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February 10, 1977

Representative Clark Gruening, Chairman
Special Committee to Consider Sale of Royalty Gas
Alaska State Legislature

Dear Representative Gruening:

Per your request, my comments follow regarding the salient points which I was able to gather from the recent public hearings regarding the proposed Royalty Gas Sales Contracts.

Given assurance under present Federal statute and regulation, that wellhead price for natural gas at prudhoe Bay will be a constant figure; that availability of a marketplace for Prudhoe Bay natural gas is equally equivalent regardless of route, there is little question but what a trans-Alaska transmission system for movement of the Prudhoe Bay natural gas is in the best interest of Alaska. And for as long as the foregoing premises remain constant, the best interest of Alaskans will continue to be best served by a trans-Alaska routing.

Testimony was strongly suggestive that present Federal statutes and regulations regarding the establishment of a wellhead price for natural gas at Prudhoe Bay will continue to be in existence for several years to come. In fact, our own retained expert testified that he saw little chance for relaxation of current regulations establishing wellhead price in less than ten years.

With possible relaxation of Federal regulatory statutes some ten-plus years from now, it could very well be that the wellhead price of Prudhoe Bay gas will be a function of the total capital outlay and operating expense required for a transmission system from Prudhoe Bay to a marketplace in the South 48. Under such relaxation of regulations wellhead price at Prudhoe Bay might be substantially lower for a transmission system to the South 48 which was substantially higher in cost to construct and operate than a less expensive alternate. Such a potential lowering in wellhead price might indeed result in a negative financial offset for Alaskans

than Alaskans might gain from the construction and operation of an All-Alaska system.

I further gathered from testimony that the Alaska Pipeline Act requires the Federal Government to make a binding decision upon the routing of a transmission system within the forthcoming year. Because of the short time fuse on the Federal decision as to route selection we cannot worry about what may or may not happen to FPC regulations ten years from now. Rather, we are forced to base our decisions upon facts as they exist today. And conditions today certainly favor the All-Alaska transmission route as being in the best interest of Alaskans.

Testimony, although quite varied as to degree, was strongly suggestive that legislative approval of the proposed Gas Sales Contract would, at least provide minuscule strengthening of Alaska's hand on the Federal level with respect to encouraging a final decision in favor of the Alaska route.

Testimony was also introduced that indicated, on the basis of all predicted reservoir performance, that with an operating and produciton program calling for 1.2 million barrels per day of oil, early gas sales in the amount of 2 billion cubic feet per day, or more, would sacrifice ultimate recovery of hydrocarbons (or energy) from the Prudhoe Bay reservoir. And testimony generally stated that the economic threshold, with respect to a daily throughput, was approximately 2 billion cubic feet per day of natural gas in order to make the transmission system a viable economic venture. Further, testimony indicated that at best, reservoir predictions were relative and not absolute. Only by close monitor and observance of actual reservoir performance after production is initiated and continued over a long time period can we gain, beyond all reasonable doubt, sufficient knowledge to make a determination as to what amounts of gas, if any, is indeed surplus to the needs to insure maximum ultimate recovery of hydrocarbons from the reservoir.

The best interest of we Alaskans and those who follow can only be served by maximizing ultimate hydrocarbon recovery from that field. This is one point that in our deliberations we should never overlook. Nor should we overlook the fact that we are dealing at Prudhoe Bay with a reserve of crude oil with associated gas. Crude oil is the prime resource by several fold with respect to both volume and value of the hydrocarbon reserve that nature saw fit to place in the Prudhoe Bay reservoir. Retaining gas within the reservoir will assure that we will always be able to maximize the recovery of crude

oil from the reservoir. By retaining associated gas in the reservoir until the maximum ultimate recovery of black oil is achieved assures us that we still have remaining in that reservoir the associated gas which some two or three decades from now will have increased value over that of today. Once black oil is fully recovered, we still have an economic reserve within the reservoir of salable gas that will continue for several years to come, one or two decades to yield a non-renewable income for the State of Alaska.

Testimony indicated that, had a transmission system from the Prudhoe gas cap to the South 48 been in existence a week ago, the President of the United States would have had the full authority to call upon the production of that natural gas to meet the South 48 needs, even though it could be extremely detrimental to the welfare of we Alaskans by materially affecting ultimate recovery from our Alaskan oil field. Such national emergency needs can well develop again and again. So long as we have no transmission system to the South 48 to move natural gas, we Alaskans can rest assured that the maximum benefit will continue to be achieved from the Prudhoe Bay reservoir. Only when we are assured, beyond all reasonable doubt, that the associated gas is indeed surplus to our needs should we permit the construction of a transmission system from Prudhoe Bay to the South 48.

However, testimony was strongly suggestive that our state's 1/8th Royalty Gas was merley a 1/8th tail attempting to wag a 7/8ths dog. In otherwords, contractual sale or commitment of Alaska's 1/8th associated gas today would in no way aide or abet the early construction of a transmission system to the South 48. The other 7/8ths of the dog is needed before sufficient volumes are realized to make a gas transmission system economically viable. As of this date, according to testimony, the other 7/8ths of the associated gas has not been commited for sale.

Testimony further was suggestive that in view of the control exercised under statute by our Alaska Oil & Gas Conservation committee, it would be doubtful if sufficient financing could be obtained for the construction of a gas transmission system until the Conservation Committee can first assure the financial centers that 2 billion cubic feet a day of associated gas or more would be available day after day on an uniterrruptable basis for approximately a twenty year period.* And it is my conviction that so long as our Oil & Gas Conservation Committee is isolated from political and economic pressures, they will continue to act with utmost prudency to insure the maximum benefit to Alaskans from our

* Solution gas from 1.2 MM Bbl/Day oil production is less than 1 billion cu ft/D

natural resources within the State. In short, it may well be ten to twenty years before the Conservation Committee can with any degree of certainty assure that associated gas is surplus to our needs, and can be exported at an uninterruptable 2 billion cubic foot daily rate for a twenty year period.

Based principally upon the foregoing, it is my determination that the approval of the Royalty Gas Sales Contract by the Legislature will have a plus value in the selection by the Federal Government for the routing of a gas transmission system from Prudhoe Bay to the South 48. Further, it is now my conviction that approval of the Royalty Gas Sales Contracts by the Legislature will not aide or abet early construction of a gas outlet for Prudhoe Bay's associated natural gas. I say this because it is my strong belief that the overriding consideration governing the availability of finance for a transmission system is the Oil & Gas Conservation Committee's ability to "turn-off the valve" at any point in time; whenever they believe that continued gas production is deleterious to overall reservoir performance with resulting loss in ultimate recovery.

Should public money enter into the picture, of course, the premise upon which I base my position no longer is valid. But in no way do I see public funds being made available at this point in time for assistance in the financing of a transmission system.

Accordingly, it is my recommendation that the Legislature approve the Royalty Gas Sales Contracts as they now stand before us.

Representative C. V. "Chat" Chatterton
Special Committee to Consider Sale of Royalty Gas

El Paso Seeks Continued Rate Base Treatment of Advance Payments for Alaskan Gas Beyond Initial Five-Year Term

On 10/6/78 the FERC issued notice of a petition filed 9/27/78 by El Paso Natural Gas Co. (RP72-116) requesting approval for continued rate base treatment of Alaskan advance payments made to Atlantic Richfield Co., Amoco Production Co. and Phillips Petroleum Co. under agreements dated in 1972. In the aggregate, these advances totalled $3.9 million as of 7/31/78.

Each of the agreements provides for recoupment of the advance payments from the proceeds of oil and gas production from the prospect areas for which the funds were advanced. In addition, El Paso's agreement with Phillips contains a backup provision whereby, if the advances have not been fully recovered by El Paso within a specified time (five years after the date of first deliveries from the funded area, or eight years from the date of the first advance), Phillips will assign a portion of its net revenues from oil and gas leases in the Prudhoe Bay area as an additional source of recoupment.

Rate base inclusion of the above advances was approved by FPC Opinion No. 673 (issued 11/6/73) 1/ subject to termination of such treatment and reduction of El Paso's rates if gas deliveries had not commenced within five years and no determination had been made that recovery would be made in economic consideration other than gas. The Commission provided, however, that El Paso could seek continued rate base treatment upon submission of evidence explaining why recoupment of the advances had not commenced, why further rate base inclusion was warranted, and what costs would result for El Paso's customers. In accordance with these conditions, El Paso asked to continue rate base treatment until five years from commencement of gas deliveries from the Kavic prospect area through the Alaska natural gas transportation system (or until full recovery of the advances, if earlier) in the case of the advances to Atlantic Richfield and Amoco, and until full recoupment of the advance to Phillips. In view of the backup recoupment provision in its advance payment agreement with Phillips, El Paso estimated that full recovery of the advance to Phillips would occur no later than June 1981.

In support, El Paso referred to a recent letter from Atlantic Richfield advising that the Kavic reservoir is estimated to contain approximately 100 Bcf of proven reserves and some 232 Bcf of potential reserves, based on an analysis of the three wells drilled to date. However, commencement of production depends upon completion of an Alaskan natural gas transportation system, which is not estimated to be operative until at least 1983. Since delays incident to construction of the pipeline are beyond El Paso's control, El Paso contended that extension of rate base treatment for five years from commencement of deliveries from the Kavic prospect area is appropriate. The prospect area underlying the Phillips advance has not been determined to be productive of oil or gas, El Paso added, but continued rate base inclusion of this advance to the extent requested is nevertheless justified because, if gas had been discovered, full recoupment would occur pursuant to the

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1/ By order dated 12/31/75, El Paso and three other pipelines who made Alaskan advance payments under contracts executed prior to Order No. 499 (issued 12/28/73) were directed to show cause why rate base treatment for these advances should not be terminated as of 12/31/75 and why refund of all carrying charges should not be required. The show cause order was issued at the same time as another order which terminated rate base inclusion of Alaskan advances covered by contracts executed after 12/28/73. The four pipelines filed responses to the show cause order in March 1976, and no further action has been taken by the Commission since that time.

backup provision due to the unavailability of a pipeline to transport North Slope gas until at least 1983. Assuming full recoupment under the backup provision by June 1981, El Paso said the Phillips advance will have been accorded rate base treatment for approximately seven years and nine months, which is well within the ten-year maximum period contemplated by Opinion Nos. 673 and 673-A if gas had been discovered in the funded area.

As further justification, El Paso argued that the subject advances were designed to benefit its customers in two respects. First, the advances served to accelerate exploration and development of nonassociated gas reserves necessary to support the implementation of a pipeline system to transport North Slope reserves. "Without the development of substantial dry gas reserves, a pipeline system would be totally dependent upon the associated gas reserves of the Prudhoe Bay Field." Second, the advance payment program gave El Paso a call on a portion of those reserves, thus insuring that gas from the North Slope would actually reach El Paso's customers by means of any pipeline project ultimately implemented. In short, El Paso declared, since the Alaskan advances represent investments made for the benefit of its customers, it would clearly be unfair to require the company's shareholders to bear the carrying costs thereof during any period of postponement in recoupment of the advances, particularly when that postponement results from delays in construction of a gas pipeline and other factors beyond El Paso's control. Moreover, El Paso added, denial of rate coverage of advance payment investments during a period of unavoidable delay in recovery would "operate as a disincentive to future efforts by El Paso, and by the industry generally, to undertake innovative gas supply projects. . . . [S]uch disincentive would be deleterious not only to the pipeline companies themselves, but also to their customers who would benefit from such projects."

If rate base treatment for its outstanding Alaskan advance payments is discontinued five years after the inclusion of each advance in Account 166, El Paso estimated that its total revenues would be reduced by approximately $4.3 million over the next ten years.

El Paso also observed that all three of the producers here involved had rejected requests to consider expedited or alternative recoupment of the advances.

In conclusion, El Paso called attention to an FPC order of 7/29/77 conditionally granting a petition by Columbia Gas Transmission Corp. (RP76-159) to continue rate base treatment of a $60 million advance to BP Oil Corp. for Alaskan North Slope gas beyond the initial five-year period approved in Opinion No. 674, issued 11/6/73. 1/ El Paso said the circumstances surrounding its advances are similar to those surrounding Columbia's advance, and hence similar treatment is warranted.

1/ More recently, on 6/28/78, the FERC conditionally authorized continued rate base treatment of advance payments made by Northern Natural Gas Co. (RP71-107, Phase II and RP72-127) for Alaskan gas under agreements executed prior to 12/28/73. (See REPORT NO. 1162, pp17-20.)

El Paso ALASKA COMPANY

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December 16, 1976

The Honorable John Rader
Alaska State Senator
P. O. Box 2068
Anchorage, Alaska 99501

Dear Senator Rader,

As you know, we are now entering the final, decisional phase of the North Slope gas pipeline controversy. The recently enacted Procedural Bill calls for an FPC recommendation by May 1, 1977, a decision by the President by September 1 and Congressional ratification within 60 days thereafter. Only two opportunities remain for input to the FPC by the applicants and other parties to the proceedings -- oral argument on the Judge's preliminary decision after January 15, and a "Brief on Exceptions" following his final recommendation (to be filed by March 1).

The State of Alaska will have one additional occasion to provide formal, direct input to the President. It is to be submitted by July 1, 1977.

Thus, the arena is shifting from the FPC regulatory phase to a purely political phase involving the federal administration and the Congress, and we and our allies are gearing up for increased promotional and lobbying efforts in behalf of the trans-Alaskan gas pipeline route.

An important influence on the ultimate success of these activities will be the State of Alaska's recent commitment of surplus Prudhoe Bay royalty gas to El Paso, Southern and Tenneco. We believe that such commitment is critical, because

(i) it is a real expression of the State of Alaska's solid support for the trans-Alaska route,

(ii) it brings Tenneco and Southern -- two substantial allies -- to the fight, and

(iii) it will help create a national constituency in the 38 states that will be the beneficiaries of surplus royalty gas if the trans-Alaska route is approved.

We are advised by representatives of OMAR that you have been furnished a copy of the royalty gas contract. We hope that you have been able to read through it, and that you agree it is a fair and equitable arrangement for both the state and the purchasers. It has a 20-year term; it provides that the highest possible wellhead price will be paid to the state; and it allows the state to take back its gas in any amount and at any time in order to serve Alaskan markets as they develop.

It is also fortunate that the contracts were completed in time to allow the state to make them a part of the FPC record prior to its closing. In view of the suggested possibility that the Procedural Bill might be reconsidered by Congress next spring, we believe that placing the contracts before the FPC will provide additional assurances that the state will retain the right to recall its gas.

We hope that you will support early consideration and approval of the royalty gas contracts when the Legislature convenes next January. Since the decisional dates are now (essentially) firmly set, we have an excellent understanding of the time remaining for us to influence the final determination. Obviously, each day of delay in approval of the contracts is one less day that we can use their very meaningful leverage.

Turning briefly to another subject, you have probably heard that the FPC Staff recently endorsed the Arctic Gas route. Inasmuch as the Staff's position was developed on a strictly traditional basis, essentially ignoring the international ramifications of the two trans-Canadian proposals, we are not in any way discouraged by Arctic Gas' "winning" this first round. It was very disappointing that Staff would judge the competing proposals in this very unique case as they would any conventional pipeline in the lower 48. However, when other federal agencies, the President and the Congress become involved, the existence of Canada will no longer be ignored and the real disadvantages of Arctic Gas and Alcan will become known. When that occurs, the El Paso project should carry the day.

