodate the United States with a transit line across Canadian territory; after all, a substantial portion of Canada's oil and gas supplies transits the United States. There would seem to be little objection in Canada on nationalistic grounds to American gas moving in either an American or a Canadian-owned pipeline across Canada. The Mackenzie project, however, raises the issue of an American-dominated consortium developing an important frontier area of Canada. The fact that an early Mackenzie connection is being justified in the United States by the (doubtful) proposition that it would lead to greater Canadian exports to the United States aggravates its potential difficulties in Canada. Both the timetable and logistics would be dictated by the convenience of the American interests. The Native claims and environmental complications of this route are also well known.

More importantly, however, a decision today in favor of immediate development of the Mackenzie Delta -- Beaufort Sea region can be seen to prejudice whether that region or the Arctic Islands (where recent exploration seems to have been more successful) shall be developed first.

Canada does not have an urgent internal need for gas production from either area, and development of either one could strain the capacity of domestic capital markets. Simultaneous

construction of the two pipelines under Canadian majority ownership is almost out of the question. It is not obvious which of these considerations is likely to be dominant in the eventual decision by the National Energy Board and the Cabinet, and it is possible to get contradictory opinions from key people in the decision process in Canada. The issue is clearly a blind-men-and-elephant situation; there is no person who can make an authoritative statement at this time.

On balance, however, my best informants in Canada indicate that there is a high-level commitment to a cooperative project with the United States concerning Alaska gas; absent a credible third application, this means that the Arctic Gas proposal will be approved. The Maple Leaf project is not a serious contender at this time.

A decision in favor of Arctic Gas would, however, be a reluctant one and would be opposed from many quarters within the Canadian federal government, by several provinces and by a large body of Canadian opinion. These objections rest on a broad range of environmental, economic, nationalistic and Native claims considerations, and most decisively perhaps on the fact that approval of Arctic Gas would effectively preclude or postpone for many years the Polar alternative. For these reasons, my own tentative judgment is that the Canadian government will -- once it has had an opportunity to consider the alternative -- welcome the opportunity to avoid an early decision one way or another regarding the Mackenzie.

The State of Alaska and the El Paso Proposal

Some of the concerns that led the Alaska state government and the bulk of the state's business and political communities to support the El Paso proposal were set out in detail in my 1975 report to the State Task Force, which provided part of the rationale for the Governor's endorsement of El Paso's application before the Federal Power Commission. The main theme of that report was that the cost of moving North Slope gas to the Lower 48 by either proposed system would be so great that the wellhead value of the gas would be very low -- if it was indeed high enough to justify investment in developing the field. As a result, the State's royalty and severance tax revenues from sale

of the gas in interstate commerce would be negligible compared with the contributions a Trans-Alaska pipeline might make to the State's economy through, for example, (1) the payrolls, profits and tax collections from pipeline and terminal construction, (2) property and income taxes on the pipeline and terminal when it was operating (3) the availability of natural gas in the Fairbanks area for household and commercial use and at tidewater in Southcentral Alaska, where it might be used as an industrial fuel or feedstock.

The system proposed by Arctic Gas would probably have meant lower average transportation costs to the Lower 48, and therefore, a higher "netback" value at the wellhead. But the effect of this difference on state revenues and economic activity would have been negligible compared to the economic disadvantage of removing the gas from Alaska at its most remote corner, with a minimum of construction activity and resulting capital plant within the state, and the virtual inability of the populated areas of the state to obtain any Prudhoe Bay gas for domestic or industrial use.

The El Paso proposal was remarkable in that -- at least temporarily -- it won the support of both the pro-development interests in Alaska and the environmentalists. For at least two years it has seemed that there was almost complete unanimity in Alaska in support of El Paso's application.

Despite my own role in helping to create this consensus (through the rationale for a Trans-Alaska pipeline, developed in my report to the Task Force), I have not been able to endorse the uncritical and increasingly irrational commitment of State spokesmen to the El Paso application. Firstly, the State has almost certainly been betting on a dead horse. The technical, economic and logistical inferiority of the LNG system from a national standpoint is so overwhelming that Alaska's views or political influence are not likely to carry much weight in the ultimate outcome. Not only is there unanimity in the Midwest and East in favor of a system that would deliver the gas directly into those regions of the United States which face the greatest shortages, but California, the state that would directly receive the LNG, prefers an overland pipeline alternative for economic reasons which seem to me wholly persuasive (and increasingly, it appears, for safety and environmental reasons also).

In view of the growing consternation about the West Coast crude oil "surplus," resulting from the choice of a Trans-Alaska route for the oil pipeline, it seems quite improbable that Congress would compound the imbalance by agreeing to a Trans-Alaska pipeline and LNG tanker system for North Slope natural gas so long as an all-pipeline route is a serious possibility. The imbalance in domestic energy sufficiency between the West Coast and the rest of the United States would of course be further aggravated by any major new oil or gas discoveries in Lower Cook Inlet or the Gulf of Alaska.

To offset the weakness of their economic and logistical arguments from a national standpoint, and their almost non-existent national political base, the supporters of El Paso in Alaska built their case largely on exaggerated and often unreasonable claims about Canadian interests, institutions and intentions. In some cases it seemed as if this rhetoric was deliberately designed to worsen relations between the United States and Canada. These claims were advanced, ironically, in support of a company which now imports LNG from Algeria and is presently promoting a project to bring LNG from the Soviet Union.

The case, even from an Alaskan standpoint, for the Trans Alaskan gas pipeline was systematically and increasingly exaggerated, not only by the Anchorage Times and OMAR but by state government spokesmen. Little consideration was given to the possibility that the natural gas available from new discoveries in Southcentral Alaska would exceed any anticipated domestic and industrial demand there, and that El Paso's terminal at Gravina Point was in any case hundreds of miles from the principal gas markets of the state and the logical sites for industrial development in the Cook Inlet-railbelt area. Little attention was given to the fact that the State could make its North Slope royalty gas effectively available in South Central Alaska, by exchange for Cook Inlet gas, even if the Arctic Gas system were built.

Little weight, evidently, was given in the State's strategy to the negative environmental impacts of the additional population growth and the prolonged overheating of Alaska's economy which would result from a second pipeline boom. It was particularly ironic -- and to me disappointing -- that a state Administration which came to office because of public reaction against the excesses of

the oil pipeline boom, and the boomer psychology, should so completely adopt on this issue the outlook of people who vehemently opposed Governor Hammond's election, and who would not support him whatever he did.

By its unconditional support of El Paso, the state gave that company no incentive to accommodate Alaska's interest by, for example, choosing a terminal in Cook Inlet rather than Prince William Sound, or by maximum use of the oil pipeline pad in order to minimize environmental disturbance from the second line. At the same time the State effectively told Arctic Gas -- which was much more likely to prevail ultimately -- that there was no accommodation it could make to the State's interest (like choice of an Alaska Highway route) that would soften the State's position of support for El Paso.

Alaska and the Northwest Pipeline Proposal

Northwest Pipeline, together with Westcoast Transmission and AGTL have this month formally proposed to build a system from Prudhoe Bay along the oil pipeline route to Fairbanks, then following the Alaska Highway to Fort Nelson, British Columbia and Zama Lake, Alberta where the gas would enter existing transmission facilities. These facilities would be expanded where necessary to accommodate the increased volumes. [A description by Northwest is appended to this letter.]

The pipeline concept proposed by Northwest would have several technical and financial advantages over the other two systems. By using a 42 inch pipeline, conventional technology, and a corridor where there has already been highway and/or pipeline construction, for the route segments which require entirely new construction, and by maximum employment of existing facilities, the initial capital cost outlay before any gas or cash could begin to flow might be held to little more than half that anticipated for the Arctic Gas system. The likelihood of large cost overruns, as well, would be much reduced by these features. The system could begin to operate with a flow of as little as a billion cubic feet per day (though I don't see how even this project would be economically viable unless its throughput ultimately reached at least 2 billion). And, in my judgment, the political and regulatory barriers to an Alaska Highway system would be far less formidable than for either of the other two systems.

There is good reason to believe that the announcement by Northwest makes the Alaskan commitment to El Paso obsolete, and that support within the State for that company's proposal may deteriorate rapidly. The Northwest project would avoid most of the environmental objections to the Arctic Gas system; it also makes gas available in the Fairbanks area and involves almost as much pipeline construction within Alaska as would the El Paso system. Because it does not involve an LNG terminal, however, the peak impact of the boom resulting from building an Alaska Highway system would be substantially smaller. This outcome can be seen as either better or worse for Alaska.

According to preliminary estimates from the University of Alaska's Man in the Arctic program, construction of the Arctic Gas system would add \$19 million to the State's gross product and three thousand persons to the State's population in the peak year of construction. The El Paso system would increase gross product by \$235 million and population by 24 thousand while the Alaska Highway system would increase Alaska gross product by \$111 million and population by 15 thousand. These calculations do not take account of the fact that Haines and Skagway would undoubtedly be major ports of entry for materials and equipment destined for construction activities in Yukon Territory.

For these reasons, the Northwest proposal seems at the very worst to be a workable compromise that would be acceptable to almost every important Alaskan interest group. The newly proposed system may, however, be more attractive to Alaskans than as just a fallback position or a workable compromise. Northwest Pipeline's approach to the State contrasts sharply with the "take it or leave it" stance of both of the original applicants. Northwest has at least informally suggested that the State take an equity share in the pipeline system and take part in the planning and in its operation from the inside. The company also has approached or plans to approach Alaska-based corporations including the Arctic Slope Regional Corporation and Doyon, Ltd. for participation, and has suggested that a block of shares in the enterprise be offered to the general public in Alaska. The effect of these innovations would be to assure that the system within Alaska would be closely identified with local interests and be responsive to them.

Another initiative proposed by Northwest (to the Royalty Board) includes acquisition of gas reserves in the Cook Inlet area, which could be provided to the State for intrastate use in exchange for state royalty gas exported by Northwest to the Lower 48. Northwest spokesmen have also talked about advance planning for a possible "Phase II" pipeline spur from Fairbanks to the Cook Inlet area. This addition would be built to serve domestic and industrial customers there when and if existing newly discovered reserves in Southcentral Alaska proved inadequate to the area's requirements. None of these concepts is yet a firm commitment, much less a reality, but if the sponsors of the new system actually proceed along these lines they will quickly rally very significant support in the State.

Regional Interests Outside of Alaska

The Alaska Highway pipeline proposal offers significant advantages over the two other proposed systems to a wide variety of regional and sectoral interests outside of Alaska.

(1) For British Columbia, introduction of Prudhoe Bay gas will more fully utilize the existing facilities of Westcoast Transmission, and thereby reduce the cost of British Columbia gas delivered to consumers in the Province. Construction of a pipeline through the Yukon would provide a stimulus to the development of that Territory, and strengthen its links with market and financial centers in British Columbia. The proposal is now being discussed in the Province as a possible justification for extending the British Columbia Railway to Whitehorse and eventually to Fairbanks. For these reasons, the Provincial Government is considering joining in the pipeline project, perhaps as an equity participant.

(2) The system proposed by Northwest Pipeline is by far the most economical method of moving North Slope gas into the Pacific Northwest, and it is for that reason supported by all the gas distributors of the region. In contrast to the Arctic Gas proposal (which is a second-best gas supply alternative for the Northwestern states), construction of an Alaska Highway system would rely mainly on Seattle-Tacoma and other ports in the region as supply and transportation bases. The Alaska Highway route would

probably not make as large a contribution to Port of Seattle activity and revenues as would El Paso's LNG project. The latter is not in my judgment likely to prevail, however, and the Alaska Highway system offers maritime interests in the Northwest the greatest volume of business they are actually likely to obtain from any Alaska gas transportation system.

(3) For California the Alaska Highway system offers a comparatively economic and (because it utilizes conventional technology) reliable source of incremental gas supply. Unlike the El Paso project it would not raise novel safety issues nor would it displace California's present low price gas from the Permian Basin in favor of high price LNG imports from Alaska.

(4) For the United States Midwest and East the Alaska Highway project (like the Arctic Gas project) would provide an assured supply of natural gas directly into the market areas where the shortages are most acute. Because of its smaller risk of construction delays and cost overruns, however, the Alaska Highway system should on balance be preferable. By preserving Canada's option to develop the Arctic Islands and the Polar Pipeline earlier than the Mackenzie Delta and Beaufort Sea, the Alaska Highway proposal may offer a better possibility of increasing producible and transportable Canadian reserves to such a quantity that the Canadian Government would be willing to consider new export commitments.

(5) The project would be supported by the crucially important Province of Alberta (which now opposes the Arctic Gas application) because it would contribute to the optimum use of Alberta's own gas transmission system, rather than establishing a competing trunkline through the Province. Unlike Arctic Gas, moreover, the new system would not in the immediate future compete with, and require the shutting in of, Alberta gas now dedicated to markets in Eastern Canada.

(6) For Canada as a whole the Alaska Highway proposal would postpone the necessity of deciding when, how and by whom the Mackenzie Delta-Beaufort Sea region was to be developed, and whether that region or the Arctic Islands should take first priority for development among Canadian frontier regions. By reducing the total amount of new

construction and shifting a substantial part of the construction out of Canada and into Alaska, the Alaska Highway system would reduce the stress on Canadian capital and labor markets and on the nation's foreign exchange position.

There cannot help but be some losers. First, of course, are those gas transmission companies whose projects would be turned down and the construction and service firms who hoped to build a bigger system or a different system from the one which is finally approved. There are Exxon, whose affiliate Imperial Oil is part of the Arctic Gas group, and other producers with interests in the Mackenzie, who would be deprived of an early hookup to their Arctic reserves, however superfluous that hookup may be at the present time from the standpoint of Canada's energy economy. Finally there are those who would expect to build and operate the LNG tankers if the El Paso project prevailed, together with those (in the Port of Seattle, for example) who hope for a larger demand for their transportation and other services than an Alaska highway project can generate.

On balance, however, if we take into account the lower front-end cost, the smaller vulnerability to cost overruns and the widely agreed-upon environmental advantages of the Alaska Highway Route, the system proposed by Northwest seems to be the best practical alternative for almost every region in both Canada and the United States. Together with its broad acceptability to Alaskan's these considerations make the Northwest proposal a possible winner. On its merits it now seems to be distinctly superior to both of the other proposals from a national viewpoint, and at least as good as El Paso's proposal from an Alaskan perspective.

For this reason it was a relief that the Administration was not able to complete arrangement during this session of the legislature to sell Alaska's North Slope royalty gas to pipeline companies who promise in return to give

political support for the El Paso project. It is fortunate that the Royalty Board did not have to vote on any such sale and that the legislature did not have to face the issue in its last days. The choices for Alaska have changed radically -- and so have their political implications. I believe that the State's position will have to move soon to reflect these changes.

Very truly yours,

Arlon R. Tussing

cc: Governor Jay Hammond
Speaker Mike Bradner

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

Cong. Delegation

TELEGRAM

ECA ALASKA COMMUNICATIONS, INC.

PHONE: 583-6440

JUNEAU, ALASKA 99901

977 JAN 28 PM 7 25

EXHIBIT# 41

02036 NL ANCHORAGE ALASKA 51 01-28 0345P AST

PMS SEN JOHN RADER

1296

JUN

I URGE PROMPT CONSIDERATION AND APPROVAL OF THE ROYALTY GAS
CONTRACTS FACING THE LEGISLATURE

EXPEDITIOUS ACTION ON THE LEGISLATURES PART WOULD

ACCURATELY REFLECT THE VAST MAJORITY OF PUBLIC OPINION

ON THIS ISSUE IN THE STATE. IT WOULD ADDITIONALLY

HELP IN WASHINGTON THE CHANCES FOR APPROVAL OF AN ALL ALASKA
GAS PIPELINE.