The FPC Staff position also reaffirmed the fact that our real competition is, and will continue to be Arctic Gas, since Staff harshly dismissed the concept, the costs and the schedule of Alcan as being "unrealistic and unreasonable."

We very much appreciate the support that the Legislature has given the trans-Alaskan gas pipeline route in the past, and we sincerely hope that our proposal will maintain its preferred position during the forthcoming legislative session.

Best regards.

Sincerely,

EL PASO ALASKA COMPANY

Michael C. Holland
Assistant to Vice President
John C. Bennett

Enclosures

NORTH SLOPE NATURAL GAS TRANSPORTATION

FACTUAL COMPARISON OF PROJECTS IN ALASKA
(December 1976)

	TRANS-ALASKA PROJECT	ALCAN PIPELINE PROJECT	ARCTIC GAS PROJECT
Pipeline Mileage	809 miles	731 miles	195 miles
Capital Cost of Alaskan Facilities	$4.6 Billion	$2.3 Billion	$662 Million
Employment Construction	21,600 direct and induced jobs at peak of construction.	14,900 direct and induced jobs at peak of construction.	6,800 direct and induced jobs at peak of construction.
Operation	624 permanent employees.	108 permanent employees.	39 permanent employees.
Construction Payroll	$840 Million	Unknown at present but expected to be about half that of the Trans-Alaska Project.	$190 Million
Ad Valorem and Income Taxes	$2.8 Billion	$1.3 Billion	$230 Million
Future Industrial Development	Offers greatest potential for future industrial development by offering shortest, most economical route to an ice-free, tidewater port (most economically attractive location for industrial development because of access to marine transportation of product).	To transport natural gas to tidewater requires 250 miles further transportation by pipeline, including a 150-mile lateral, resulting in increased cost of service. Therefore not as economically attractive as opportunities associated with the Trans-Alaska Project.	Route precludes use of state's royalty gas for industrial development.

AGO 667962

PLEASE NOTE

THE ORGINAL FILE CONTAINS AN OVERSIZED DOCUMENT THAT IS UNSUITABLE FOR FILMING. PLEASE REFER TO THE ALASKA STATE ARCHIVES TO VIEW THE ORIGINAL.

DESCRIPTION: MAP

TRANS-ALASKA GAS PROJECT

COMPARISON OF THE EL PASO PROJECT
WITH OTHER PROJECTS PROPOSING TO
TRANSPORT ALASKAN AND OR CANADIAN
NATURAL GAS DISCOVERIES

House Committee has held Dec 15 brief on same subject

UNITED STATES OF AMERICA

Before the

FEDERAL POWER COMMISSION

El Paso Alaska Company, et al.) Docket Nos. CP75-96, et al.

BRIEF OF EL PASO ALASKA COMPANY CONCERNING PROJECT FINANCING AND REGULATORY ACTION

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June 4, 1976

BRIEF OF EL PASO ALASKA COMPANY CONCERNING PROJECT FINANCING AND REGULATORY ACTION

I. INTRODUCTION TO THE PROBLEM

In these consolidated proceedings, proponents of two 1/ mutually-exclusive delivery systems are each seeking requisite Federal Power Commission ("FPC") authority to construct and operate facilities in interstate commerce to move natural gas from Alaska's North Slope to consumers in the lower 48 United States.

The El Paso Alaska Project proposes the construction of a new gas pipeline southward across Alaska to a site near Gravina Point in Prince William Sound on Alaska's south-central coast, a route within an established utility corridor closely paralleling the Alyeska oil pipeline. After liquefaction at a new facility at Gravina, the gas would be carried by ship to a regasification plant near Point Conception in southern California, regasified, and thereafter transported to markets throughout the country by utilizing idle capacity in existing pipeline systems.

The Arctic Gas Project proposes the construction of an entirely new pipeline system first extending eastward out of northern Alaska through the Arctic National Wildlife Range into Canada and then southward through Canada to a point of bifurcation near Caroline, Alberta. From there, an eastern leg would proceed to a United States border-point near Monchy, Saskatchewan and then traverse the north-central United States to a point near Kankakee, Illinois. At various points along this portion of the system within the lower 48 states, Alaskan gas would be

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1/ Northwest Pipeline Corporation on May 10, 1976 announced plans to file an application to transport North Slope gas out of Alaska by a third route--along the course of the Alyeska oil line to Delta Junction and then eastward along the Alcan Highway to the Yukon border where three Canadian entities will in turn arrange for its transportation through Canada. Since no application has yet been filed, there has not been any Commission action to effect consolidation of that proposal with the two proposals which have been in comparative hearings for over a year.

delivered to existing pipelines for further movement and displacement to eastern and midwestern markets. A western leg of the Arctic Gas Project would use expanded pipelines in both the United States and Canada to move gas southward from Caroline across the International Boundary near Kingsgate, British Columbia to markets in the western states.

The capital requirements of these projects are enormous. The estimates of El Paso Alaska range between $6.5 billion and $7.9 billion; those of Arctic Gas range between $8.3 billion and $8.8 billion, each depending upon the amount of deliverability certificated. 2/

Recognizing that the unprecedented capital costs required for the construction of an Alaskan gas delivery system preclude any natural gas company or even a group of such companies from raising the necessary capital on the basis of their own credit, the financial advisors of El Paso Alaska--not unlike those of Arctic Gas--have recommended that the El Paso Alaska Project be project financed. Project financing involves the creation of a new enterprise whose own economic integrity is sufficient to finance itself independently to a significant degree. Stated in financial terms, this new enterprise is designed so that it generates sufficient revenues to pay its operating costs, to pay interest and principal on its debt and to pay a return on, and ultimately a return of, its equity.

The very nature of project financing identifies the principal financial risks inherent in it. The prospect that the project's revenues may be insufficient to permit it to make the necessary payments arises from three risks: (1) failure of governmental regulation to permit the project to generate sufficient revenues; (2) prolonged interruption of the project's operation without receipt of revenues; (3) non-completion of the project for economic, physical or other reasons.

El Paso Alaska's financial advisors have testified that neither the El Paso Alaska Project--nor any other comparable project--can be financed unless the investors can be

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2/ These figures reflect July 1, 1975, costs based on assumptions each party has made in its filings and proposed testimony.

assured that these risks are significantly reduced. 3/ Since they expect that the project, once in operation, will be permitted to earn a fair return, they do not consider the first risk to be a serious deterrent to a potential investor. But as to the other risks, they state that lenders will require undertakings which provide, irrespective of project completion or project failure due to force majeure or otherwise, that they will recover their debt, principal and interest. Similarly, because the equity capital required will be so large, it is doubtful if a potential sponsor could be induced to contribute equity if no assurance could be given that at least the return of equity would be made upon project failure. The reasons for these positions are set out in Exhibit EP-254, which accompanies this Brief.

This risk assessment, therefore, is intrinsic to the reasoning of this Brief. Financing of the El Paso Alaska Project will require contractual and tariff provisions which, at a minimum, provide that, in the event of either prolonged service interruption or a failure to complete the project, debt principal and interest will be repaid to the lenders and that equity contributions will be recovered. This burden of unconditional repayment will be hereinafter called "Investment Recovery."

The financial advisors produced by Arctic Gas were also of the view that lenders would require assurances that their investment would be returned if the project failed either of completion or of operation for a prolonged period. Raymond B. Gary stated in pertinent part:

> [Lenders] will require assurances a) that the project will be completed even if costs exceed those originally projected (or, if not completed, that the debt of the project will be repaid in full); b) that the project, once completed, will generate operating revenues sufficient to meet its expenses and service its debt; and c) that if for any reason, including force majeure, its operations are interrupted, suspended or terminated, its

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3/ L. E. Katzenbach, Tr. 13,443-13,444; 13,689-13,698; 13,781-13,786; 13,801-13,804; Stanley Lewand, EP-100 (p. 6 of prepared direct testimony); Tr. 13,866-13,868; 13,886-13,900.

> debt obligations will continue to be serviced either through continued receipt of revenues or otherwise. These assurances must take the form of binding contractual obligations. Tr. 17,801.

Stewart B. Clifford gave substantially the same testimony Tr. 17,818. The opinions of these U.S. financial advisors for Arctic Gas were also reaffirmed by their Canadian counterparts. 4/

L. E. Katzenbach, an El Paso Alaska financial witness, expressed the need for a series of agreements and tariffs. He thought that the tariffs of each of the shippers of Prudhoe Bay gas should contain a provision which would allow each to collect from its customers--in the event of the occurrence of either non-completion of the project or prolonged interruption of service--sufficient revenue to provide for Investment Recovery.

Katzenbach contemplated that all of the necessary agreements and tariff provisions would be submitted to this Commission as part of the totality of the financing package. The final approval of the El Paso Alaska Project by this Commission would include not only approval of the route and methodology for gas transport, but also approval of gas purchase contracts, approval of the necessary tariff provisions, approval of the overall financing plan and the issuance of certificates authorizing the construction and operation of jurisdictional facilities and for the sale and transportation of the gas. Each of the several elements would be approved as interdependent. "It would be a part of the whole closing arrangement." Tr. 13,725.

While the El Paso Alaska advisors thought that the assurances necessary to convince the lenders to advance funds would be supported by the approval of an all-events tariff and other contractual agreements, 5/ the advisors of Arctic Gas were of the opinion that the risk of prolonged interruption of service and non-completion could ultimately be met only by

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4/ J. Ross LeMesurier, Tr. 17,814; Thomas S. Dobson, Tr. 17,824.

5/ Katzenbach, Tr. 13,676; Lewand, Tr. 13,886-13,892.

some form of guarantees from both the U.S. and Canadian governments and perhaps from state and provincial governments as well. 6/

Arctic Gas has identified two seemingly unresolvable roadblocks to satisfying the concerns of lenders by regulatory action alone. First, Arctic Gas contends that action by the FPC alone is not enough. Before lenders will be satisfied that gas consumers are backstopping the financing arrangements, satisfactory formal action must be unanimously forthcoming by state or local regulatory agencies in every state where Alaskan gas is destined. Having raised this hurdle, Arctic Gas then concedes the virtual impossibility of successfully attaining the required result in so many jurisdictions. 7/ Second, even assuming that satisfactory federal and local approvals could be obtained, Arctic Gas raises the specter of future regulatory change: "that in order for investors to have confidence in that tracking, that it would probably have to be legislatively mandated, so that future commissions could not upset or change the arrangements . . . wherein there is always the possibility that a politically constituted public utility commission could perhaps at a state level simply cancel the possibility of tracking." 8/

Treasury witnesses John M. Niehuss and Theodore M. Barnhill also recognized that lenders would require assurances of payment despite non-completion or prolonged interruption of service. They were of the opinion that it was possible to arrange financing without federal guarantees of financial assistance as long as appropriate regulatory actions were taken. Tr. 18,900; 18,908-18,912; 18,944-18,956.

It is, therefore, the purpose of this brief to address the means by which the investors in the El Paso Alaska Project might be assured that the risk of non-completion of the project and the risk of prolonged interruption of service--thereby creating a condition of non-revenue--would be covered. We believe that the approval by this Commission of an all-events

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6/ Raymond B. Gary, Tr. 18,072-18,082; Stewart B. Clifford, Tr. 18,405-18,410; 18,424-18,427; J. Rose LeMesurier, Tr. 18,189-18,193; Thomas S. Dobson, 18,507-18,508.

7/ Gary, Tr. 18,080-18,081.

8/ Id. Tr. 18,080.

tariff for Alaska gas service and the approval of other contractual and rate clauses would reduce the financial risks perceived by investors to the degree needed to encourage a willingness on their part to advance the enormous sums necessary to the development of the El Paso Alaska Project.

II. THE MEANS BY WHICH REVENUE MAY BE GENERATED TO PROVIDE FOR INVESTMENT RECOVERY

El Paso Alaska proposes to provide against the risk of non-completion and the risk of prolonged interruption of service by means of contracts and tariff provisions which will assure investment recovery. The means by which these contracts and tariff provisions would operate are substantially the same for either service interruption or non-completion of the project, but since each risk would occur under different circumstances, each must be faced with slightly different procedural arrangements.

(a) Prolonged Interruption of Service

This condition would occur after the El Paso Alaska Project has been constructed and is in operation. Under these circumstances, the El Paso Alaska tariff, setting forth the terms and conditions under which gas would be transported for its shippers would be operative. 9/ That tariff, as presently proposed by El Paso Alaska, provides that a shipper must in all events pay a base monthly charge sufficient to pay operating expenses, debt service and a return of and on equity. Exh. EP-56, pp. 5-6, 26, 49. In the event of an outage, the return on equity is reduced to the point of elimination if the lack of service is substantial. 10/ However, there continues, even during prolonged outage, an obligation on the part of the shipper to pay a basic service charge adequate to provide for debt service and operating expenses 11/ and return of equity.

9/ The tariff as proposed is Exhibit EP-56. Its proposed effective date will occur when all segments of the El Paso Alaska Project have reached a stage of construction where El Paso Alaska stands ready to render initial transportation service to all shippers. Tr. 10,164-10,166.

10/ Exh. EP-56, pp. 56-57.

11/ Id.

As a consequence, any shipper of Alaskan gas having a service agreement with El Paso will be required to pay a basic service charge irrespective of its receipt of gas. 12/

(b) Non-completion of the Project

It is possible that the El Paso Project may never be completed either by reason of the enormity of cost overruns or by reason of insurmountable physical obstacles. If completion is not accomplished, a method must nevertheless be found to provide for Investment Recovery.

Since the assumption here is that the project is not completed, it necessarily follows that El Paso Alaska will have no operative tariff in place in order to generate monthly charges 13/. As a consequence, the tariff is not the operative instrument for generating the necessary revenues to provide for investment recovery. However, this obligation can be met by contractual arrangements with the various shippers of Alaskan gas. Each by contract will obligate itself to make monthly payments sufficient over time to service the amount of debt previously put in place and to return that equity which has been advanced. The discharge of this contractual duty by the shippers would provide El Paso Alaska with

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12/ E.g., Exh. EP-56, p. 48-49 provides in pertinent part:

> 3. RATES AND CHARGES
>
> 3.1 . . . Shipper shall pay Company each month under this Rate Schedule, (1) Shipper's allocable share of Company's monthly cost of service . . . regardless of (i) the amount of natural gas received, transported, or delivered to shipper or its designee during the billing month involved . . ., and (ii) the non-delivery of natural gas to Shipper or its designee during the billing month for any reason.

13/ In our opinion only a "natural gas company" may have an effective tariff under Section 4 of the Natural Gas Act. Until El Paso Alaska transports gas in interstate commerce, it will not become a "natural gas company." See Section 2(6) of the Act.

the revenue required to provide for Investment Recovery.

While appropriate contracts and an all-events tariff will provide El Paso Alaska with revenue sufficient to provide for investment recovery in the event of either non-completion or prolonged outage, the shippers must be provided with a tariff mechanism by which timely to flow through these charges to their customers.

It is the submission of this Brief that the Commission, by the appropriate exercise of its certificate and rate authority, may provide sufficient assurances that once investments have been made in the El Paso Alaska Project, Investment Recovery can be accomplished in all-events and that neither supplementary legislation nor government backstopping is required.