MIKE GRAVEL USS



AGO 560307 +

AAAX

PHONE: 586-6440
JUNEAU, ALASKA 99801

EXHIBIT #

2

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1-035734A028 01/28/77

ICS IPMNAWB WSH

SUSPECTED DUPLICATE

09027 GOVT NFWASHINGTON DC 460 01-28 710P EST

PMS HONORABLE JOHN RADER

PRESIDENT

1297

ALASKA STATE SENATE

POUCH V

JUNEAU AK 99811

I APPRECIATE YOUR REQUEST FOR MY VIEWS ON THE PROPOSED
CONTRACTS FOR THE SALE OF THE PRUDHOE ROYALTY GAS TO EL PASO,
SOUTHERN AND TENNECO.

AS YOU KNOW, LAST YEAR I URGED GOVERNOR HAMMOND TO NEGOTIATE
A SALE OF THE ROYALTY GAS FOR SEVERAL REASONS. I FELT THAT A
SALE WOULD CLEARLY ASSERT THE STATES RIGHT TO CONTROL THE GAS
AND WOULD, THEREFORE, PREVENT DEDICATION OF THE GAS TO
INTERSTATE COMMERCE. THAT ARGUMENT IS STILL VALID IN SPITE OF
THE AMENDMENT TO PUBLIC LAW 94-536, GIVING ALASKAS GAS SPECIAL
PROTECTIONS. I ALSO ASKED THE GOVERNOR TO SELL THE GAS FOR
THE ADDITIONAL HELP SUCH A SALE WOULD BRING TO THE APPROVAL
PROCESS IN WASHINGTON. THE ASSISTANCE SOUTHERN AND TENNECO CAN
GIVE HAS ALREADY BEEN DEMONSTRATED IN WASHINGTON. THEY HAVE
INTERVENED BEFORE THE FEDERAL POWER COMMISSION AND HAVE
INITIATED CONTACTS WITH OTHER MEMBERS OF THE HOUSE AND SENATE.
ALSO THE SALE REPRESENTS THE FIRST CONCRETE COMMITMENT OF GAS
TO EITHER PROJECT AND, THEREFORE, AFFECTS THE ECONOMICS OF THE
PROPOSALS.

SOME OF THE SPECIFIC CONTRACT PROVISIONS CAUSE ME SOME CONCERN BUT I FEEL THE CONTRACTS SHOULD BE APPROVED

AGO 560308

TO REJECT THE CONTRACTS NOW WOULD BE A SERIOUS BLOW TO THE ALL-ALASKA LINE. THOSE WHO FAVOR OTHER ROUTES WOULD SEIZE ON FAILURE TO APPROVE AND MAKE MUCH OF IT. THE COMPETITION BETWEEN THE PROPOSALS IS INTENSE AND WILL GROW MORE SO. I THINK THERE IS A GENERAL CONSENSUS IN THE STATE THAT THE ALL-ALASKA LINE IS PREFERABLE. IT WOULD PROVIDE BENEFITS TO MOST AREAS THAT WOULD BENEFIT FROM ANY OTHER LINE AND WOULD BENEFIT OTHER AREAS, AS WELL. THE ECONOMIC IMPACT ON THE STATE AND THE IMPACT ON STATE REVENUES IS GREATER FOR THE ALL-ALASKA LINE. REJECTION OF THESE CONTRACTS COULD STALL EFFORTS TO HAVE THAT LINE APPROVED.

ALSO, THERE IS SIMPLY NOT ENOUGH TIME TO RENEGOTIATE THE CONTRACTS. LAST YEAR THE CONGRESS ADOPTED LEGISLATION SETTING FORTH A TIMETABLE FOR APPROVAL. UNDER THAT LEGISLATION, THE INITIAL DECISION OF THE FPC ADMINISTRATIVE LAW JUDGE WILL BE ANNOUNCED BY FEBRUARY 1ST. THE FINAL COMMISSION DECISION WILL BE REACHED BY MAY. THE PRESIDENT MUST REACH A DECISION BY SEPTEMBER

1ST, ABSENT UNUSUAL CIRCUMSTANCES. THE CONGRESS WOULD THEN HAVE 60 DAYS TO ACT ON THE PRESIDENTS PROPOSAL.

IN VIEW OF THE LENGTH OF TIME THAT WAS REQUIRED TO NEGOTIATE THESE CONTRACTS, I DO NOT FEEL THAT WE CAN AFFORD TO DELAY FINAL APPROVAL OF THE SALE. FURTHER NEGOTIATIONS WOULD RESULT IN NO AGREEMENT UNTIL IT WAS TOO LATE TO BE OF ANY ASSISTANCE.

IN SUM, ALTHOUGH I HAVE CONCERNS ABOUT SOME PROVISIONS, I FAVOR APPROVAL OF THE CONTRACTS. THEY ARE IN THE INTEREST OF THE STATE AND ITS PEOPLE, IN MY OPINION.

PLEASE LET ME KNOW IF I CAN BE OF ANY ASSISTANCE.

TED STEVENS

UNITED STATES SENATOR

AGO 5603 09

Exhibit #4

DON YOUNG
CONGRESSMAN FOR ALASKA

COMMITTEES:
INTERIOR AND INSULAR
AFFAIRS
MERCHANT MARINE AND
FISHERIES

Congress of the United States
House of Representatives

Washington, D.C. 20515

January 28, 1977

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1210 LONGWORTH BUILDING
TELEPHONE 202/225-5765

DISTRICT OFFICES
115 U.S. FEDERAL BUILDING
ANCHORAGE, ALASKA 99501
TELEPHONE 907/279-1537

202 U.S. FEDERAL BUILDING
FAIRBANKS, ALASKA 99701
TELEPHONE 907/456-6949

The Honorable John Rader
President, State Senate
Juneau, Alaska

Dear President Rader,

Thank you for your letter of January 13 requesting my views on the approval of the contracts for the sale of the State's royalty gas to Tenneco Alaska, Southern Natural Gas and El Paso Natural Gas. I welcome the opportunity to respond to these agreements and hope they will receive speedy approval by the legislature.

The sale of the State's royalty gas is a unique and highly significant element in the final decision for a route for the transportation of the North Slope natural gas to the lower fortyeight states. The difficult task of gaining first Congressional approval for Section 13(b) of the Alaska Natural Gas Transportation Act and later presidential approval for the Act will only be brought to fruition upon the successful sale of the State's royalty gas. I have reviewed the contracts at some length and would like to comment on several points contained in them.

I am impressed with the straightforward approach of the contracts. An acknowledgement of the State's desires and expectations to the purchasers of the gas will insure a well understood relationship between the parties. The people of Alaska can only benefit from this relationship.

Next, and this should be carefully considered by the Legislature, the price of the State's gas has not been established and will be subject to change by the Federal Power Commissions actions on the price of natural gas in the rest of the nation.

Overall, the protection of the State's interest is impressive throughout the contracts and is the basis for my support for the mechanics of the contracts.

The current natural gas shortages in the lower forty-eight states is firm evidence of the possible reconsideration of the comprehensive deregulation of natural gas by the Federal Power Commission and the Congress. The greater awareness of the Nation's reliance on natural gas as a result of the shortages will only heighten the controversy surrounding the selection of a route for the delivery of North Slope natural gas. Since the announcement of the sale of the State's royalty gas to Tenneco, Southern and El Paso, it has been my view that the deliberations might have been forced off center in favor of the an All-Alaska route with the entry into the lobbying effort of two more established natural gas distribution firms. With the addition of Tenneco and Southern, both of which distribute natural gas to the Southern United States, key members of the House and Senate can be convinced of the favorable aspects of the All-Alaska route and the direct benefits to their constituents. Greater National interest in the North Slope gas question can only improve the chances for the selection of an All-Alaska route.

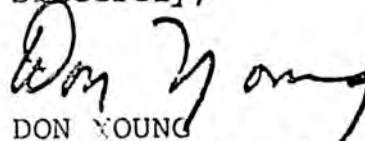
It is imperative that this effort not be jeopardized by lengthy discussions of the Legislature over the approval of these contracts. This is not to suggest that the Legislature should fail to carefully consider the proposed contracts. I would hope that upon examination of the contracts the Senate Special Royalty Gas Review Committee will conclude as I have that the sale should be approved and the Legislature will follow suit. If the joint efforts of the Congressional Delegation, the State and the people of Alaska are to meet with success, the existing momentum generated from the sale of the royalty gas should be allowed to continue.

One last point is of some importance to your consideration of the royalty gas sale. As you know, last Friday a gas treaty was signed between Canada and the United States. It is my hope that the U.S. will continue its good relations with Canada in this regard but one shouldn't reach false conclusions from the type of diplomatic exchange which is a part of our ongoing relationship with Canada. For example, the recent treaty which was signed by low-ranking officials of the State Department does not resolve critical questions which must be addressed should an overland pipeline be built through Canada. The questions of expanding the capacity of the line; the protection of U.S. equity in the line; the rate base; the Canadian native land claims; etc. have not been answered.

The two issues which we touched on in the treaty, the non-intervening of through-put and the non-discrimination of taxation are questions which in the long run will have to be answered by the Provinces and not by the U.S. All in all, the greatest obstacle to a Canadian pipeline is Canada and it is my hope that the Legislature will approve the contracts so that we can get on with it down here in Washington, and let the Canadians haggle among themselves.

Thank you for the opportunity to express my views on this important issue. I look forward to continuing my efforts to gain approval of an All-Alaska route for the natural gas line.

Sincerely,

A handwritten signature in dark ink, appearing to read "Don Young", written in a cursive style.

DON YOUNG
Congressman For All Alaska

ex. #20

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United States Senate

COMMITTEE ON FINANCE
WASHINGTON, D.C. 20510

MICHAEL STERN, STAFF DIRECTOR
DONALD V. MOOREHEAD, CHIEF MINORITY COUNSEL

Honorable John Rader
Alaska State Senate
Pouch V
Juneau, Alaska 99811

Dear John:

Thank you for writing me on January 13 to solicit my views on (1) the proposed contracts for sale of Alaska State's royalty natural gas from the Prudhoe Bay field to Tenneco Alaska, Inc., El Paso Natural Gas Company and Southern Natural Gas Company, and (2) Senate Concurrent Resolutions Nos. 3-5, to approve these sales.

I find the contracts attractive in that they require the buyers to support a trans-Alaska route for a natural gas line from Prudhoe Bay, thereby building into the contract a strong incentive to work hard for such a line. In the event, however, than any other route is chosen and certified for gas from Prudhoe Bay, the Governor may terminate the contracts.

Furthermore, the provision whereby the State has the right to take back whatever gas it needs for in-State use is of obvious merit. This provision, I understand, includes the exchange of Prudhoe Bay gas for gas located elsewhere in Alaska if the exchanged gas is used in Alaska.

Commissioner Martin assures me that although the price provision in the contract is complex, the basic principle behind the term is simple: under all "reasonably foreseeable circumstances" the State will receive the highest price being paid for gas from the same reservoir and never less than would have been received had the State taken its royalty-in-value.

It also is possible under the contracts for the State, should the situation ever arise where it is advisable, to switch its position on the gas line route. If this occurred, the buyer may either terminate the contract or shift its support to the new route supported by the State.

AGO 560313

page two

The contracts clearly recognize the Legislature's authority to approve or disapprove, as provided for in AS 38.06. The review and approval by the Legislature are both necessary and desirable actions.

Lastly, these contracts would see Alaskan gas potentially reaching consumers in 42 of the lower 48 states, since the three purchasers combined have markets in 42 states. This major concern, that Alaska's gas abundance reach as much of the rest of the United States as possible, cannot be overstated with my colleagues in the Congress.

I concur wholeheartedly in these contracts and in the Senate Concurrent Resolutions Nos. 3-5 and add my support to them all.

Thank you for the opportunity to express my views to you as Chairman of the Alaska Senate Special Royalty Gas Review Committee.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mike Gravel", with a stylized, cursive script.

Mike Gravel

cc: Honorable Clark Gruening
Chairman, House Special Committee
on Sale of Royalty Gas
Pouch V
Juneau, Alaska 99811

February 7, 1977

Senator John Rader
Representative Clark Gruening
Joint Gas Pipeline Committee
State Capitol, Pouch V
Juneau, Alaska 99801

Gentlemen:

I think serious consideration should be given to a "fallback" position by the state prior to ratification of the state's royalty gas sale contracts. The contracts are well-bargained, and at one point last year, might have significantly furthered Alaska's chances for an all-Alaska line. That time has passed.

The only reason for the sale is political support. It is too late to mount any significant campaign to effect the eventual gas-line decision in my estimation. The train has already left the station.

After this winter, the gas-hungry Mid-West would never allow this major project to end up anywhere than their own backyards. No amount of convincing could prove that North Slope gas can be delivered to the Mid-West any more economically than a direct pipeline. El Paso can deliver gas to California competitively - but not the Mid-West.

So the options remaining are Gas Arctic or Northwest - barring a Canadian veto. I suggest attention be paid to: 1) trading Alaskan royalty gas for gas liquids; 2) passing legislation barring the gas liquids from leaving Alaska unprocessed; 3) attempting to gain industry support for either running a small diameter liquids line to Fairbanks, or processing the liquids on the North Slope.

Reasoning: 1) Gas could go to Mid-West where it is desperately needed, with Alaska's full support;

2) Alaska would profit from liquids: a) they could be most efficiently distributed to Alaska's sparse and scattered population as a heating/energy source; b) they are the building-block of several petrochemical applications that could support Alaska's industrial and employment needs.

February 7, 1977
Page -2-

I think it is time to reassess the state's position to a more realistic one, and seek maximum benefit from that.

Thank you for hearing me.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Eckholm', with a stylized, cursive script.

Eric Eckholm
1028 East 11th Avenue
Anchorage, Alaska 99501

cc: Gregg Erickson
Guy Martin
Bob LeResche
John Greely

EE/kb

EFFECT OF ALASKA'S ROYALTY GAS ON NATURAL GAS SUPPLY:

TENNECO MARKET AREA (25 states)

Prudhoe Bay natural gas production rate is assumed to be
2.0 Bcf/day

Yearly Prudhoe Bay natural gas production 730 Bcf.

Royalty Share of Prudhoe Bay production = $1/8$ of 730 Bcf = 91.25 Bcf/Year.

Tenneco Share of Royalty Gas = 50 % of 91.25 Bcf = 45.625 Bcf/year.

Tenneco Summary of Operating Data (from "Tenneco Statistics 1975")

Volume of Gas sold and transported: 1,634 Bcf
Volume of Gas purchased: 1,459 Bcf

Tenneco's share of 25-state gas market:
1,284 Bcf
9.9 %

Tenneco's share of royalty gas as a per cent of Tenneco's
share of 25-state gas market:

$$(45.625 \text{ Bcf/year} / 1,284 \text{ Bcf/year}) = 3.55 \%$$

Tenneco's share of royalty gas as a per cent of total
25-state gas consumption:

$$(45.625 \text{ Bcf/year} / 12,879 \text{ Bcf/year}) = 0.35 \%$$

Total U.S. Consumption of Natural Gas in 1975 (rounded): 19,000 Bcf

Yearly Royalty Gas Production as a percent of total U.S. Consumption:

$$(91.25 \text{ Bcf/year} / 19,000 \text{ Bcf/year}) = 0.48 \%$$

Yearly Prudhoe Bay gas production as a percent of total U.S.
Consumption:

$$(730 \text{ Bcf/year} / 19,000 \text{ Bcf/year}) = 3.84 \%$$

Note: Above calculations do not take into account shrinkage of
natural gas through transportation (e.g. 6% loss in liquefaction
and deliquification).