III. NECESSARY ASSUMPTIONS

In order to put in place the various agreements, tariff provisions and regulatory actions necessary to provide the setting in which investment might be attracted to finance an Alaskan gas delivery system without increased burden to the federal Treasury, it is necessary to set out the assumptions which are critical to the legal conclusion which we reach--that, by the appropriate exercise by the Commission of its certificate and rate authority, sufficient assurance may be given to the U.S. financial community that the economic risks inherent in a project of this type an be avoided. It is therefore, assumed that:

1. In order to maintain effective federal regulation and provide for uniform treatment of gas consumers, this Commission will not certificate sales of North Slope gas to other than interstate transmission companies presently subject to its jurisdiction and who are currently selling gas in interstate commerce under service agreements and tariffs subject to the authority of the Commission. 14/ These companies in turn

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14/ An exception could be made in the case of the principal California distributors. See infra, p. 34. Historically, the two major California distributors have been regulated by the California Public Utilities Commission rather than the FPC. However, sales to California distributors should be certificated only if the CPUC were to agree to act with respect to the resale of Alaskan gas in the same manner as the FPC has been required to act to obtain the necessary financing commitments. Otherwise Alaskan gas should be delivered to the California markets under the existing service agreements with El Paso Natural Gas Company or other interstate carriers serving those markets.

will resell their Alaskan gas on a rolled-in basis under existing service agreements.

2. In order that each of the several certificate and rate authorizations may be considered interdependent and required as a totality by the present and future public convenience and necessity, the Commission will condition each grant of authority requested herein upon final approval of all interdependent events.

3. At the conclusion of the present phase of these consolidated proceedings, the Commission will issue a certificate of public convenience and necessity under § 7(c) of the Natural Gas Act authorizing El Paso Alaska to construct and operate facilities to transport gas from the North Slope to markets in the lower 48 states. Among other things, the certificate will be conditioned to require the submission of proposed financing arrangements within a reasonable period of time for the Commission's review and approval.

4. Before any financing plan is submitted to the Commission for approval, North Slope producers will have executed definitive contracts for the wellhead sale of their gas to interstate pipeline companies in the lower 48 states and will have sought certificates for such sales under Section 7(c) of the Natural Gas Act.

5. The purchasers of North Slope gas, having by reason thereof the greatest interest in a delivery system for that gas, will become the principal subscribers to the Project's equity, and their willingness to make such a contribution will be recognized in the course of the certification of the North Slope gas purchase contracts.

6. The equity participants will have reached preliminary agreement among themselves as to their respective degrees of equity participation and negotiation of the terms and conditions of short term and long term debt financing will have commenced with representatives of commercial banks and institutional lenders.

7. A financing plan tentatively acceptable to equity participants and lenders alike will be agreed upon and tendered to the Commission for its review and approval. As a part of these financing arrangements, shippers and sponsors will have conditionally executed or will have agreed to execute various documents, including:

(a) A service agreement, or a letter evidencing an intent to execute a service agreement, under the all-events cost of service transportation tariff of El Paso Alaska.

(b) An agreement by sponsors to make a specified dollar amount equity contribution to the El Paso Alaska Project.

(c) An agreement by sponsors, satisfactory to lenders, to contribute a pro rata share of a specified dollar amount of any additional funds needed during the construction period to provide for cost overruns.

(d) An agreement between shippers and El Paso Alaska, satisfactory to the Project's investors, by which the shippers, pro rata, will assure that sufficient funds will be made available to provide for Investment Recovery in the event the Project is aborted for any reason before completion.

8. Shippers of Alaskan Gas will have filed applications under Section 7(c) of the Act to add such facilities as are necessary in the lower 48 states to take delivery of their gas from the facilities available to the El Paso Alaska Project and each will have also filed applications with the FPC for appropriate Purchased Gas Adjustment Clause (PGAC) modifications sufficient to permit each to recoup in a timely manner all costs which may be incurred by reason of its agreement with El Paso Alaska to provide for Investment Recovery.

9. In connection with the applications specified in 8, supra, the shippers will each seek and obtain authority to treat its purchased supply of North Slope gas on a rolled-in basis as a part of its total system gas supply to be allocated and sold to its customers in accordance with existing contracts and the FPC curtailment plan prescribed for each.

10. Notice and opportunity to be heard shall have been afforded to all affected state regulatory commissions and to all affected distributor-customers of each shipper prior to the approval of the various tariff proposals.

11. The Commission will (i) issue final certificates to El Paso Alaska and each of the shippers; (ii) approve the financing plan submitted and recognize that its implementation is required by the present and future public convenience and necessity, and (iii) approve both the methods by which the shippers will wholesale their Alaskan gas and the tariff modifications proposed.

By virtue of the exercise of this final authority, all expenditures subsequently incurred by the shippers in the discharge of their respective obligations to El Paso Alaska, including specifically the obligation to make payment in the event of the failure of the project, will be reflected in the shipper's rates on file with the FPC and will be collected by each of them in its sales of natural gas to customers under existing sales contracts.

IV. THE FPC POSSESSES THE AUTHORITY TO ACCOMPLISH THE GOALS NECESSARY TO ASSURE PRIVATE SECTOR FINANCING OF THE EL PASO ALASKA PROJECT

So that the enormous sums necessary to finance the construction of the El Paso Alaska Project may be forthcoming from the private investment community, three purposes must be accomplished:

1. A mechanism must be put in place which will generate sufficient revenues adequate to provide for Investment Recovery even should the Project fail of completion or operation. Without the assurance of such revenue, investment counsellors are unanimous in stating that the project cannot be privately financed.

2. The mechanism once adopted by this Commission must be effective to assure the collection of revenue through to the ultimate consumer without fear of state regulatory interference.

3. Once investment is made in reliance upon the effectiveness of the mechanism for the collection of revenue, it must be inviolate to arbitrary change.

These ends are attained by the approval of changes in the presently filed tariffs of interstate transmission companies by which such companies, as shippers of Alaskan gas, would be permitted to flow through to their customers charges which arise as a result of their Alaskan gas agreements. These changes would be found at the time of the certification of the Project to be just and reasonable and required to enable the Alaskan gas delivery system to be built. The required tariff change would authorize a shipper to increase its rates for flowing gas to the extent necessary to provide for debt service and operating expenses in the event of outage, and to provide for Investment Recovery in the event of project abandonment.

1. The Natural Gas Act Contains a General Grant of Authority by Which the FPC May Accomplish Its Purposes

Section 1(b) of the Natural Gas Act is a grant to this Commission of jurisdiction over the "transportation of natural gas in interstate commerce" and "the sale in interstate commerce of natural gas for resale." Sections 4 and 5 of the Natural Gas Act grant exclusive jurisdiction to the Commission (a) to regulate charges for the transportation of gas in interstate commerce and (b) to fix the price at which gas may be sold in interstate commerce for resale. Section 16 grants the Commission "authority to perform any and all acts, and to prescribe, issue, make, and amend and rescind such orders, rules and regulations as it may find necessary or appropriate to carry out the provisions of this Act."

The Supreme Court has consistently accorded this Commission broad authority under the Natural Gas Act to deal with the jurisdictional transportation and sale of gas in an effective and comprehensive manner, and has emphasized the desirability and even the necessity for novel approaches, suited to the problems of the day, in the exercise of this authority. This generous interpretation of its authority has been particularly pronounced in recent instances where this Commission has acted out of a need to deal with the problems posed by the shortage of natural gas. Consistent with this need, the Supreme Court and the Courts of Appeal have appr ved a variety of FPC orders which, while only indirectly related to the actual transportation and sale of natural gas, are nonetheless appropriate measures to deal comprehensively with the problems posed by the delivery of gas from field to burner tip.

The use to which gas was put received the Supreme Court's attention in FPC v. Transcontinental Gas Pipe Line Corp., 365 U.S. 1 (1961). The Commission had denied Transco's application to transport gas from Louisiana to Consolidated Edison in New York for use as boiler fuel. Transco had proposed to make a direct sale of the gas to ConEd and argued that as a direct sale the transportation was beyond all FPC jurisdiction including consideration of either end use or price. The Commission denied certification for two reasons: the end use of the gas was perceived as an inferior one considering the need to conserve natural gas and the inflated price paid by ConEd was seen as having an undesirable inflationary effect on future sales of both jurisdictional and non-jurisdictional gas. The Court upheld the Commission's judgment citing the FPC's "wide range of discretionary authority" which obligated it "to bring to bear upon the problem an

expert judgment and to determine from its analysis of the total situation on which side of the controversy the public interest lies." Id. at 7. The Court concluded that the Act, while leaving much authority over conservation to the states, did not preclude the Commission from acting in all matters of conservation, especially given the impracticality of uniform and effective state regulation.

In Permian Basin Area Rate Cases, 390 U.S. 747 (1968), the Court endorsed the Commission's experiment with area pricing designed to encourage exploration and prevent excessive producer profits. It reiterated that "the breadth and complexity of the Commission's responsibilities demand that it be given every reasonable opportunity to formulate methods of regulation appropriate to the solution of its intensely practical difficulties." Id. at 790. The Court reaffirmed Hope's teaching 15/ that the Court need not examine each detail of the Commission's order, but must only decide if the "total effect" of the order is "just and reasonable" under the Act. Id. at 767. It found no bar in the Act to the use of area rates, and in so doing held the Commission's authority to be co-extensive with the broad purposes of the Act:

> The Act was intended to create, through the exercise of the national power over interstate commerce, "an agency for regulating the wholesale distribution to public service companies of natural gas moving interstate"; it was for this purpose expected to "balanc[e] ... the investor and the consumer interests." This Court has repeatedly held that the width of administrative authority must be measured in part by the purposes for which it was conferred. Surely the Commission's broad responsibilities therefore demand a generous construction of its statutory authority. Id. at 776 (citations omitted).

The Court derived "additional assistance" for its conclusion that the Commission was due a "generous construction of its statutory authority" from the Commission's "power [under § 16] to perform any and all acts, and to prescribe ... such orders,

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15/ FPC v. Hope Natural Gas Co., 320 U.S. 591, 602 (1944).

rules and regulations as it may find necessary or appropriate to carry out the provisions" of the Act. 16/

The Court continued that such "generous construction"

> [I]s consistent with the view of administrative rate making uniformly taken by this Court .... [R]ate-making agencies are not bound to the service of any single regulatory formula; they are permitted, unless their statutory authority otherwise plainly indicates, "to make the pragmatic adjustments which may be called for by particular circumstances."
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> We are unwilling, in the circumstances now presented, to depart from these principles. The Commission has asserted, and the history of producer regulation has confirmed, that the ultimate achievement of the Commission's regulatory purposes may easily depend upon the contrivance of more expeditious administrative methods. The Commission believes that the elements of such methods may be found in area proceedings. "[C]onsiderations of feasibility and practicality are certainly germane" to the issues before us. We cannot, in these circumstances, conclude that Congress has given authority inadequate to achieve with reasonable effectiveness the purposes for which it has acted. Id. at 776-777 (citations omitted).

The unusual deference accorded to this Commission's expertise by the Court is illustrated by the fact that the rates were set in 1965 to encourage exploration but were applied

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16/ Section 16 is not to be read simply as a means of arranging the Commission's procedural affairs. It authorizes the agency "to use means of regulation not spelled out in detail, provided the agency's action conforms with the purposes and policies of Congress and does not contravene any terms of the Act." Niagara Mohawk Power Corp. v. FPC, 379 F.2d 153, 158 (D.C. Cir. 1967); Mesa Petroleum Co. v. FPC, 441 F.2d 182, 187 (5th Cir. 1971); see also FPC v. Louisiana Power & Light Co., 406 U.S. 621 (1972).

retroactively to gas committed to interstate commerce since January 1, 1961. "It is difficult to see," the Court admitted, "how the higher rate could reasonably have been expected to encourage, retrospectively, exploration and production that had already occurred." Id. at 798. Nonetheless, the Court respected this Commission's belief that its initial statement of policy, issued as it began area rate hearings in 1960, "had created reasonable expectations among producers that higher rates would thereafter be permitted" and the Commission's conclusion that it would be unfair to disappoint the producers. This factor, and the need to preserve confidence in interstate prices, was sufficient to justify the Commission's retroactive application of area rates. Id. at 798-99. The Court has repeatedly shown its disinterest in setting aside parts of orders and expressed its concern only with the "total effect of the rate order." 390 U.S. at 767. As it said in Permian, "Although the Commission's position might at several places usefully be clarified, the producers have not satisfied the 'heavy burden' placed on those who would set aside its decisions." 390 U.S. at 812-13, quoting Hope Natural Gas, supra.

The Commission's authority to employ pricing mechanisms to encourage new production received approbation in Mobil Oil Corp. v. FPC, 417 U.S. 283 (1974). There the Commission fixed area rates for the southern Louisiana area, and set rates for "new" gas which were substantially higher than those set for "flowing" gas. The court rejected a challenge to these higher rates as being predicated on an "erroneously limited view of the permissible range of the Commission's authority to employ price to encourage exploration or production." 417 U.S. at 319. The Commission's decision to set higher prices for new gas was not based on any change in producing conditions, but rather on the need for new revenues to expand future production. The court ratified this approach.

> Its justification here for increasing the price of flowing or first vintage gas was not that new evidence showed that the conditions of producing that gas differed from the conditions found in the 1968 opinion, but, as the Commission frankly acknowledged, new revenues were deemed necessary to expand future production. As between placing the burden of that expansion on new or second vintage gas alone or spreading it over both old and new gas, it judged the latter more equitable and

more likely to lead to the immediately increased capital necessary in the face of a crisis. We see nothing in New York's argument to suggest that the Commission could not--in view of its finding that increased revenues were necessary--place the burden of those payments on all users rather than on those alone who purchased gas in the future. Indeed, it is worth noting that the Commission's rate orders in Permian included in the cost components of gas a noncost price element for future expansion of exploratory effort.

In this situation, the Commission could reasonably choose its formula as an appropriate mechanism for protecting the public interest. And, against the background of a serious and growing domestic gas shortage, the Court of Appeals could certainly conclude that the Commission might reasonably decide that, as compared with adjustments in the rate ceilings for gas producers to induce more exploration and production, its responsibility to maintain adequate supplies at the lowest reasonable rate could better be discharged by means of the contingent escalation and refund credit provisions. We therefore agree with the Court of Appeals' holding that "these periodic escalations were a proper subject for the exercise of administrative discretion and clearly fall within that 'zone of reasonableness' which we allow FPC on review." Id. at 320-321.

In FPC v. Texaco, Inc., 417 U.S. 380 (1974), the court endorsed yet another FPC concept for ensuring an adequate gas supply by encouraging the exploratory efforts of small producers. In this instance, the Commission proposed to allow small producers to sell at the price the market would bear, with the Commission regulating those prices only indirectly in the course of regulating the rates of pipelines and of the large producers who purchase gas from small producers. Though sending the actual order back to the FPC for clarification, the court approved the plan in principle after concluding simply that there was "nothing in the Act which requires the Commission to fix the rates chargeable by small producers by orders directly addressed to them or which proscribes the kind of indirect regulation undertaken here." Id. at 387. While all rates must be just

and reasonable, the Act "does not specify the means by which that regulatory prescription is to be attained." Id. Most recently, the Court reversed the District of Columbia Circuit and, reiterating Permian's language of "generous statutory authority," upheld the FPC's power to pre-grant abandonment at the time it certificates sales under § 7. FPC v. Moss, 44 U.S.L.W. 4278 (3/3/76).