TABLE I

EFFECT OF ALASKA'S ROYALTY GAS ON NATURAL GAS SUPPLY:
TENNECO MARKET AREA

STATE	1975 Consumption (Bcf)	Tenneco % Share of Market	Tenneco Share of Market (Bcf)**	Tenneco Royalty Gas Share of Market (%)**
*Alabama	260	10	26	.36
Arkansas	270	41	42	4.03
Connecticut	64	46	29	1.63
Illinois	1130	16	181	.57
Indiana	488	41	44	4.03
Kentucky	208	13	27	.46
Louisiana	1376	41	413	4.03
Maine	2	91	2	3.23
Maryland	147	20	29	.71
Massachusetts	153	53	81	1.88
Michigan	902	6	54	.21
Minnesota	318	2	6	.07
*Mississippi	208	4	5	.14
N. Hampshire	8	72	6	2.55
New Jersey	279	6	17	.21
New York	571	27	154	.96
No. Dakota	26	21	5	.75
Ohio	951	21	200	.75
Pennsylvania	698	27	188	.96
Rhode Island	22	23	5	.82
*Tennessee	255	39	99	1.39
*Texas	3911	41	439	4.03
Virginia	123	20	25	.71
W. Virginia	172	19	33	.68
Wisconsin	367	14	51	.50
TOTAL 25 STATES	12,879	9.9	1284	.35

Notes to Table I:

- * indicates state will receive additional royalty gas supplies from Southern Natural Gas:

Alabama receives 66% of supply from Southern
Mississippi receives 13% of supply from Southern
Tennessee receives 8 % of supply from Southern
- ** Tenneco share of market expressed in Bcf was calculated by multiplying each state's 1975 consumption by Tenneco's percentage share of market (Source of these figures was Table II from "Why Tenneco", published by Tenneco). Minor inaccuracies may have occurred due to rounding.
- *** Figures for Tenneco Royalty Gas share of market assume equal distribution among states by relative share of consumption.

Tenneco was chosen as an example of the impact of royalty gas commitment because original data was readily accessible. Figures for 1976 consumption among the states served by Southern Natural Gas indicate similar results. El Paso service area figures were not available.

The calculations indicate that the addition of Alaska's royalty gas to U.S. supply will increase total U.S. supply by less than 1/2 of one percent.

Prepared for House Special Committee on the Sale of Royalty Gas

TENNECO'S INTERSTATE NATURAL GAS PIPELINES

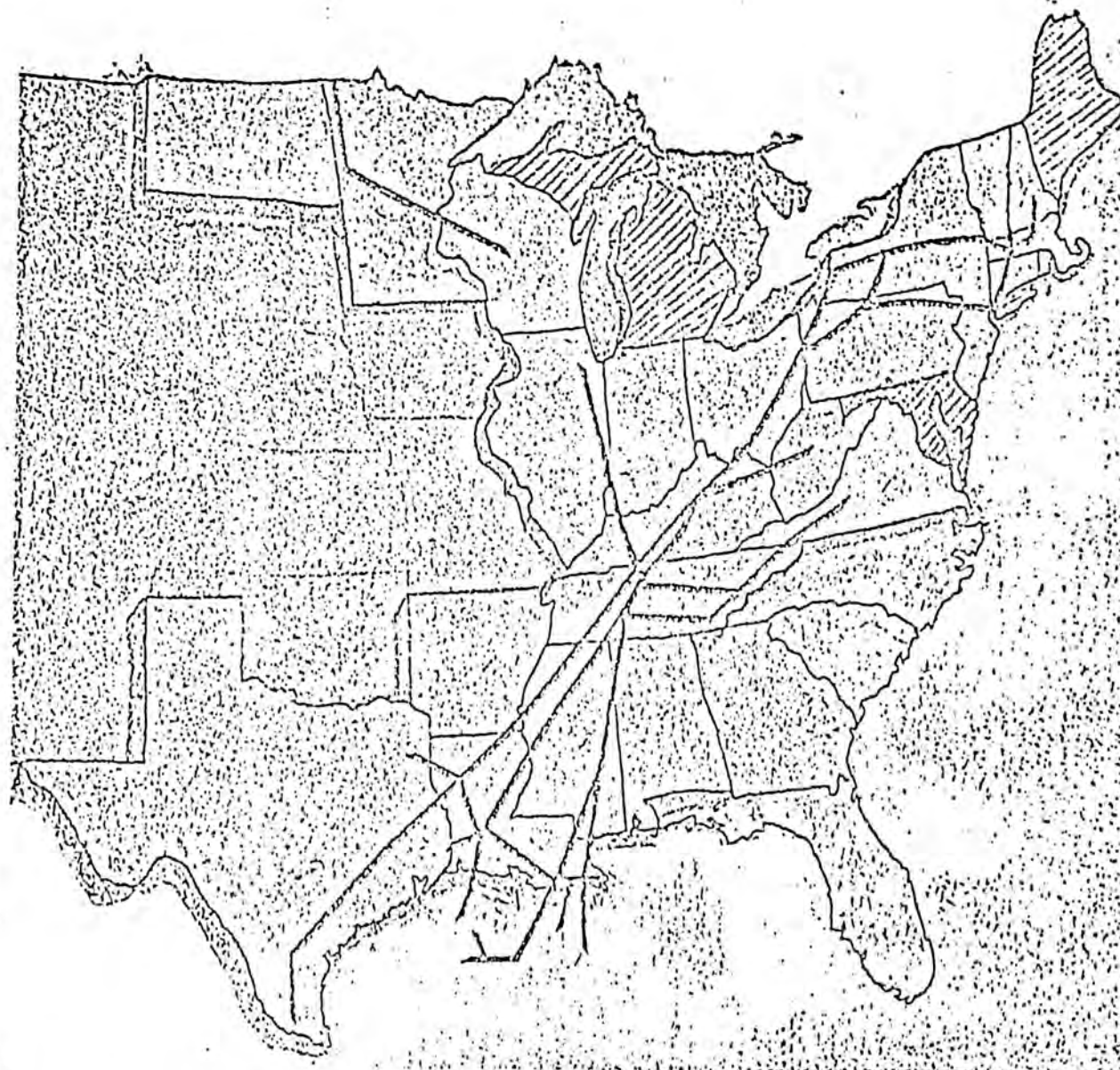
MARKET AREA

AGO 560320

Market Impact

State	1975 ¹ Natural Gas Consumption (Bcf)	Tenneco's Share of Total State Gas Market	Population ²
Alabama	260	10%	3,577,000
Arkansas	270	<1	2,062,000
Connecticut	64	46	3,038,000
Illinois	1,130	16	11,131,000
Indiana	428	<1	5,330,000
Kentucky	208	13	3,357,000
Louisiana ³	1,376	<1	3,764,000
Maine ²	2	91	1,047,000
Maryland ²	147	20	4,034,000
Massachusetts	153	53	5,860,000
Michigan ²	902	6	9,098,000
Minnesota	318	2	3,917,000
Mississippi	208	4	2,324,000
New Hampshire	8	72	803,000
New Jersey	279	6	7,330,000
New York	571	27	18,111,000
North Dakota	26	21	637,000
Ohio	951	21	10,737,000
Pennsylvania	693	27	11,835,000
Rhode Island	22	23	937,000
Tennessee	225	39	4,129,000
Texas ³	3,911	<1	12,050,000
Virginia	123	20	4,903,000
West Virginia	172	19	1,791,000
Wisconsin	367	14	4,566,000
TOTAL	12,879		136,428,000
% of United States	65%		65%

¹ Gas consumption based on Gas Requirements Committee, September, 1976 Report. Population data based on 1975 Statistical Abstract of the United States.
² Served indirectly through another wholesaler.
³ Louisiana provides 75% of Tenneco's gas. Texas provides 16%.



Source: "Why Tenneco" published by Tenneco
 1976

FEDERAL POWER COMMISSION

NEWS RELEASE

WASHINGTON, D.C. 20426



IMMEDIATE RELEASE

February 1, 1977

El Paso Alaska Company, et al.

Docket No. CP75-96, et al.

No. 22869

(accompanies FPC

Release No. 22868)

ALASKAN NATURAL GAS FACT SHEET

This Federal Power Commission proceeding involves three competing projects proposing significantly different approaches to delivering natural gas from the Prudhoe Bay Area of Alaska's North Slope to markets in the lower 48 states. The 200-square mile Prudhoe Bay Field is estimated to contain 22.5 trillion cubic feet in proven reserves of natural gas.

The FPC is to make a recommendation to the President on the selection of a transportation route for the gas by May 1, 1977, under the Alaska Natural Gas Transportation Act of 1976 (Public Law No. 94-586), passed by Congress October 1, 1976, and signed into law by the President October 22.

The three projects pending before the Commission are:

③ Alaskan Arctic Gas Pipeline Company (CP74-239, et al.) -- This project involves the construction of about 3,300 miles of new pipeline and 875 miles of looped (connected and parallel to existing lines) pipeline. The pipeline, ranging in diameter from 30 to 48 inches, would pick up United States reserves in Prudhoe Bay, Alaska, and Canadian reserves in the Mackenzie Delta, Northwest Territories, and proceed to Caroline Junction, Alberta, where the system would divide, with one leg extending into the Pacific Northwest down to California, and the other crossing the U.S. border into Montana and southeast into Illinois. Gas would move to eastern markets by displacement. This project includes transmission facilities proposed by several other Canadian and American companies -- Canadian Arctic Gas Pipeline Limited, Alberta Natural Gas Company Limited, Pacific Gas Transmission Company, Pacific Gas and Electric Company, and Northern Border Pipeline Company.

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AGO 560321

The project facilities are designed to initially transport 2.25 billion cubic feet of gas daily to U. S. markets and will cost an estimated \$5.9 billion (based on filed July 1975 estimates of gas allocated to U.S. markets).

© El Paso Alaska Company (CP75-96) -- This company would build an 809-mile 42-inch pipeline from Prudhoe Bay along the Alyeska oil pipeline corridor to a liquefaction facility at Point Gravina on the south coast of Alaska. The liquefied natural gas would be transported across water by a fleet of 11 cryogenic tankers 1,900 nautical miles to Point Conception, California, where it would be regasified. Gas would flow to midwest and east markets by displacement. The project is estimated to cost \$6.54 billion (based on July 1975 estimates) and would be capable of delivering an estimated 2.4 billion cubic feet of gas per day.

© Alcan Pipeline Company (CP76-433) and Northwest Pipeline Corporation, along with several Canadian companies (Foothills Pipe Lines Ltd., Westcoast Transmission Company Limited, Alberta Gas Trunk Line Limited), propose construction of about 3,000 miles of new pipeline and 1,600 miles of looped pipeline (paralleling the other line). The pipeline, ranging in diameter from 30 to 48 inches, would pick up Prudhoe Bay reserves and follow the Alyeska oil pipeline route as far as Delta Junction, Alaska, and from there would parallel the Alcan Highway to a connection with Canadian pipelines in British Columbia and Alberta, where the system would split the gas between western U.S. and midwest U.S. shippers. Gas would also flow to the east by displacement. This system would have a capacity of approximately 2.4 billion cubic feet per day and would deliver gas both into the Pacific Northwest and across a route similar to the Arctic Gas project extending from northeastern Montana into Illinois. The proposed project will cost an estimated \$6.28 billion (as filed).

An associated, although independent project, Maple Leaf, will be built to deliver Canadian reserves from the Mackenzie Delta to Southern Canadian markets.

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Chronology

March 21, 1974 - Alaskan Arctic Gas Pipeline Company application filed.

September 24, 1974 - El Paso Alaska Company application filed.

January 23, 1975 - FPC order consolidating both applications (in Docket No. CP75-96, et al.).

April 7, 1975 - Hearings began before FPC Administrative Law Judge Nahum Litt.

November 21, 1975 - FPC staff Draft Environmental Impact Statement issued.

April 7, 1976 - Final Environmental Impact Statement issued.

July 9, 1976 - Alcan Pipeline Company and Northwest Pipeline Corporation application filed.

September 1976 - Supplemental Final Environmental Impact Statement issued.

November 12, 1976 - Hearings concluded. (There were a total of 253 days of hearings resulting in 44,458 pages of transcript together with numerous exhibits.)

December 7, 1976 - Final Position Brief of the Commission Staff issued.

December 14, 1976 - FPC issued Order No. 558 prescribing procedures pursuant to the Alaska Natural Gas Transportation Act of 1976.

February 1, 1977 - Initial decision issued by Judge Litt.

March 1, 1977 - Briefs on exceptions to the Judge's decision to be filed by FPC staff and all parties in the proceeding. (Replies to the exceptions will not be permitted.)

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May 1, 1977 - The Federal Power Commission to make its recommendation to the President.

September 1, 1977 - The President to make his recommendation to Congress. He may postpone his decision until up to December 1, at his discretion.

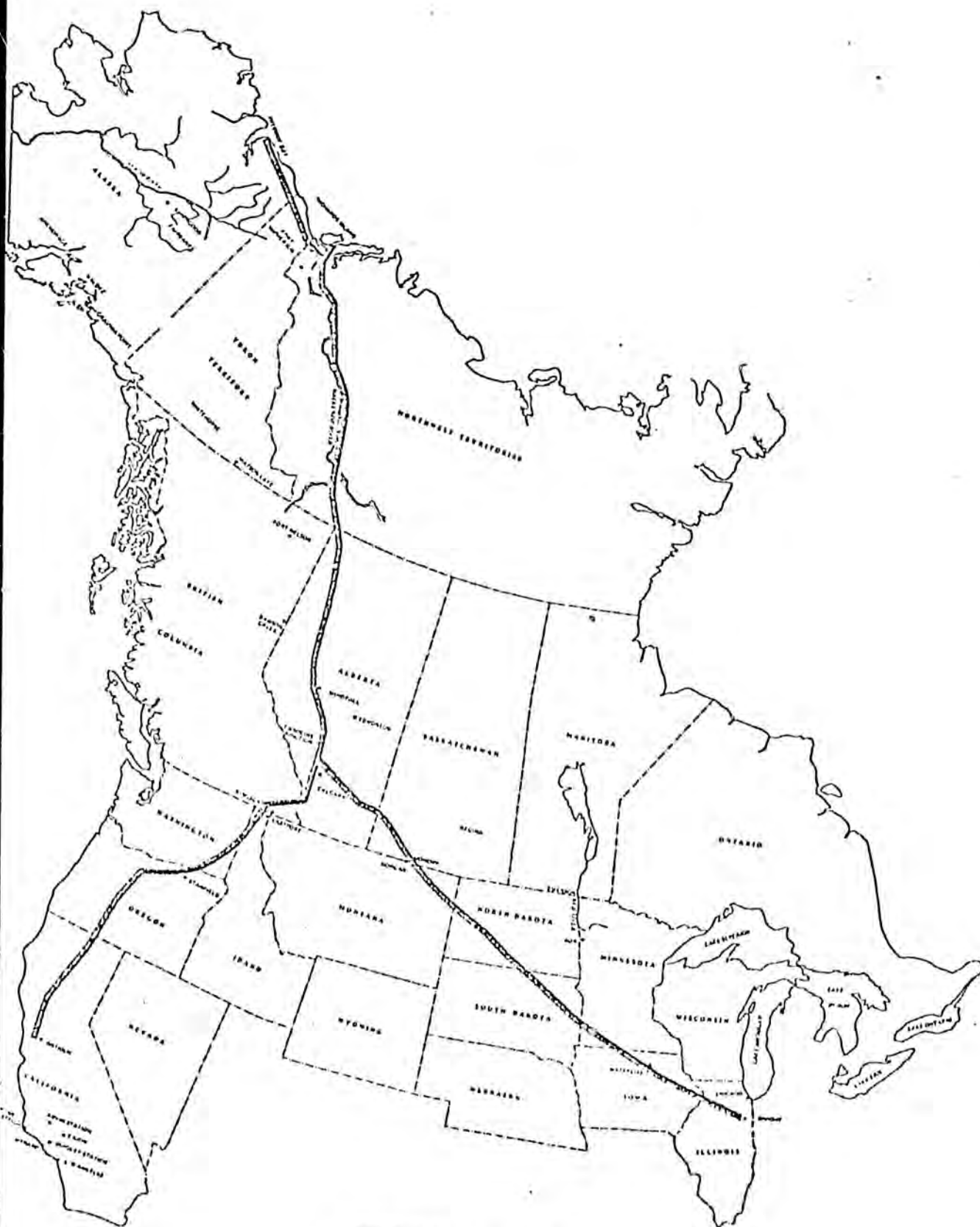
Sixty days after the President's recommendation, Congress may enact a joint resolution. The Alaskan Natural Gas Transportation Act of 1976 (in section 8) provides dates for further executive and legislative review, if necessary.