The foregoing cases sketch at least in outline the expansive scope of FPC authority in certification and rate-setting proceedings. They demonstrate the disinclination of the Supreme Court to fragment complex FPC decisions into permissible and impermissible facets and, show moreover, the readiness of the Court to find support in the Act for FPC inventiveness necessary to deal with current gas shortage problems.

Section 4 of the Natural Gas Act provides that all rates and charges made, demanded or received by a natural gas company "for or in connection with" the transportation or sale of jurisdictional gas shall be just and reasonable, and that, upon the filing of a new schedule with the Commission, the Commission is authorized, after hearing, to "make such orders with reference thereto as would be proper in a proceeding initiated after it [i.e., the new schedule] had become effective." Section 5 of the Act authorizes the Commission to "determine the just and reasonable rate, charge, classification, rule, regulation, practice or contract to be thereafter observed and in force, and [to] fix the same by order."

Because the shippers' proposed tariff revisions will permit the flow-through of charges imposed by reason of interruptions of service or abandonment of the Alaska Project, such charges will be "in connection with" the jurisdictional transportation and sale of natural gas, and thus authorized under the Act. The power to regulate transportation necessarily includes, in any "comprehensive and effective regulatory scheme," 17/ the power to deal with the consequences of failure of that transportation. In order to fulfill its statutory duty to ensure

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17/ Panhandle Eastern Pipe Line Co. v. PSC, 332 U.S. 507, 520 (1947).

effective transportation the Commission may and indeed must provide for abandonment and interruption of service. 18/

The concept that failure of transportation must be a necessary aspect of the FPC's transportation jurisdiction is not a novel one, nor without judicial approval. As early as 1947, the Supreme Court explicitly recognized the nexus. In Panhandle Eastern Pipe Line Co. v. PSC of Indiana, 332 U.S. 507 (1947), the Court upheld state authority under the Act to regulate rates of direct sales in interstate commerce. To the pipeline's protest that this would bring about conflicting state regulations and conflicting state-federal actions "particularly in relation to curtailment of service when weather conditions or others require it," the Court answered that in the event of such conflict, "The matter of interrupting service is one largely related, as appellees say, to transportation and thus within the jurisdiction of the Federal Power Commission to control, in accommodation of any conflicting interests among various states." Id. at 523. See FPC v. Transcontinental Gas Pipe Line Corp., supra, at 27-28.

The Supreme Court reiterated its view that the Commission has pervasive authority over the transportation of natural gas in FPC v. Louisiana Power & Light Co., 406 U.S. 621 (1972). The question presented was whether the Commission had jurisdiction to curtail direct-sale deliveries in times of natural gas shortage. Since curtailment is a pro tanto non-delivery, and thus by extension a "non-transportation" and "non-sale" of gas, the Court's decision that direct-sale curtailments came under the aegis of the Commission's transportation jurisdiction is directly applicable here. The Court, reversing the Fifth Circuit, rejected the argument of Louisiana Power & Light, a direct-sale customer of a jurisdictional pipeline, that the direct-sale exemption in § 1(b) of the Act "creates a complete exemption of direct sales from curtailment regulations." "The answer," said the Court,

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18/ The rate mechanism proposed is nothing more than the conventional and familiar "demand charge" long recognized as an appropriate component of rate-making to reflect "costs which occur by reason of required plant and equipment capacity [which] must be available whether or not it is being used at any particular moment." Mississippi River Fuel Corp. v. FPC, 163 F.2d 433, 438 (D.C. Cir 1947).

[I]s that the prohibition of the proviso of § 1 (b) withheld from FPC only rate-setting authority with respect to direct sales. Curtailment regulations are not rate-setting regulations but regulations of the "transportation" of natural gas and this within FPC jurisdiction under the opening sentence of § 1 (b) that "[t]he provisions of this Act shall apply to the transportation of natural gas in interstate commerce. . . ." 406 U.S. at 637-638 (emphasis in original)

* * *

Since curtailment programs fall within the FPC's responsibilities under the head of its "transportation" jurisdiction, the Commission must possess broad powers to devise effective means to meet these responsibilities. FPC and other agencies created to protect the public interest must be free, "within the ambit of their statutory authority, to make the pragmatic adjustments which may be called for by particular circumstances." FPC v Natural Gas Pipeline Co., 315 U.S. 575, 586 (1942). Section 16 of the Act assures the FPC the necessary degree of flexibility in providing that:

> "The Commission shall have power to perform any and all acts, and to prescribe, issue, make, amend, and rescind such orders, rules, and regulations as it may find necessary or appropriate to carry out the provisions of this Act. . . ." 15 U.S.C. § 717o.

In applying this section, we have held that "the width of administrative authority must be measured in part by the purposes for which it was conferred . . . . Surely the Commission's broad responsibilities therefore demand a generous construction of its statutory authority." Permian Basin Area Rate Cases, 390 U.S. 747, 776 (1968); see United Gas Pipe Line Co. v. FPC, 385 U.S. 83, 89-90 (1966). Id. at 642

The Commission had seen fit to use the provisions of Section 4 of the Act to effectuate its curtailment authority. It had required all pipelines facing supply shortages to file reasonable curtailment schemes as amendments to their existing tariffs. The Court approved this unusual usage of Section 4 authority and answering the argument that only Section 7(b) abandonment jurisdiction was available to the Commission, said, "Since § 4(b) deals with 'service,' the FPC may invoke it to deal with curtailment programs, whether or not it could also invoke § 7 for the purpose." Id. at 646.

The commodious grant of transportation jurisdiction which Louisiana Power affords the Commission fully encompasses the exercise of the authority which we seek--the authorization to amend existing tariffs in the exercise of Section 7 and Section 4 jurisdiction to permit the flow-through of charges necessary to finance an Alaskan gas transportation system.

2. The Authority to Track, Through Existing Tariffs, the Service Charges Which Might be Necessitated if the Alaskan Project Fails Is Clear

Since this Commission possesses wide authority to prescribe rules and rates for the transportation and sale of gas in interstate commerce, it clearly possesses as an incidental right the power to allow for the collection of service charges in the event the transportation system fails--if that collection is a necessary condition for providing for the financing of the transportation system in the first instance. This is the teaching of the opinions dealing with permission to rate base advance payments made by a pipeline to producers for gas to be delivered in the future from new exploration and development. See Public Service Comm'n of New York v. FPC, 467 F.2d 361 (D.C. Cir. 1972); Public Service Comm'n of New York v. FPC., 511 F.2d 338 (D.C. Cir. 1975). The Court of Appeals said of the advance payment program, 467 F.2d at 369-370:

> [W]e are convinced that the "total effect of the rate order" is a reasonable attempt to increase the available capital for development of gas production, which, under the circumstances of the present gas shortage, we find to be a valid exercise of the discretion of the FPC.

By analogy, this Commission could authorize a present surcharge to the expected consumers of Prudhoe Bay gas for the purpose of creating a sinking fund sufficient to pay off investors in an Alaskan gas delivery system, if it found that such a fund was necessary to attract the capital necessary to construct the project. If it possesses such authority, as clearly it does under the "advance payments" cases, no reason suggests itself as to why it could not adopt the proposal we put forth, which has a lesser impact on the consumer--the allowance of tariff modifications which would permit Alaskan gas shippers to track through their rates the increased costs which they must bear only in the unlikely event of project interruption or non-completion.

3. The Several States Are Bound to Allow for the Collection From Consumers of Service Charges Required for Alaskan Gas Service

Both the distributing companies that may be subject to a shipper's additional charge on account of the failure of Alaskan gas service and state regulatory commissions having jurisdiction over such companies are precluded from attacking in any other forum the justness and reasonableness of this service charge.

Subject only to the judicial review afforded by the Natural Gas Act, 19/ rates fixed by this Commission for the transportation or sale of gas under its jurisdiction are conclusively presumed to be just and reasonable. Their justness and reasonableness may not be collaterally attacked in any other forum. Montana-Dakota Utilities Co. v. Northwestern Public Service Co., 341 U.S. 246 (1951). The holding of that case which was decided under the Federal Power Act 20/ is a critical underpinning to the position we espouse.

19/ See Section 19(b).

20/ "The pertinent provisions of the Federal Power Act 'are in all material respects' substantially identical to the equivalent provisions of the Natural Gas Act." Permian Basin Area Rate Cases, 390 U.S. 747, 821 (1968), quoting FPC v. Sierra Pacific Power Co., 350 U.S. 348, 353 (1956).

In that case an interstate electric utility sued another utility with whom the plaintiff had exchanged electric energy over a period of years. During the period of exchange the companies had a director interlock. Upon termination of the interlock the former subservient corporation sued the dominant, claiming that the rates it had been forced to pay the dominant, and the payments it had received from the dominant were unreasonable and resulted from the impermissible interlock. In sum, it contended that the Commission's approval of the rates paid and collected was the result of fraud practiced upon the plaintiff. The Supreme Court found that no cognizable cause of action was stated. The Court said of the subservient utility:

> It cannot litigate in a judicial forum its general right to a reasonable rate, ignoring the qualification that it shall be made specific only by exercise of the Commission's judgment, in which there is some considerable element of discretion. It can claim no rate as a legal right that is other than the filed rate, whether fixed or merely accepted by the Commission, and not even a court can authorize commerce in the commodity on other terms.
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> We hold that the right to a reasonable rate is the right to the rate which the Commission files or fixes, and that, except for review of the Commission's orders, the courts can assume no right to a different one on the ground that, in its opinion, it is the only or the more reasonable one. 341 U.S. at 251-252. 21/

Clearly, then, the states are barred from questioning in subsequent proceedings rates which utilities under their jurisdiction must pay for their interstate purchases of gas. This

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21/ This concept, that rates once fixed by federal regulatory agencies are conclusively presumed just and reasonable and cannot otherwise be challenged, is an old, firmly entrenched and necessary doctrine. See Texas and Pacific R.R. Co. v. Abilene Cotton Oil Co., 204 U.S. 426 (1907); Keogh v. Chicago and Northwestern Ry. Co., 260 U.S. 156 (1922); Georgia v. Pennsylvania R. Co., 324 U.S. 439 (1945); McLeran v. El Paso Natural Gas Co., 357 F. Supp. 329 (S.D. Tex. 1972).

is an area in which the states may not interfere. The law was plainly stated by a three-judge court in FPC v. Corporation Comm'n of Oklahoma, 362 F. Supp. 522, 538 (W.D. Okla. 1973), affirmed, 415 U.S. 961 (1974).

> The State has no authority, either directly or indirectly, to fix the price at which natural gas is sold in interstate commerce.

Quoting from Northern Natural Gas Co. v. State Corporation Comm'n of Kansas, 372 U.S. 84, 91 (1963), the opinion went on to state:

> The federal regulatory scheme leaves no room either for direct state regulation of the prices or interstate wholesales of natural gas, Natural Gas Pipeline Co. v. Panoma Corp., 349 U.S. 44 or for state regulations which would indirectly achieve the same result.

This principle arises from the doctrine of federal supremacy. 22/

A state order which "affect(s) the ability of the Federal Power Commission to regulate comprehensively and effectively the transportation and sale of natural gas, and to achieve the uniformity of regulation which was an objective of the Natural Gas Act. . . . invalidly invade(s) the federal agency's exclusive domain." Northern Natural Gas Co. v. State Corporation Comm'n of Kansas, supra at 91-92.

State orders which might impair the effective implementation of federal regulatory purposes "must be declared a nullity in order to assure the effectuation of the comprehensive federal regulation ordained by Congress." Id. at 92.

22/ "This Constitution, and the Laws of the United States which shall be made in Pursuance thereof . . . shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby; any Thing in the Constitution or Laws of any State to the Contrary notwithstanding." U.S. Const. Art. VI, cl. 2.

As we have previously set out, 23/ filed tariffs approved by this Commission are conclusively presumed just and reasonable in other forums. As a consequence, the collection by a shipper of its filed rate from its customers is beyond the challenge of any state regulatory commission.

When the inquiry shifts from whether a state may regulate what a distributor pays, to whether the state may regulate what the distributor charges when reselling the gas to its customers, different considerations come into play, but the result is the same. Under the due process clause, the states must allow the distributor to pass on to its customers the charges imposed by the tariff of its interstate supplier.

Although Section 1(b) of the Natural Gas Act states that the FPC's authority shall not extend to "local distribution of natural gas", 15 U.S.C. § 717b, the states are nevertheless bound by the Constitution's due process clause 24/ to allow regulated utilities to pass legitimate operating expenses on to their consumers.

The Alaskan gas service charge which the distributor would be required to pay to its pipeline supplier on account of the latter's filed rates is plainly an operating expense for that utility, and past practice and the law developed in this area lead one to the conclusion that allowance of flow-through can be expected.

The disallowance by a regulatory body of a legitimate expense is a violation of the due process clause of the Fourteenth Amendment to the Constitution. West Ohio Gas Co. v. Public Utilities Comm'n of Ohio, 294 U.S. 63 (1935). In that case the Ohio Public Utilities Commission disallowed a $12,000 advertising expense incurred by a utility to procure new business and allowed only $5,000 on the ground that the excess was "unnecessary and wasteful" and could not be passed

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23/ See discussion, supra, at pp. 21-22, concerning Montana-Dakota Utilities Co. v. Northwestern Public Service Co., 341 U.S. 246 (1951).

24/ ". . . nor shall any State deprive any person of . . . property, without due process of law . . . . U.S. Const. Amend. XIV.

on to consumers. The Supreme Court found no evidence to support such a conclusion and restored the original amount, holding that good faith on the part of management is to be presumed: "In the absence of a showing of inefficiency or improvidence, a court will not substitute its judgment for (management's) as to the measure of a prudent outlay." Id. at 72. The Court held that the state commission's rate "must give heed to all legitimate expenses that will be charged upon income during the term of regulation." Id. at 74. Similarly, the utility claimed as an expense the loss of 9 percent of its gas as a result of leakage. The state commission allowed for only a 7 percent loss. The Supreme Court found no evidence of fault or inefficiency to justify the modification. Such a modification in the absence of such evidence was held to be arbitrary and a denial of due process. Id. at 68-69. See also 294 U.S. at 77 (Stone, C. J., concurring).

As the District of Columbia Circuit said in setting aside a FPC disallowance of costs,

> Expenses (using that term in its broad sense to include not only operating expenses but depreciation and taxes) are facts. They are to be ascertained, not created, by the regulatory authorities. If properly incurred, they must be allowed as part of the composition of rates. Otherwise, the so-called allowance of a return upon the investment, being an amount over and above expenses, would be a farce.
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> [It is an] obvious basic premise [that a] rate order which does not provide for proper allowable expenses, taxes, depreciation and return, is unfair, unreasonable and confiscatory. Mississippi River Fuel Corp. v. FPC, 163 F.2d 433, 437, 451 (D.C. Cir. 1947).

Only expenses which are attributable to "inefficiency" or "improvidence", Alabama PSC v. Southern Bell Tel. & Tel. Co., 42 So.2d 655, 84 P.U.R. (n.s.) 221 (Ala. 1949); waste or negligence, West Ohio Gas Co. v. PUC, 294 U.S. 63 (1935); or resulting from an abuse of managerial discretion, Re New England Tel. & Tel. Co., 66 A.2d 135, 79 P.U.R. (n.s.) 508 (Vt. 1949), are disallowed.