Maps of the three proposed Alaskan natural gas transportation systems accompany this fact sheet.

- FPC -

For further information
call 275-4006 (Area Code 202)

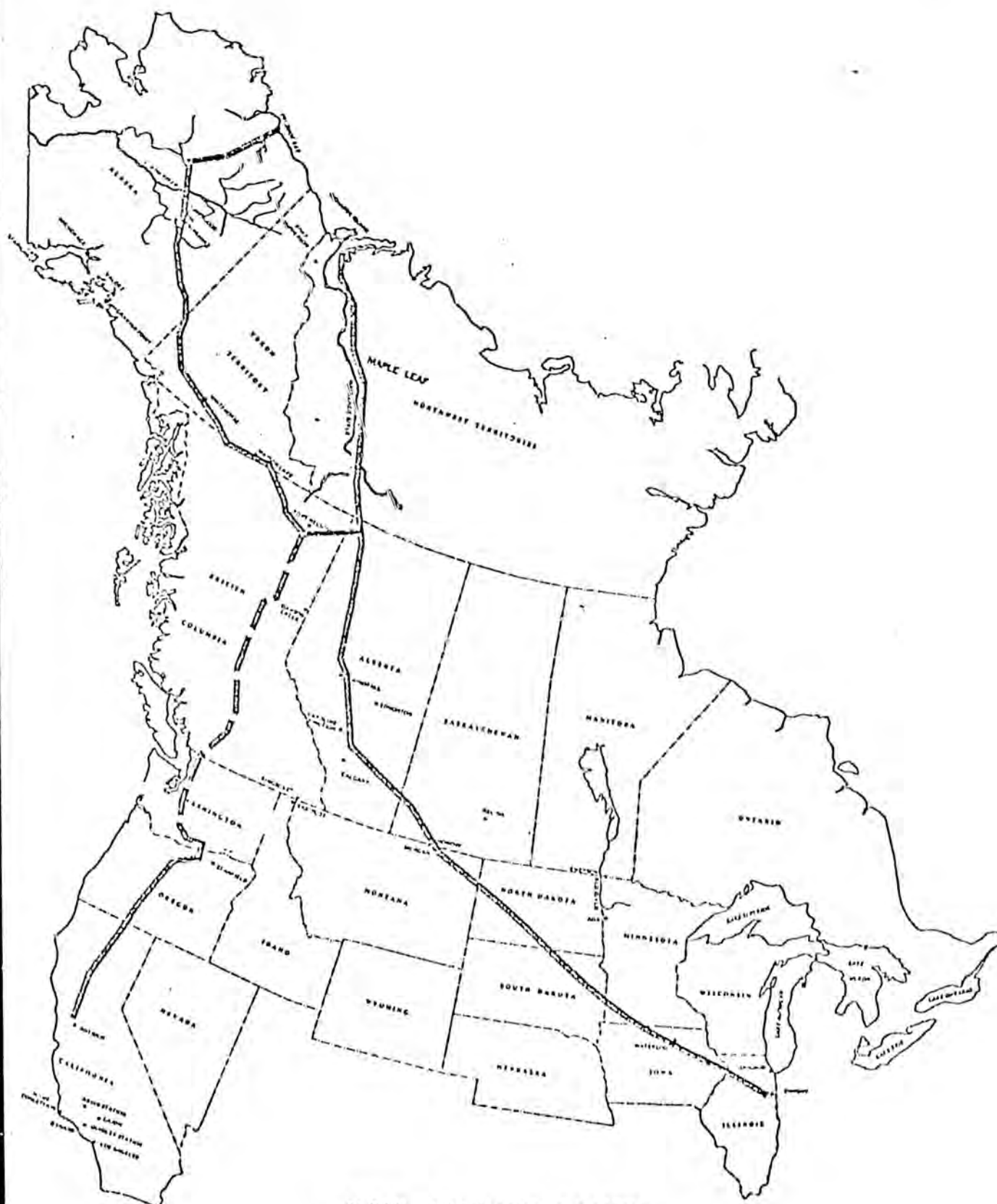
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ARCTIC GAS PROJECT



EL PASO ALASKA PROJECT



ALCAN - MAPLE LEAF PROJECTS

FEDERAL POWER COMMISSION

NEWS RELEASE

WASHINGTON, D.C. 20426



IMMEDIATE RELEASE

FEBRUARY 1, 1977

No. 22868

Docket Nos. CP75-96, et al.

Alaskan Arctic Pipeline Company, et al.

FPC JUDGE RECOMMENDS APPROVAL OF ARCTIC GAS'

\$8.5 BILLION ALASKAN GAS PROJECT

Federal Power Commission Administrative Law Judge Nahum Litt today recommended approval of an \$8.5 billion trans-Canada pipeline system proposed by an Arctic Gas Study Group to bring large volumes of Alaskan natural gas to lower 48 U.S. markets.

Judge Litt in his 430-page decision found the proposal superior in almost every respect to two competing applications, by El Paso Alaska Company and Alcan Pipeline Company (see fact sheet, FPC release No. 22869, for details of all three proposals).

Arctic's project, the largest private undertaking in the country's history, will make more gas available sooner, result in less impact on the environment, at less cost to the consumer than either of the competing proposals, Judge Litt concluded. It would be built during the winter seasons, employing 2,400 at its peak, and initially carrying from 2 to 2.5 billion cubic feet of gas daily beginning in 1982 or 1983.

This initial decision is the first step in FPC consideration of the matter. The full Commission will now review the action of the Administrative Law Judge under the special procedures established under the Alaska Natural Gas Transportation Act of 1976. An FPC recommendation regarding the transportation system will be submitted to the President by May 1, 1977.

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In a separate order issued concurrently with Judge Litt's decision, the Commission noticed suspension of the Natural Gas Act proceedings, established further procedures for Commission review and responded to earlier procedural petitions by Arctic Gas and El Paso. The Commission said that the procedures adopted will give parties adequate opportunity to rebut factual matters while enabling it to discharge expeditiously its duties under that Act.

Hearings on the proposals began May 5, 1975, and continued almost uninterrupted until November 1976. An official inspection was made in August 1976 of the sites of the proposed major facilities and pipeline routes of all three applicants. The record consists of 253 volumes of transcripts and about 1,000 exhibits. The second-stage proceeding is not likely to begin before early 1978, and construction would not begin before late 1978 or '79. The second-stage proceeding would address producer sales contracts and again review rates, marketability, financeability and other matters.

The transportation cost per million btu's for the Alaskan Arctic gas in the fifth year of operation, based upon unescalated 1975 data, will be about \$1.60, compared to \$2.15 for El Paso's proposal and \$1.91 for Alcan.

Judge Litt recommended rolled-in pricing, where all the pipelines' customers help pay for the project gas, but cited one witness' conclusion that gas marketed through the Alaskan Arctic project will be competitive whether priced incrementally or rolled in.

Making a number of assumptions, the average rolled-in price at the city gate would be \$1.50 per thousand cubic feet, based on a field price of \$1 per thousand cubic feet. On an incremental basis, meaning only those consumers who actually receive the gas pay for it, the average price will be \$2.41. These prices are substantially lower than the price of fuel oil and electricity for all metropolitan areas except California and New York, where there is parity with fuel oil, Judge Litt said.

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Even with a 20 percent construction cost overrun, which is not improbable, Judge Litt said, the Arctic Gas deliveries are still economically competitive, while the El Paso project gas would be only marginally so.

Alaska's North Slope encompasses an 80,000-square-mile area extending about 600 miles from the Canadian border up to the Arctic Ocean. Exploration there has only begun, but Judge Litt said all parties agree that proved saleable reserves are around 22 trillion cubic feet.

Most of the proved reserves on the North Slope are in the Prudhoe Bay field, discovered in 1968. Those reserves are the largest yet discovered on the North American continent, representing about 10 percent of proven 1975 U.S. natural gas reserves and more than a year's supply for all U.S. consumers.

The applications were filed prematurely from any rational regulatory point of view, Judge Litt said, and the Commission's determination to try the cases without an essential ingredient represents a regulatory boldness normally not seen. The important missing ingredient was sales contracts by any of the 13 producers who hold interest in Prudhoe Bay reserves. Their failure to sign sales contracts was a chief impediment throughout the hearings, Judge Litt said, since many things depend on the amount of gas available, such as the size of the pipeline, financing, and marketability.

The Commission, with some misgivings, set the applications for hearing without the sales agreements because the national interest demanded expedited consideration, Judge Litt said. The only conclusion possible, he stated, is that for the producers the national interest "lies somewhere below their own economic interest. The producers, like G.B. Shaw's dinner-time companion, have a price at which they would sell their 'service,' and all their protestations to the contrary cannot hide that they are mainly dickering over price," Judge Litt said.

However, he continued, the lack of sales contracts was not fatal to the case since there is little dispute over the

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recoverable reserves at Prudhoe Bay. There is no such agreement on the size of the Mackenzie Delta reserves though, which are critical since the Arctic Gas proposal is directly dependent on delivery of at least 1 billion cubic feet a day the first year of operation. The Mackenzie Delta, located in Canada's Northwest Territories, is 15,000 square miles in size. There are benefits of building one project to transport both Canadian and U.S. gas rather than two separate transportation systems, he said, not the least of which is fewer environmental effects.

Judge Litt rejected Alaska's claim that the FPC does not have jurisdiction over the Alaska gas because the State is performing those activities within the state which Congress wanted regulated. The Commission clearly has full jurisdiction over producer wellhead sales in interstate commerce, transport of the gas within Alaska, and transport and sale within the lower 48 states, Judge Litt said.

The Arctic Gas proposal calls for over 4,000 miles of pipeline extending from Prudhoe Bay through Alaska and Canada to termination points in the lower 48. The 48-inch line to be built between Prudhoe Bay and Caroline Junction in Alberta will be the largest ever used to transport gas, and the operating pressure used to force the gas through the pipeline will exceed the thrust of any line now in existence in North America. The projects would all be built using known technology, with adaptation or "scale-up" as necessary to improve that which is known, such as construction of chilled gas pipelines in permafrost (ground that is frozen year-round), or fabricating a ditching or snow-making machine larger than any built before.

Arctic Gas' heavy reliance on winter construction, it was argued, subjects it to billion-dollar risks if construction is delayed. Arctic has made clear its willingness to incur additional costs to avoid delay, Judge Litt pointed out, but maintains it will not be necessary. All in all, he continued, there is little reason to believe Arctic Gas will not be able to meet its logistic build-up schedule prefatory to each winter construction season. It plans to barge most of its equipment and supplies to stockpile sites before the construction begins, with air support as needed. Although Arctic contemplates six years between certification and
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commencement of flow, actual construction would not begin until the winter of the fourth year.

Judge Litt said that, as to the environmental effect of the proposed projects, seldom has a decision-making body been favored with so substantial a body of salient information on which to draw in reaching a decision. The staffs of the FPC and the Department of Interior each wrote detailed environmental impact statements assessing the "worst case" risks of all three proposals and numerous alternatives. In addition, reports were filed by the parties and voluminous evidence submitted by numerous expert witnesses.

The most significant environmental concern as expressed through testimony was Arctic's crossing of the 14,000-square-mile Alaskan Wildlife Range. The line would cross the entire Range in an east-west direction, with about 2,650 acres permanently dedicated to it. Most of that acreage is right-of-way, however, which would be revegetated.

The Range is part of a large ecosystem, Judge Litt said some of which has not been substantially despoiled by man. Its protection from significant degradation is therefore important and has been so considered by all parties, he said. He accepted, however, Arctic's belief that the impact will be small, of limited duration and not disruptive of even a small area. Judge Litt pointed out that the Range, while remote, is not unimpacted by man, who will continue to use the area regardless of whether a pipeline is approved or not. In addition, he noted, the Range is not legally designated as a "wilderness area" and there is therefore no legal impediment to authorizing a pipeline across it.

It is clearly in the public interest to exploit hydrocarbon reserves in the Range, Judge Litt said, and unless prohibited by Congress, incursion into the Range for this purpose must be considered a virtual certainty. The Arctic Gas project then becomes a benefit because it lessens the environmental cost of attaching the reserves, he said.

A primary environmental concern of the cross-Mackenzie Delta route in Canada was effect on migratory snow geese. Mitigative construction measures can greatly reduce the impact, Judge Litt said. Aircraft overflights, the most
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serious hazard, will be kept well below the least acceptable rate of one every two hours. Judge Litt said, however, that while the FPC can consider the impacts of the pipeline on the MacKenzie Delta, two Canadian tribunals must also rule on the issue, with ultimate authority to deny, license or condition as they see fit.

Judge Litt rejected the argument that Arctic's knowledge of the environmental effects along its proposed route is woefully deficient. The research effort Arctic has made is impressive, he said, and its specific knowledge of the fauna and flora exceeds that held by its competitors.

Another key environmental criticism of Arctic's proposal is its alleged inability to build snow roads when needed in an environmentally acceptable manner or to build a pipeline from them in winter conditions of extreme cold and long periods of darkness. Judge Litt found that the snow road plan is both feasible and effective and can be accomplished with a minimum of environmental harm.

The 915 miles of snow road and work pad will be built in sensitive permafrost using snow collected by snow fencing, harvesting from frozen lakes, or manufactured snow using standard ski-slope technology. Timing is the critical element, he noted. Snow fences would be erected in October, and construction would begin in late October or early November as soon as five to ten miles of snow road is completed.

The State of Alaska's position on environmental matters clearly has been influenced by economic considerations, Judge Litt stated. The simple fact is, he continued, that the State wants to encourage industrial development in central Alaska and supported the El Paso proposal on economic grounds, bargaining with pipeline purchasers of its royalty gas to release portions of that interstate supply for future intrastate industrial use.

The State embarked early on upon a course designed to maximize the economic benefits it would derive, Judge Litt stated. "This laudable goal for Alaskans, unfortunately, is not always consistent with the public interest of all the people of the U.S.," he said. Besides the fact that the state's

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use of Alaskan gas is speculative at best, Judge Litt stated, there is also a serious question of whether industrial gas use would be compatible with federal natural gas end use policy or environmental sensitivities.

Judge Litt acknowledged that Alaska's views are entitled to substantial weight even where the evidentiary showing may be ambiguous. However, he said, the great bulk, if not all, the Prudhoe Bay gas will be marketed in the contiguous U.S., and those consumers will be paying the costs. The economic ills of a particular state are not a valid consideration in determining pipeline rates or route selection, he said, and this policy has been upheld by the Commission and the courts.

Arctic Gas' pipeline, because it is large-diameter and uses extra-high compression, will use less fuel than the other two proposals -- 6.87 percent for Arctic gas compared to 11.96 for El Paso. Since gas consumers must pay for the gas consumed as fuel, their unit costs will be lower, Judge Litt said. The annual fuel saving by using the Arctic system exceeds residential consumption in each of a large number of states, he noted.

The Arctic Gas system also has more flexibility and expansibility should volumes exceed those expected. It can handle up to 4.5 billion cubic feet daily with additional compression, and if even more capacity is necessary, looping (new lines paralleling existing ones), would "be a work of joy," Judge Litt said.

The FPC staff contended the west leg of the Arctic Gas system is not the most economic way of moving the gas to those market areas. That leg, as proposed by Arctic Gas, would deliver 65½ million cubic feet daily, or roughly 30 percent of total initial flow, to a point on the Idaho-British Columbia border, for delivery to west coast markets. The FPC staff proposed that delivery could be accomplished by using idle western pipeline capacity it expected to result from future declining Canadian gas imports, or by displacement of gas westward using existing pipeline systems.

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