There can be no challenge to the legitimacy and propriety of an Alaskan gas service charge. If the charge is authorized in a tariff approved by this Commission, it is conclusively established as just and reasonable. Montana-Dakota Utilities Co. v. Northwestern Public Service Co. supra. Rates established by a state regulatory body for utilities under its jurisdiction must allow for such an expense. The service charge in these circumstances resembles the treatment which must be accorded a federal tax imposed upon the utility. "Normally included as a cost of service is a proper allowance for taxes, including Federal income taxes." FPC v. United Gas Pipeline Co. 386 U.S. 237, 243 (1971).

In Galveston Electric Co. v. City of Galveston, 258 U.S. 388 (1922) and in Georgia Ry. and Power Co. v. Railroad Comm'n, 262 U.S. 625 (1923), the Supreme Court reinstated as an allowed expense federal income taxes which lower courts had disallowed on grounds that Congress had intended the expense of income taxes to be borne by the taxpayer utility, and not to be shifted to alternate consumers. The Supreme Court held simply that all taxes, state or federal, income or otherwise, "which would be payable if a fair return were earned are appropriate deductions." Galveston Electric Co. v. City of Galveston, supra at 399.

Just recently in City of Cleveland v. FPC, 525 F.2d 845 (D.C. Cir. 1976), the court rejected the city's contention that a state gross receipts tax levied against certain portions of the utility's operations was not properly allowable as an expense. The applicability of the tax to the utility was then being litigated in Ohio courts. The utility was paying the tax and was required to continue until Ohio authority ruled to the contrary. The court held that the amount of tax paid was properly allowable as an expense. Id. at 850. Cf. Driscoll v. Edison Light & Power Co., 307 U.S. 104 (1939) (expenses incurred in unsuccessful defense of existing rate structure before a public utilities commission are allowable expenses).

A distributor customer of an Alaskan gas shipper, required to pay that shipper's Alaskan service charge, must be permitted to pass this charge along to its own customers. A state regulatory body cannot disallow such payments except under pain of being found to have acted arbitrarily. Any other treatment, by "not provid[ing] for proper allowable expenses" would be "unfair, unreasonable and confiscatory." Mississippi River Fuel Corp. v. FPC, supra. "[U]nder the due process clause of the Constitution no public utility could be compelled to absorb its own costs and not pass them on to the consumer." PSC of New York v. FPC, 467 F.2d 361, 370 (D.C. Cir. 1972).

4. The Commission is Bound to Continue for the Duration of the Risk the Approved Tariff Provisions

"The skepticism with which investors regard regulatory authorities" 25/ has prompted financial advisors for Arctic Gas to suggest that the risk of non-completion and prolonged interruption be guaranteed by some form of governmental insurance. The skepticism which is expressed is that the approval by this Commission of tariffs containing provisions assuring investors of a return of their investment in the event of the failure of the project will not be long observed but that the issue of the fairness of the provision will be revisited by some subsequent Commission. The Arctic Gas advisors fear there can be no guarantee that the required tariff provisions will remain effective.

It is our submission that this Commission has the statutory authority permanently to adopt such tariff provisions and that, absent changed circumstances, that approval cannot later be withdrawn. So to do would violate Section 5 of the Natural Gas Act and the due process clause of the United States Constitution. The recent opinion in Pacific Gas Transmission Co. v. FPC, No. 74-2046 (D.C. Cir. 4/9/76) does not in our opinion alter this submission. The court in that case specifically noted the Administrative Law Judge's finding that there had been since the approval of the Pacific Gas Transmission's cost of service tariff "a 'change of considerable significance and unquestionable certainty in the ground rules' under which the tariff had originally been approved." This change was the four-fold price increase ordered by Canadian authorities for Canadian export gas sold to Pacific Gas Transmission Company.

Once it is found by the Commission as a fact, in the course of its consideration of the Project's financing, that the funds necessary to provide for the construction of the El Paso Alaska Project will not be available unless investors can be assured that Commission approval is given for tariff provisions which would permit the collection of the necessary revenue to provide for Investment Recovery in the event of the failure of the project, the logic of the solution is readily apparent. The Commission, under that predicate, would be enabled to view the required tariff provisions as an integral

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25/ Testimony of Raymond B. Gary, Tr. 18,054.

part of the application for a certificate and as a necessary assurance to the issuance of the certificate. The Commission would then be enabled to authorize the construction and operation of the project only if it also found that the necessary tariff provisions were required by the overall present and future public convenience and necessity. 26/ Charges for service are a proper subject for consideration in a certificate proceeding. See Atlantic Refining Co. v. Public Service Comm'n, 360 U.S. 378 (1959); Henry v. FPC, No. 73-2090 (D. C. Cir. 7/28/75).

The issuance of a final certificate to El Paso would contain the clear expression that the proposed tariff provision is required not only by the present but also by future public convenience and necessity.

Although this Commission may be of the opinion that it is unable to bind a future Commission not to invoke the prospective operation of Section 5 of the Natural Gas Act, 27/ we do not believe that Section 5 poses any real threat to the permanence of approval given to the requested tariff provisions. Section 5 does not authorize the Commission arbitrarily to change any filed tariff theretofore found to be just and reasonable. Any change to be worked under Section 5 must be based on a hearing record and supported by substantial evidence. The Commission's authority under Section 5 requires a "two-step adjudicatory process."

26/ Section 7(e) of the Natural Gas Act permits certification of a project such as that proposed by El Paso Alaska only if the Commission finds that it "is or will be required by the present or future public convenience and necessity."

27/ See Order No. 455, 48 FPC 218, 223:

> We cannot bind a future commission not to invoke the prospective operation of Section 5, nor do we attempt to do so. We do, however, announce our policy to examine the justness and reasonableness of proposed rates in Section 7 proceedings instituted under this Section, thus avoiding the uncertainty of reserving rate determinations for subsequent Section 4 or Section 5 action.

> First, the Commission must find that an existing condition is unjust or discriminatory; second, the Commission must prescribe the remedy for that condition. Each step requires the Commission to draw a legal conclusion, viz: illegality of an existing condition and the justness and reasonableness of the remedy. American Smelting & Refining Co. v FPC, 494 F.2d 925, 940-41 (D.C. Cir. 1974).

Once a just and reasonable rate has been established, the Commission is not at liberty to allow change in that rate "without changes in circumstance." Southern Louisiana Area Rate Cases v. FPC, 428 F.2d 407, 429 (5th Cir. 1970), cert. denied, 400 U.S. 950 (1970).

While the Commission has considerable discretion under Section 5 to initiate inquiries into existing rates, once a judgment has been made as to the reasonableness of a particular tariff provision and especially when large sums of money have been committed to a project in reliance upon those provisions, that decision may not be reversed -- absent some new circumstance -- without offending traditional considerations of equity and due process.

> [A] decision may not be repudiated for the sole purpose of applying some quirk or change in administrative policy, particularly where, as here, considerable funds have been expended in justifiable reliance upon the earlier ruling. Chapman v. El Paso Natural Gas Co., 204 F.2d 46, 53-54 (D.C. Cir. 1953).

While we cannot dismiss out of hand the threat which the exercise of Section 5 authority would give to the Commission to change its mind concerning the approval of the required tariff provisions, it poses no practical threat to the guarantee of permanence required by the investors in the El Paso Alaska Project. The required tariff provisions are designed to repay investment in the event of project failure. If the condition occurs against which the tariff provision was designed, it cannot be argued logically that this is a change of circumstance. It is not possible presently to imagine any change in circumstance which would justify abrogation of a tariff provision found to be essential to

cert. denied, 419 U.S. 834 (1974). 29/ See also Consumers Union of U.S. Inc. v. FPC, 510 F.2d 656, 659 (D.C. Cir. 1974).

We propose, therefore, that the certificate orders themselves contain express provisions approving the necessary tariff provisions as essential conditions to implementation of the transportation and sales authorized.

Under these circumstances, tariff provisions necessarily required in order to finance a transportation system which are found to be reasonable and in the public interest and expressly recognized as integral to the certificating process could not be abrogated without in effect abrogating the certificate itself--a power which the Commission does not possess. No express power is reserved to the Commission in the Natural Gas Act to amend or alter a final certificate once issued. Cf. United States v. Seatrain Lines, Inc., 329 U.S. 424, 432 (1947). See also, CAB v. Delta Air Lines, Inc., 367 U.S. 316 (1961).

Moreover, the abrogation of the required tariff provisions without evidence of changed circumstances and thus changed equities would be an exercise of arbitrary conduct forbidden by the due process clause of the United States Constitution. In City of Chicago v. FPC, 385 F.2d 629, 637 (D.C. Cir. 1967), the court put the proposition clearly:

29/ The Court in Distrigas said:

> Thus should the Commission eventually decide that those facilities and sales proposed in Distrigas' original application do not now merit Section 7 certification, it would, in our view, be under some burden to justify its decision, on the basis of altered circumstances or otherwise. Moreover, in denying Distrigas' application for rehearing, the Commission acknowledged "the problems and equities associated with application of a change of [jurisdictional] policy." Given this acknowledgment, we cannot now assume that the Commission would, in applying Section 7 requirements to Distrigas, fail to abide the principles of fairness implicit in all standards governing exercise of regulatory power. See Amalgamated Meat Cutters v. Connally, 337 F. Supp. 737, 755-58 (D.D.C. 1971) (three-judge court) (opinion by Leventhal, Circuit Judge).

financing and determined by the Commission to be in the present and future public interest. 28/

The ability of this Commission to bind a future Commission in a determination of what benefits the future public convenience and necessity has been established by the Supreme Court's opinion in FPC v. Moss, 44 U.S.L.W. 4278, (3/3/76). That case gave final judicial approval to all aspects of the Commission's Order No. 455 and in particular, approved the pre-granting of abandonment authorization as an integral part of a Section 7(c) certification proceeding. The procedure which was authorized by Order No. 455 permitted this Commission to "determine in a single proceeding whether the 'public convenience and necessity' under § 7(c) of the Act, 15 U.S.C. § 717f(c) warrants the issurance of a certificate authorizing the sale and whether the rates called for by the contract are 'just and reasonable' under § 4(a), 15 U.S.C. § 717c(a)." 44 U.S.L.W. at 4279.

We envision a similar one-step procedure -- the exercise by this Commission of its certification authority under Section 7(c) and its rate-making authority under Section 4. The final certificates and the necessary tariff provisions for El Paso Alaska and the shippers would be approved together upon consideration of the total financing plans submitted by El Paso and the shippers. The Section 7(c) certificates of El Paso and of the shippers would issue upon an express finding that the tariff provisions were necessary to ensure construction of the project and that the project was required by the present and future public convenience and necessity. The Commission's order would acknowledge that funds would be advanced in reliance upon the continued effectiveness of the required tariff provisions in each of the shippers' tariffs and in that of El Paso Alaska. Under these circumstances, no change in policy or change of mind by a future Commission would be adequate grounds for disturbing this finding, absent evidence of a change in the nature of the problem or a change of circumstances so considerable as to make it inequitable to adhere to the filed tariff. See Distrigas Corp. v. FPC, 495 F.2d 1057, 1065 (D.C. Cir. 1974),

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28/ This is not to say that the Commission would be without authority to institute, upon project failure, a Section 5 proceeding to disallow costs imprudently incurred. The standards for such disallowance are rigorous. See cases cited at p. 25, supra. This problem should be avoided by the adoption of audit procedures during the course of construction--a Staff recommendation which El Paso Alaska has endorsed.

> The Rule of Law does not forbid an agency from modifying its regulatory policy, and the courts have upheld policy revision many times. Indeed one of the signal attributes of the administrative process is flexibility in reconsidering and reforming of policy. What is required by the Rule of Law is that agency policies and standards, whether or not modifications of previous policies, be reasonable and non-discriminatory, and flow rationally from findings that are reasonable inferences from substantial evidence.
>
> There is perhaps one additional requirement inserted in case of change in policy, that the agency give due consideration to the equities, if any, arising out of commitments based on previous rulings. (Citations omitted)

Consequently, if the equities remain the same, one can confidently expect a court to reach the conclusion that the Commission would be estopped 'to change its position.' Presumably, if the equities change, the reason for the tariff provision would have also changed. As long as the risk which the tariff provisions were designed to avoid remain, it follows that there can be no change in the operative equities.

While the doctrine of estoppel has been historically held, as a general rule, not to be applicable to the United States or its agencies in their exercise of governmental power, there has been a significant shift in recent years toward the adoption of the principle of estoppel against the government in situations where the equities require its application. 30/ It has now been recognized that

> [E]stoppel is available as a defense against the government if the government's wrongful conduct threatens to work a serious injustice

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30/ See Emergence of an Equitable Doctrine of Estoppel Against The Government-The Oil Shale Cases, 46 U. Colo. L. Rev. 433 (1975).

> and if the public's interest would not be unduly damaged by the imposition of estoppel. United States v. Lazy FC Ranch, 481 F.2d 985, 989 (9th Cir. 1973).

See also United States v. Wharton, 514 F.2d 406 (9th Cir. 1975); United States v. Georgia Pacific Co., 421 F.2d 92 (9th Cir. 1970). 31/

The ultimate and practical effect of the three concepts just examined is that (i) if the risk of non-payment to the investors remains over the years and (ii) if the investors have advanced moneys for the completion of the Alaska Project upon the express approval by the Commission of the service charge provisions in the applicable tariffs, designed as the means to provide for investment recovery, these provisions have a permanence guaranteed by the Natural Gas Act, the Federal Constitution and general principles of equity.

V. APPLICABILITY TO THE ARCTIC GAS PROJECT

We are not convinced that our proposed theory will materially assist Arctic Gas in its financing. The absence of constitutional principles in Canadian law equivalent to the supremacy clause and the due process clause of the U.S. Constitution and the lack of confidence in the legal restraints upon Canadian governmental bodies preclude any sanguine judgment that the necessary tariffs could be put into place and maintained in Canada. Arctic Gas might well require other procedures to assure its financeability.

VI. APPLICABILITY TO CALIFORNIA STATE REGULATION

Should Southern California Gas Company or Pacific Gas and Electric Company become purchasers of North Slope gas and shippers over the facilities of the El Paso Alaska Project, it will be necessary to the financing of the project to involve the California Public Utilities Commission. Investors as a condi-

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31/ Should overriding considerations of public interest prevent the operation of the equitable doctrine of estoppel against the FPC in the circumstances, the investors would possess a substantial claim that there has been a "taking" within the meaning of the Fifth Amendment's obligation to pay appropriate compensation. See Union Oil Co. of California v. Morton, 512 F.2d 743, 750-52 (9th Cir. 1975).

tion to financing would undoubtedly require that Commission to approve the same tariff provisions as would be submitted to this Commission. If the CPUC should refuse, it is doubtful that any large percentage of North Slope gas could be sold to Southern California or Pacific Gas and Electric except as a resale from a transmission company under FPC jurisdiction. 32/

If the CPUC were to approve the necessary service charge provisions, the investors should feel assured that a subsequent Commission, differently constituted, would not be free to abrogate the approved tariff provisions. Under California law the equitable doctrine of estoppel applies to the state to the same extent as to a private person. City of Long Beach v. Mansell, 3 Cal. 3d 462, 476 P.2d 423 (1970). See also U.S. Fidelity & Guaranty Co. v. State Board of Equalization, 47 Cal. 2d 384, 303 P.2d 1034 (1956); Strong v. County of Santa Cruz, 15 Cal. 3d 720, 543 P.2d 264 (1975).

In addition, concepts of due process, including the right to appropriate compensation for a public taking, bind the state no less than the Federal Government. See West Ohio Gas Co. v. Public Utilities Comm'n of Ohio, supra; Miller v. Railroad Comm'n, 9 Cal. 2d 190, 70 P.2d 164 (1937).

VII. CONCLUSION

It is in the interest of United States fiscal policy that an Alaskan gas delivery system be financed in the private sector. Treasury witnesses have urged this Commission to develop techniques to accomplish this end. Tr. 18,897-18,900.

Once it is perceived that private financing to construct such a transportation system will not be forthcoming unless the investor can be assured that he will recover his investment in any event and that it is in the interest of the gas consumer that Alaskan gas be brought to market as soon as possible, the logic of the plan which El Paso Alaska sponsors is compelling.

This Commission clearly possesses the necessary statutory authority to permit the imposition of a charge on

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32/ In this manner, this Commission's approval of an Alaskan gas service charge would control.

flowing gas to pay for the financing of an Alaskan gas delivery system if the condition requiring such a charge arises.

If such a charge is found to be just and reasonable, it will be and must be passed along to the ultimate customer without the need for further state regulatory approval.

Once authorized, and once financing has been put in place in reliance upon the charge, it may not be abrogated while the risk which it was designed to avoid remains to threaten the investor with the non-recovery of his investment.

Respectfully submitted,

EL PASO ALASKA COMPANY

By Paul R. Connolly
Paul R. Connolly
One of Counsel

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused a copy of the foregoing to be served upon each state regulatory commission in accordance with instructions of the Presiding Administrative Law Judge and upon each person designated on the restricted service list compiled by the Commission Secretary in the proceedings consolidated at Docket Nos. CP75-96, et al., in accordance with the requirements of Section 1.17 of the Rules of Practice and Procedure.

Dated at Washington, D. C. this 4th day of June, 1976.

Paul R. Connolly
One of Counsel

Prepared by El Paso

EL PASO NATURAL GAS COMPANY
NATURAL GAS CONSUMPTION FOR THOSE STATES SERVED WHOLLY OR IN PART
Calendar Year 1975

STATE	EPNG SALES	TOTAL CONSUMPTION	EPNG PERCENT OF TOTAL CONSUMPTION
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Nevada	28,590 MMCF	60,446 MMCF	47.3%
New Mexico	43,336 MMCF	167,220 MMCF	25.9%
Oklahoma	11 MMCF	639,575 MMCF	<1%
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Utah	19 MMCF	123,098 MMCF	<1%

[1] MMCF = millions of cubic feet

NATURAL GAS CURTAILMENT IN 1976 AND ESTIMATED CURTAILMENT IN 1981

1976

	VOLUME	% OF REQUIREMENT
P 1	0	0
P 2	1,731 MMCF	1%
P 3	35,666 MMCF	16%
P 4	2,862 MMCF	21%
P 5	219,809 MMCF	65%
TOTAL	260,068 MMCF	19%

1981

	VOLUME	% OF REQUIREMENT
P 1	83,071 MMCF	15%
P 2	143,261 MMCF	52%
P 3	254,693 MMCF	100%
P 4	11,440 MMCF	100%
P 5	348,723 MMCF	100%
TOTAL	841,188 MMCF	58%

AGO 668001

El Paso ALASKA COMPANY

POUCH 7009
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PHONE 907 279 6502

December 23, 1975

Dear Senator Rader,

John Bennett has asked that I send you the enclosed presentation by Mr. E. C. Phillips, President of Westcoast Transmission Company Limited. It was given recently before the Canadian House of Commons Standing Committee on National Resources and Public Works.

The major theme of Mr. Phillips' talk is that Canada must not act in haste on the matter of frontier gas transportation systems. He briefly discusses a forecasted shortage of natural gas in eastern Canada (by the winter of 1979-80) and projected curtailments of U. S. exports. Most importantly, however, Mr. Phillips suggests a nine-point program which would provide for the prudent development of Canada's frontier gas resources and at the same time satisfy both Canada's growing demands for natural gas and U. S. export contracts. The salient point endorses a recently announced offer by the Province of Alberta to provide interim supplies of natural gas from existing, proven Alberta reserves in order to meet immediate requirements, and thereby lessen the urgency of any decision on the Arctic Gas or Foothills projects. Such interim supplies would ultimately be repaid with frontier gas developed at a later time.

Very truly yours,

EL PASO ALASKA COMPANY

Michael C. Holland
Assistant to the Vice President

Enclosure

The Honorable John L. Rader
Box 2068
Anchorage, AK 99501

WESTCOAST TRANSMISSION COMPANY LIMITED

PRESENTATION TO
HOUSE OF COMMONS STANDING COMMITTEE
ON NATIONAL RESOURCES AND PUBLIC WORKS

Ottawa, December 9, 1975

As representatives of Westcoast Transmission Company Limited, we are delighted, Mr. Chairman, to have this opportunity to discuss the subject of frontier natural gas. It is not overly dramatic to say this is the most complex and important project our regulators and legislators have considered in this century. As one of the three major Canadian gas pipelines, we are anxious to make whatever contribution we can to this great national undertaking. Our formal presentation will be very brief in order to permit sufficient time for questions from your committee.

With me today is our Senior Vice President, John Anderson. His principal responsibility is regulatory affairs, together with other legal matters and gas supply.

Merely as a word of qualification on this subject, Westcoast Transmission operates 2,242 miles of gas pipeline reaching from the U.S.A. border, through British Columbia into the Yukon and Northwest Territories. This system traverses residential areas, rich farmland, plains, foothills, mountains, Indian reserves, major rivers, muskeg and permafrost - the most challenging and varied pipeline operation in North America. We are the only pipeline in Canada operating gas processing plants. The one in Fort Nelson is the largest of its type in the world and the most northerly-situated in Canada, just 80 miles south of the Northwest Territories border.

With Alberta Gas Trunk Line, we are a sponsoring partner in Foothills Pipe Lines Ltd., familiarly known as the Maple Leaf Project to move Mackenzie Delta gas to southern Canada.

The thrust of our presentation today definitely will run counter to some popularly accepted views on the subject of frontier natural gas. We will develop the thesis that undue haste is both unnecessary and imprudent in this vital matter. There is a process by which interim arrangements can be made to supply gas, for both domestic and export requirements, while regulatory proceedings follow a cautious and deliberate pace. Our grestest concern in this matter is the extent to which the public and many in

the industry have under-estimated the time required for all the complex regulatory, legislative, economic, contractual and physical factors to be harmonized in a fashion that will not impose serious social or economic hardship or injustice on any geographical region of Canada, or on any segment of its population. Consequently, it could be an unkindness, bordering on unintentional deception to leave the impression with the U.S.A. that they can safely defer their plans while waiting for Canada to select the best frontier pipeline route in this country's own public interest.

Unlike the detailed geological knowledge Westcoast has developed concerning natural gas reserves in British Columbia and Alberta, we do not have our own calculations of the frontier reserves. However, our examination of the submissions of others leads us to the conclusion that there are abundant reserves to be found both in the Mackenzie Delta and the High Arctic regions. There is no question that these reserves will be required in southern Canada, and the technology will be developed to permit their transport. The same applies to Alaska gas reserves and their movement to the lower 48 states.

Based on that confident expectation, Westcoast, with four U.S.A. partners, acquired Mountain Pacific Pipeline Ltd. in 1969 as a corporate vehicle for the purpose of moving Alaska gas to the Pacific coast of the U.S.A. Because of an abrupt change in the gas supply situation, we were compelled to change our priorities and consider moving Canadian frontier gas to Canadian consumers first.

To accomplish this new priority, we joined Foothills Pipe Lines Ltd. rather than its competitor, Canadian Arctic Gas Pipeline Limited. Our many reasons for that choice have been given in evidence before the National Energy Board. If we had to identify our most compelling reason, we would say it was the decision of CAGPL to bypass the existing gas transportation system in Alberta, which reaches within 80 miles of the Northwest Territories border, and to build 1,000 miles of all new right-of-way and pipeline through that province; and another 105 miles through southeastern British Columbia. In our view, as pipeliners and citizens, that departure from practical engineering and the easily avoidable duplication of services would impose a perpetual social and economic cost on Canadians that should be rejected by this nation.

Having earlier offered a word of caution regarding improvident haste in this matter, we should emphasize this advice is not indicative of any insensitivity to the urgent natural gas needs of either eastern Canada or our export customers in the United States.

Our own studies forecast a shortage in eastern Canada by the winter of 1979-80. As to U.S.A. requirements, our own system in British Columbia will curtail our export customers in the Pacific Northwest about 300 million cubic feet per day this winter, almost 40 percent of their contract. And we believe it was quite significant that the Minister of Energy, Mines and Resources recently limited his assurance of no curtailment of exports from other locations in Canada to just this winter. The gas export prospect for subsequent winters is not encouraging.

We recognize that the need to meet the imminent gas shortage in eastern Canada is of national importance. Similarly, we maintain it is in the Canadian public interest to remove the curtailment in the Pacific Northwest and to prevent the commencement of any curtailment of NEB approved gas exports to the mid-western and eastern United States. Without labouring the point, we cannot accept that tampering with Canada's gas export contracts worth about $1.6 billion per year will not be injurious to relations with Canada's most important trading partner, not to mention the negative effect on our balance of payments.

Fortunately, the U.S.A. has more than one possible long-term alternative to their proposed Mackenzie Valley pipeline. At least two of the alternatives have different but demonstrable economic benefits to the U.S.A. when compared to the Mackenzie Valley route. The Federal Power Commission staff and the Department of the Interior have both indicated interest in a possible alternative to the two contesting applications now being heard by the FPC. And reference will be made in a moment to a method of short-term relief for U.S.A. gas requirements.

Our position that frontier gas must ultimately flow to southern Canada is not inconsistent with our publicly expressed sensitivity to the question of native land claims. Indeed, this is why we are urging that there not be even the slightest appearance of using a gas supply emergency as an excuse to proceed with a pipeline without resolving the land dispute. As far as Westcoast is concerned, we would not start construction of a pipeline through lands of clearly contestable ownership or control.

In order to make a constructive contribution to your committee's consideration of this great national debate, I will itemize a sequence of events that could satisfy the reasonable aspirations of all, with discrimination and hardship for none. Further, these events could be acceptable to the principal ministries involved - Energy, Indian Affairs, External Affairs and Finance.

The following sequence is clearly idealistic but still attainable with prudent and determined regulatory, legislative and industry effort:

1. Continue the current NEB Hearing and Berger Inquiry without the burden of injudicious deadlines for decisions.

2. Meantime, exploit the offer of the Honorable Donald Getty to provide an interim supply of "swap" gas from Alberta's reserves.

3. Use these interim supplies to reduce the Pacific Northwest curtailments and to eliminate the need for any export curtailments to the mid-western and eastern United States. Retention of their present importation from Canada of one trillion cubic feet per year should be a higher U.S.A. priority than locating an all new remote source of a trillion cubic feet per annum with availability many years in the future.

4. Polar Gas should be encouraged to come forward formally, with its proposal to move gas from the Arctic Islands, in sufficient time to be heard by the National Energy Board as a concurrent or sequential project to the Mackenzie Valley applications.

5. U.S.A. can exploit the interim assistance by using the time afforded to examine thoroughly the pipeline alternative to their Mackenzie Valley plan, namely a pipeline through Alaska and Canada carrying only Alaska gas.

6. Canada can exploit the interim Alberta supply by using the extra time to resolve native land claims in an atmosphere unclouded by impending gas shortages in eastern Canada.

7. U.S.A. can finally adopt an Alaska-gas-only project designed to fit their specific requirements, more time having been provided to negotiate an international transportation treaty if required.

8. Canada could finally achieve, if warranted, a sequential melding of Mackenzie Valley and Arctic Islands projects in a profitably and practically phased all-Canadian undertaking.

9. Commence replacement of Alberta "swap" gas with frontier gas.

In summary, we are advocating unhurried and thorough consideration by all involved in this vital matter. Although we have been identified as a partner in the proposal with the descriptive nickname Maple Leaf Project, we submit that although Westcoast's position is thoroughly responsive to Canadian needs, it is at the same time pro-American. We cannot agree that the suggested cancellation of export licences is an acceptable solution.

The willingness of your committee to travel extensively in the frontier areas and its policy of inviting presentations such as this, give us assurance that the legislative processes are keenly tuned to this complex subject. And, in closing, I would like to record the complete confidence Westcoast has in the National Energy Board - its Chairman Marshall Crowe, the Board Members, the executives and staff. The NEB is unquestionably capable of submitting to government an objective recommendation at an appropriate time. We only hope that industry will assist the Board with sound and imaginative proposals and that the Canadian public will be understanding and patient concerning the amount of time all of this will take.

E. C. Phillips, President

John Anderson, Senior Vice President

prepared by El Paso

Ex 13

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STATEMENT OF JOHN C. BENNETT
VICE PRESIDENT, EL PASO ALASKA COMPANY
BEFORE THE JOINT LEGISLATIVE GAS REVIEW COMMITTEE
FEBRUARY 1977

Mr. Chairman, members of the Joint Legislative Gas Review Committee, we are grateful for this opportunity to meet with you today and to discuss both the purpose and the effects of the state's commitment of surplus Prudhoe Bay royalty gas.

I want to say at the outset that the arrangements which are the subject of these deliberations represent one of the most significant actions by any participant in the lengthy decisional process for the North Slope gas pipeline route. I can assure you that the support of the State of Alaska, as expressed by this commitment of surplus royalty gas, is having a profound positive influence on the ultimate success of our proposal. Conversely, we can just as confidently predict that defeat of these contracts by the Legislature will have an equally profound negative effect. Any inordinate delay in their approval would produce identical negative results.

So, our hope, ladies and gentlemen, is that these contracts will be approved in their present form at the earliest possible date.

I would like to take a few moments to emphasize some of the reasons for our belief that these contracts are the best attainable for both the state and the buyers.

1. They are the product of intensive, arms-length negotiations. Neither the state nor the buyers are completely happy with all of

the provisions in the contracts, but, for our part, we are satisfied that we can neither give up anything more than we already have, nor can we ask anything further from the state. As a result, the contracts represent a true bargained arrangement, arrived at in good-faith negotiations.

2. We are obviously pleased with the provision calling for active support of the trans-Alaska route for the gas pipeline by both the state and the buyers. From the state's standpoint, there has never been a Governor, a Legislature or any state agency, task force, or committee which has studied the alternative proposals and reached any conclusion other than that the trans-Alaska route is best for the state. The citizens and institutions of Alaska are overwhelmingly in favor of our line. A number of state entities, from political subdivisions to special interest groups, have joined the Hammond Administration in intervening in behalf of the project before the Federal Power Commission. Indeed, Alaska's commitment to a trans-Alaska line is perhaps best expressed by a statement in the November 1976 Gas Pipeline Task Force Report, which said,

> ".....the Alaska public is more united on this question than on any other present major public issue."

3. As to the buyers' support for the trans-Alaska route, you need have no fears about my company's sincere dedication to its own proposal. Since 1970, when we first looked at this proposition (at the request of a group of Alaskan businessmen), we have expended approximately

$20 million in the design and promotion of the trans-Alaska route. This is more than four times the amount spent by any individual company sponsoring a competing proposal, and it is 100% risk money.

Tenneco and Southern are the other two purchasers of the state's surplus royalty gas. In spite of the fact that the contracts are not yet final, both companies have played large parts in the progress we have made recently on the Hill and elsewhere in the lower 48. They have done far more than any of us have had a right to expect, and we are extremely pleased with the results of their efforts. They have shown us that they can and will produce, and I believe that the best is yet to come.

4. Both Tenneco and Southern bring to this project considerable talent and experience. While we jealously guard our own company's reputation as the leader in the field of large scale, base-load LNG technology, Tenneco and Southern are also recognized experts.

Southern is part of El Paso's initial Algerian LNG project and is currently constructing LNG receiving facilities at Savannah, Georgia. Tenneco has recently filed for its own base-load LNG project to supply Algerian gas to the United States. The addition of these two respected companies to the trans-Alaska project will strengthen the available resource base to ensure the development of the most efficient and environmentally acceptable project possible.

5. From the state's standpoint, these contracts provide for the highest possible price for its surplus gas; rights to the LPG's in the gas

stream are reserved; flexibility in recalling gas to meet in-state gas needs is total; and resources surplus to Alaska's needs are used as a lever to help obtain approval of a project which will undoubtedly provide the greatest possible benefits for its citizens.

During the three months that this commitment of surplus royalty gas has been public, we have heard and read of several concerns about these contracts which have been expressed by responsible citizens who, we have no doubt, have had the best interests of the state in mind.

Some have suggested that the trans-Alaska route might not be best for the state. We ask only that those people look at the record of support for our project by the citizens of Alaska. We challenge either of our competitors to show that they will provide more jobs, more taxes, lower transportation cost or more spin-off development opportunities than we can.

We have heard some suggest that the timing of this sale is bad. From the standpoint of its support for the trans-Alaska route, this is probably true. It would have produced far greater positive results had it been made a year ago. To those who feel it is too soon, we point out that the contract contains every conceivable flexibility for the state to recall its gas as in-state markets develop -- even to the point where virtually all of the gas could be recalled on the day the pipeline begins operation. In fact, under the lease agreements with the Prudhoe Bay producers, the state does not acquire title to its royalty gas until it arrives at the wellhead. So it must be produced in order to exist as royalty gas per se. As a physical matter, the state's royalty gas could be gathered up and then reinjected into the Prudhoe Bay reservoir. But as a practical matter, who can explain to the citizens of Alaska that they have a

valuable, marketable resource which they are paying to have withheld from market, and which is diminishing by between 5 and 8 percent each production/ reinjection cycle. We have firm assurances from the Prudhoe Bay producers that between 2 and 2.4 billion cubic feet of gas per day can be produced without adversely affecting oil production. So protection of oil production is no reason for reinjection, nor is economics, nor is conservation. In our view, reinjecting the gas gains nothing for the state, and therefore makes no sense at all.

We have heard some ask for guarantees that the state's right to recall its royalty gas from our pipeline for in-state use will be fully protected. This is a guarantee that we as a private company simply cannot provide. The United States Congress, however, can and has. Under the Alaska Natural Gas Transportation Act of 1976, the State of Alaska has been given unique authority to take its gas back from interstate transportation to satisfy its own needs. Additionally, these contracts were submitted to the FPC -- on the last afternoon of the hearings -- and once their approval is granted, another layer of protection of the recall right will be obtained. Finally, under the provisions of the contract itself, if the state's access to its royalty gas is not guaranteed, the contracts self-destruct. There simply is no other way that we can think of to protect this right.

A final point that we hear made in detraction of this surplus royalty gas sale is that the state should not commit its resources to gain political leverage. Obviously, this is a philosophical question, but as a practical matter, natural gas is no different a resource than money from the State's Treasury. Those who suggest that the Legislature should appropriate several million dollars of state

funds for lobbying and promotional activities ignore the fact that the royalty gas contracts achieve this same objective without the expenditure of a single tax dollar. In fact, the influence gained in behalf of the trans-Alaska route from the contracts is far more substantial than that which could be gained from almost any amount of money spent for lobbying or similar efforts. The commitment of surplus royalty gas will allow Tenneco, Southern and El Paso to develop a constituency in almost 40 of the lower 48 states. When we visit our market areas and point out that more gas will be available if and only if the trans-Alaska route is approved, we expect that considerable support for our project will result, particularly in the face of the critical gas situation and cold weather of this winter.

Ladies and gentlemen, that concludes my prepared remarks. If you wish, I will now respond to any questions you might have.

Thank you.

STATEMENT

By

ROBERT C. THOMAS

BEFORE THE

JOINT SPECIAL ROYALTY GAS REVIEW COMMITTEE

My name is Robert C. Thomas. I am a Senior Vice President of Tennessee Gas Transmission Company with responsibility for energy supply for all of Tenneco's Interstate Transmission Companies. I am also a Vice President of Tenneco Alaska, an Alaskan Corporation, which has entered into a royalty gas agreement with the State on behalf of Tenneco.

My purposes today are to urge your early approval of the Royalty Gas Sales Agreements, to explain why we believe these agreements are in the best interests of Tenneco and the State, and to answer your questions.

The State has presented to you the terms of this agreement and the benefits accruing to the State. I would like to start with the reasons Tenneco has signed this agreement.

Each day, Tenneco's interstate system supplies an average of 3.2 billion cubic feet of natural gas to their customers. This volume is insufficient to meet demands. As their demands are growing, our reserves in our traditional supply area of the Gulf Coast are declining.

To meet this demand, Tenneco is working in many different areas to secure energy supply from non-traditional sources. These sources include liquefied natural gas from Algeria, Trinidad, Nigeria, the USSR and other countries. We are also pursuing synthetic natural gas to be manufactured from domestic coal deposits and additional natural gas from the Canadian Arctic Islands.

We are vitally interested in purchasing natural gas in Alaska, not only because of the large volume of currently proven reserves, but because we feel Alaska will be the most active area in the U. S. for the exploration for major new energy supplies for the next 20-30 years. We want to be a part of this future activity. We also believe there are substantial advantages in purchasing domestic, as opposed to foreign, gas.

These facts explain our needs. The fulfillment of needs, however, inevitably encounters obstacles. The securing of natural gas supply from Alaska was no exception.

Tenneco looked at these obstacles from the viewpoint of the largest natural gas transmission system in the United States that was uncommitted to any of the competing proposals for delivery of Prudhoe Bay gas to market. The State also made it very clear that the primary condition in any sales agreement would be support for the Trans-Alaska delivery systems.

We considered carefully three fundamental questions before determining we could undertake such a commitment:

1. Would there be sufficient reserves available, either now or in the future, to justify our efforts;
2. If we committed our resources of time, money, and people to the project, was there a substantial likelihood it would succeed;
3. Would such an effort adversely affect substantial business interests in Canada which we intend to maintain and to further.

Our analysis concluded that we could not only agree to support the Trans-Alaska route but could also agree to condition our right to purchase the royalty gas upon the eventual designation of that route by the Federal Government. These terms are in the agreements before you.

Our conclusion was based upon the belief that with a strong, responsible team supporting the Trans-Alaska project and making objective arguments in its behalf, the Federal decision makers, after extensive and careful analysis, would conclude the Trans-Alaska system would get the North Slope gas to the lower 48 States at the earliest possible date. While early delivery is the most important element of national interest, other issues such as jobs and taxes clearly favor the Trans-Alaska route.

It has always been our firm opinion, however, that Federal acceptance of the Trans-Alaska delivery system and therefore the benefits to the parties, depends upon prompt approval of the royalty sales agreement by this Legislature.

Another major factor crucial to your deliberations is the strength that Tenneco can add to the team dedicated to the securing of a Trans-Alaska route. Let me give you a brief summary of our technical capabilities:

1. Tenneco maintains a staff of approximately 140 engineers in it's pipeline headquarters in Houston. This department not only supervised the construction of our 15,000 plus miles of interstate pipeline, but was also involved in the construction of the existing Trans-Canada pipeline of which we were a part at that time. Our operations people routinely run an interstate system transporting up to five BCF on peak days.

2. Tenneco is dedicated to the conduct of its operations within the proper environmental framework. The Corporation maintains a staff of approximately 60 environmentalists.

3. Tenneco maintains a staff of cryogenic, process, and LNG systems engineers plus the services of numerous consultants with expertise in LNG projects. We have had much experience in the planning of major LNG programs.

4. As a corporation, Tenneco has annual capital expenditures in the range of $500 million. In the 34 years of our existence, our assets have grown from zero to approximately $7 billion. The strength and the financial experience gained through this evolution is invaluable in the planning and execution of multi-billion dollar energy projects.

All of these areas of expertise are now being readied in preparation for our participation in the Trans-Alaska project.

There has been a great deal of reference during the negotiation of these agreements to the "political influence" to be contributed by each party. It is unfortunate that this gives some people the impression that the purchasers control votes in the Congress or in the Executive Branch to be used on behalf of the Trans-Alaska project as soon as this agreement is ratified. This, of course, is not true.

No amount of so-called political clout or pressure is going to determine the federal decision on this matter. We are convinced that the decision will be

made on the merits of the issues. Neither we nor the new Administration have incentive to proceed in any other way. This approach is also assured by the detailed and comprehensive provisions of the Alaska Natural Gas Transportation Act of 1976.

For these reasons, it is essential that all the issues involved be thoroughly discussed at both regional and national levels with all parties having input into the final decision. This will present a monumental job of planning and coordination to insure that knowledgeable staff, both technical and non-technical, be made available to discuss the issues with people needing this information.

From a regional standpoint, it is essential that the issues be reviewed and discussed as they affect different parts of the lower 48 states and Canada. The perspective and needs of these different regions vary and their views must be analyzed and effectively answered.

We feel we are best qualified to present the Trans-Alaska merits in our market area. Our market area covers 25 states in New England, New York-New Jersey, Appalachia and the Upper Midwest. These states

embrace 65% of the U. S. population and much of its industrial capacity.

We feel that Southern and El Paso will be most effective in their market areas. All three companies will be effective on the national scene.

The combined facilities of Tenneco, El Paso and Southern with minor modifications could deliver Alaskan gas to at least 42 states. It is improbable, perhaps impossible, that any other group of three or more companies presently uncommitted to any pipeline route could equal this coverage.

El Paso has made and is continuing to make a tremendous effort on behalf of the Trans-Alaska project. More help is needed and we are prepared to provide this help.

We believe it essential that the Legislature act promptly to approve these agreements. The time available to make all the necessary contacts is becoming short. The U.S.-Canadian pipeline treaty was signed last Friday. The Presiding Administrative Law Judge of the FPC will issue his decision tomorrow. We expect his decision to favor the Arctic Gas proposal. All the participants

before the FPC, of which we are one, will be permitted to file comments on this decision by March 1.

The Alaskan Transportation Act provides that the FPC must submit its recommendation to the President by May 1. Federal agencies are now preparing their comments to the FPC and Federal and State officers and agencies may submit their comments to the President by July 1. Our views must be made known to all of these people as soon as possible in order to ahve any effect on their comments. The President's decision is due September 1 and the Congress has 60 days in which to approve this decision.

There is much to be done and the Federal timetable leaves no time for delay.

In anticipation of your approval, Tenneco has already taken substantial steps in preparation for the support of this project.

1. We have had many meetings with representatives of the State, El Paso and Southern to insure maximum cooperation, coordination and effectiveness in this combined effort.

2. El Paso has given our engineering, environmental, LNG and financial experts a detailed review of their plans. We will work closely with them toward assuring the best possible project and to answer the questions that will be raised in Washington, California, Canada and elsewhere concerning the physical, environmental and financial integrity of this project.
3. We have designated a project manager within Tenneco with authority to call upon and coordinate activities of all our involved departments.
4. We have retained counsel in Alaska and in Washington to assist in the planning and the execution of our overall plan to insure adoption of the Trans-Alaska delivery system.
5. We have communicated to the State of California our reasons for supporting the Trans-Alaska project. I will be happy to make a copy of this letter available for your record.

These efforts are only a beginning. However, further efforts to implement a detailed plan to secure adoption of a Trans-Alaska route will not be credible if the State of Alaska does not act promptly to approve the agreement which provides the reason for our support.

In summary, Mr. Chairman, Tenneco is prepared to invest their time, money and people in a maximum effort to secure a Trans-Alaska route. We are prepared to begin as soon as our agreement with the State is approved by the Legislature.

The State has retained the ultimate assurance of our performance. If the Trans-Alaska route is not approved, the State has the right to terminate this agreement. Should that happen, we will have wasted our money, manpower and time.

The State has assembled a strong team, the contest is in progress and we are ready to participate when we receive your approval.

El Paso ALASKA COMPANY

310 SUBMARINE BUILDING
1775 K STREET N.W.
WASHINGTON, D.C. 20006
PHONE 202-872-3123

JOHN C. BENNETT VICE PRESIDENT

February 23, 1977

Dear Mr. President:

I understand that in the Senate's discussion of the State's royalty gas contracts, some question has been raised about our company's intent to support the State of Alaska in retaining the provisions of section 13(b) of Public Law 94-586 in the statute.

In order to clear the air, I would like to record El Paso's support for section 13(b) and to assure you and your colleagues that, should any effort be made in Congress to modify that section, the State can count on El Paso to make every possible effort to retain this provision in Public Law 94-586.

Sincerely,

John C. Bennett

The Honorable John Rader
President
Senate of the State of Alaska
Anchorage, Alaska

AGO 668026

For Cold. Substance

El Paso ALASKA COMPANY

POUCH 7009
ANCHORAGE, ALASKA 99510

PHONE: 907-279-6501

Why E.P. needs you

February 27, 1977

The Honorable Joseph H. McKinnon
Alaska State House of Representatives
Pouch V - State Capitol Building
Juneau, Alaska 99811

Dear Representative McKinnon,

During our conversation in your office last week, you asked for additional information respecting the value of a commitment of the state's surplus royalty gas to El Paso Natural Gas Company in eliciting support for a trans-Alaska gas pipeline route.

We note that the report published by the House Special Committee on the Sale of Royalty Gas states that El Paso needs no additional incentive to work in behalf of its own proposal, and suggests that the value of committing 25% of the state's surplus gas to El Paso is questionable. While we are certainly dedicated to doing everything within our ability to secure approval of the trans-Alaska route, the persuasive force of additional gas supplies for the eight-state El Paso market area is of no less significance than that for Tenneco and Southern. In fact, many knowledgeable experts involved in the gas line issue have singled out California as the state most critical to the success of the trans-Alaska route (next to Alaska, of course!)

As you can see from the attached description of the states served by El Paso, over 55% of the total volume of gas consumed in California is supplied by that company. Moreover, in recent years, El Paso has, through its natural gas deliveries, provided more energy to California than any other company involved in supplying energy of any kind. Nonetheless, it is well known that the State of California does not support our project. The reasons for this fact are complex, but the simple problem we have experienced in persuading California to back the trans-Alaska route is that we have nothing tangible to offer them. For over four years, we have attempted to elicit support on the basis of our friendship and goodwill with our California customers. At the same time, sponsors of the trans-Canadian route have argued successfully that approval of their project with its "western leg" could mean that additional gas supplies from some unnamed source (presumably Mackenzie Delta) would be available to California markets. We know that such argument has no

factual basis, since testimony before the NEB has been that Mackenzie Delta gas will not be exported to U.S. markets. However, Arctic Gas has very effectively used the suggestion of additional Canadian gas via its project to gain California's endorsement.

With the commitment of Alaska's surplus royalty gas to El Paso, we will have at least three means of turning California around on this issue.

1) Senators Stevens and Gravel and Congressman Young can write "Dear Collegue" letters to California's U.S. Congressional Delegation, asking for their support on the basis of Alaska's surplus gas offsetting part of the severe curtailments facing California markets.

2) The State of Alaska will be able to send representatives to California with the message, "Fellow Americans, we understand your critical needs for natural gas. We will have some royalty gas which will be surplus to our own needs in Alaska, and we are willing to make this excess gas available to your markets provided the trans-Alaska route for the North Slope gas pipeline is approved."

3) El Paso itself will be provided with a tool for use in mounting an extensive state-wide public campaign in California. Given this tool (additional natural gas) and sufficient time, we believe that we can generate sufficient public support for our project to reverse the stand of the California administration. We have hired the necessary public relations expertise but it is now up to the Alaska House of Representatives to provide us with the tool to work with. We have encountered several congressional representatives who, after hearing our presentation on the trans-Alaska route, have said, in essence," Gentlemen, I can see that your project will provide some real benefits for the American gas consumer and the U.S. economy, but until 51% of my constituents tell me to do so, I can not support you." Obviously, our mission in California is to pursuade 51% of the population to support the trans-Alaska route. And, as I have said, we have not been able to do it with friendship and goodwill.

The foregoing plans have been described on the basis of their application in California alone. We would, of course, work throughout our 8-state market area.

I don't want to leave you with the impression that we intend to claim that El Paso's share of Alaska's surplus royalty gas would solve all of our customers' gas problems. However, you can see from the attached document that we estimate 15% curtailment in Priority 1 (household) uses in 1981. Alaska's surplus royalty gas could offset a major portion of that curtailment, to the tune of supplying over 190,000 homes which would otherwise be without gas.

Alaska has an opportunity to present itself as a concerned, generous number of the U.S. energy community by offering to share its surplus resources. While we do not wish to suggest anything that is more properly the right of those with the constitutional authority to establish state policy, such as yourself, it would certainly seem that the "generous" approach would be a far more effective means of generating support for Alaska's programs than the "dog in the manger" attitude which some elements in the lower 48 perceive on the part of a few Alaskans.

One final point. The debate in the Senate last week was centered around an amendment which would have compelled El Paso, Tenneco and Southern to support the retention of section 13B of the Alaska Natural Gas Transportation Act of 1976. As you know, section 13B gives Alaska the right to recall its gas from interstate pipelines as Alaska's own needs develop. There are some who fear that the Act may be amended and section 13B repealed. For the record, El Paso suppported section 13B when it was first proposed, and we intend to continue to support its retention in the Act. No action by the Alaska Legislature is necessary to force us to do so.

I have attempted to be as brief as possible and still be responsive to your request. If you should want any additional information on this matter, please let me know.

Best regards.

Sincerely,

EL PASO ALASKA COMPANY

Michael C. Holland
Assistant to the Vice President

Attachment

cc: Speaker Malone
Representative Cowper
Representative Gruening
Representative Parr
Representative Hayes
Representative Chatterton

EL PASO NATURAL GAS COMPANY
NATURAL GAS CONSUMPTION FOR THOSE STATES SERVED WHOLLY OR IN PART
Calendar Year 1975

STATE	EPNG SALES	TOTAL CONSUMPTION	EPNG PERCENT OF TOTAL CONSUMPTION
Arizona	164,704 MMCF [1]	164,704 MMCF	100.0%
California	1,008,158 MMCF	1,807,604 MMCF	55.8%
Colorado	120 MMCF	290,798 MMCF	<1%
Nevada	28,590 MMCF	60,446 MMCF	47.3%
New Mexico	43,336 MMCF	167,220 MMCF	25.9%
Oklahoma	11 MMCF	639,575 MMCF	<1%
Texas	34,627 MMCF	3,911,026 MMCF	<1%
Utah	19 MMCF	123,098 MMCF	<1%

[1] MMCF = millions of cubic feet

NATURAL GAS CURTAILMENT IN 1976
AND ESTIMATED CURTAILMENT IN 1981

1976

	VOLUME	% OF REQUIREMENT
P 1	0	0
P 2	1,731 MMCF	1%
P 3	35,666 MMCF	16%
P 4	2,862 MMCF	21%
P 5	219,809 MMCF	65%
TOTAL	260,068 MMCF	19%

1981

	VOLUME	% OF REQUIREMENT
P 1	83,071 MMCF	15%
P 2	143,261 MMCF	52%
P 3	254,693 MMCF	100%
P 4	11,440 MMCF	100%
P 5	348,723 MMCF	100%
TOTAL	841,188 MMCF	58%

El Paso ALASKA COMPANY

310 SUFFRIDGE BUILDING
1775 K STREET, N.W.
WASHINGTON, D.C. 20006
PHONE 202-872-8133

JOHN C. BENNETT VICE PRESIDENT

February 23, 1977

Dear Mr. President:

I understand that in the Senate's discussion of the State's royalty gas contracts, some question has been raised about our company's intent to support the State of Alaska in retaining the provisions of section 13(b) of Public Law 94-586 in the statute.

In order to clear the air, I would like to record El Paso's support for section 13(b) and to assure you and your colleagues that, should any effort be made in Congress to modify that section, the State can count on El Paso to make every possible effort to retain this provision in Public Law 94-586.

Sincerely,

John Bennett

The Honorable John Rader
President
Senate of the State of Alaska
Anchorage, Alaska

JOSEPH R. HENRI
ATTORNEY AT LAW

907-586-3669

203 WEST THIRD AT DIXON
JUNEAU, ALASKA 99801

AGO 668032

3 March 1977

Mr. President

John Bennett wanted you to have this, which we gave to the House this morning.

Joe

File El Paso Oil

March 3, 1977

To: Honorable Hugh Malone
Speaker of the House
Alaska House of Representatives
Juneau, AK

Dear Mr. Speaker:

The purpose of this telegram is to express my reaction to the vote of the House yesterday disapproving El Paso's contract for surplus royalty gas.

The El Paso Company came to Alaska five years ago at the invitation of Alaskans to pursue the Trans-Alaska Gas Pipeline Project. The approval of our projects by all legislatures and governors since our arrival in the State led us to believe that the considerable investment and risk to which we were exposing ourselves were being made in an environment where we were a welcome member of the Alaskan community.

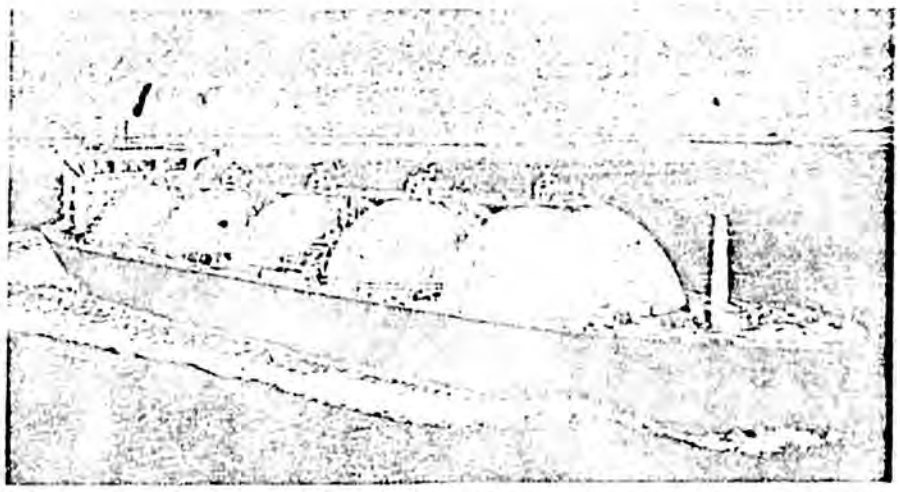
If yesterday's decision is confirmed by the State today, I can only interpret the rejection of our contract in favor of other companies, who have made virtually no investment in the future of Alaska, as an abrupt and significant change in the atmosphere in which we have worked on the Trans-Alaska Gas Pipeline until now. Our company, as a matter of policy, has never attempted to intrude in situations where we are less than a welcome partner. I sincerely hope that the common interest and cooperation that have characterized our efforts in the past will be restored by the House in view of the very important common objectives which have enabled us to work together thus far.

Sincerely,

Howard Boyd
Chairman of the Board
The El Paso Company

Liquid Natural Gas Tankers Rouse Fears of Catastrophe

by Alexander Cockburn & James Ridgeway



Mammoth tankers carrying liquefied natural gas may soon visit American ports. Artist's concept of the 936-foot-long ship shows five spherical tanks which together can hold some 33 million gallons of the potentially explosive fuel.

In the summer of 1883, a gigantic explosion echoed across the world. The island of Krakatoa, off the coast of Indonesia, simply disappeared into the sea. Its remains were blown 17 miles into the sky and dust particles filtered around the globe, causing extraordinary sunsets remembered by all who had seen them for years afterward. Tidal waves were observed as far away as the English Channel. The noise of the explosion was heard 3000 miles away. Thirty-six thousand people in the near vicinity were killed.

The cause of this catastrophe was a mighty volcanic eruption. Scientists now speculate that the unparalleled intensity of the blast was caused by the sudden mixture of lava with seawater, leading to the creation and release of vast amounts of energy. This theory carries a startling message for modern times. For scientists now worry that the modern industrial age may have unwittingly developed the conditions under which the "Krakatoa effect" could be repeated on a smaller scale hundreds of times around the globe.

What frightens these scientists is not the specter of nuclear explosions with which mankind has lived since World War II, but an entirely new menace: liquefied natural gas. Natural gas, often found in the search for oil, is one of our most valuable fuels. It provides about one-third of all energy consumed in the United States. It is clean and, until recently, cheap. Now U.S. companies that produce and sell natural gas from the Southwest claim the resource is fast being exhausted and, in order to meet demands, they must look further and further afield.

Solution: import gas

While gas is a precious fuel in the U.S., in other parts of the world—the Middle East, Africa and Asia—it is regarded as of little use and burned off at the wellhead, its usefulness lost to mankind. One solution now being adopted by the oil and gas industries is to ship this foreign gas to the U.S.

Gas, of course, is an impractical cargo in its natural form. The solution has been to freeze it down into a liquid form at a temperature of about -260 degrees Fahrenheit. In this state, the gas is 1/600th of its original volume and becomes a practical shipping proposition.

Within the next few years, specially built tankers will begin transporting the liquefied gas from North Africa to ports up and down the Eastern Seaboard of the U.S. There are schemes to ship the gas from Asia and even Alaska to the West Coast by these tankers. Other countries are making similar plans. The small trade from North Africa to Europe is expected to increase, and a $3 billion project is well under way to ship liquid gas from Indonesia to Japan. The U.S. government, in fact, is issuing $730 million in loan guarantees to General Dynamics Corporation — the largest guarantee ever made to a single company—for the building of tankers to carry the gas from Indonesia. The U.S. also is negotiating with the Soviet Union to bring in gas from Siberia.

If all goes according to plan, within a decade or so, scores of these odd-looking ships will be crisscrossing the ocean and routinely sailing in and out of busy American ports with their cargoes of desperately needed fuel. As much as 15 percent of the nation's gas may soon be imported in this manner.

Both in government and industry, experts hail this development as an innovative answer to the energy crisis. But these same experts now are meeting with growing opposition to their plans. At the center of debate is the question of safety and the stark fact that the explosion of just one of these gas tankers in a U.S. port could kill upwards of 100,000 people.

Little real testing has been done on the safety of the new tankers that will carry the liquid gas in huge cylinders embedded in their hulls. In 1970 the U.S. Bureau of Mines mounted a brief experiment. A small quantity of liquid natural gas was dropped into an aquarium, which promptly blew up. Later the liquid gas was dropped into a pond, with equally explosive results. The bureau concluded in a report that no assurances can be offered "that these explosions could not scale up to damaging proportions in a massive spill." The scientists engaged in these experiments all recalled one of the few cases in which the effects of an accident involving liquid natural gas could actually be observed.

On Oct. 20, 1944, in Cleveland, Ohio, 2 million gallons of liquid natural gas burst from two storage tanks belonging to the East Ohio Gas Co. and created a firestorm. Liquid gas flowed

In Cleveland, rescue workers dig through ruins after giant 1944 firestorm—caused by 2 million gallons of escaped liquid gas—gutted 29 acres, killed 131. Experts say the explosion of a liquid-gas tanker would do far worse.

PARADE
FEB. 20, 1977

down the streets and into the sewers. The slightest spark exploded it. Manhole covers sailed into the air and fell like bombs on the fleeing crowds. So intense was the heat that birds above the city burned alive as they flew. The streets became rivers of flame. Houses exploded. In the end, 29 acres of homes and stores were gutted and 131 people lost their lives. And the liquid gas tanks in Cleveland held only a small fraction of the amount carried by a modern tanker, which ranges from about 33 to 42 million gallons.

Safety studies urged

In recent months anxiety over the dangers of liquid natural gas has spread. No less a figure than Dr. Edward Teller, the nuclear physicist often viewed as the father of the H-bomb, is concerned: "The gas shortage is apt to become very serious and therefore the importation of liquid natural gas may become really necessary. . . . Time and money spent on the safety of liquid natural gas is less than one percent of what has been spent on the safety of nuclear reactors. I am suggesting that, in view of our need for liquid natural gas, very greatly increased attention be paid to safety studies."

The Coast Guard is so concerned that it has established special procedures protecting gas tankers. In Boston, where small shipments of the liquid gas are already being off-loaded, the shipping lanes are cleared of other traffic long in advance. Fire departments are placed on standby alert. Tankers may only enter the harbor if visibility exceeds two miles. At the first sign of a thunderstorm, all unloading ceases.

Congress concerned

Citizens' groups around likely liquid natural gas terminals (such as Staten Island, N.Y., and Los Angeles) are opposing the building of such facilities. In the Congress, in the Federal Power Commission and in the Department of Transportation, politicians and officials are nervously considering improved safety precautions. Committees in the House may begin public inquiries shortly and could well involve testimony on the likelihood of the "Krakatoa effect" occurring in the event of an accident.

Over the last few months, this concern has been redoubled. Oil tanker disasters, including the explosion of one tanker in Los Angeles harbor and the wreck of another off Nantucket, have brought home in brutal fashion the result of lax safety measures on fuel shipments to the U.S. These calamities would pale in comparison with any accident to a liquid natural gas tanker. It is a race against time in more ways than one: the race to head off another energy crisis; the race of the tanker men to get their new fleets under way; the race of government regulators to catch up on safety precautions and head off what could be a terrifying catastrophe.

GAS

High Hurdles for Imports

For Americans flying over the deserts of the Middle East, it is a doleful sight: mile after mile of flaring wellhead fires burning off natural gas, a fuel that has become painfully scarce in many parts of the U.S. Equally bounteous reserves of gas exist in many other parts of the world, from Soviet Siberia to the marshy fields of Holland—and several of the nations with the biggest reserves must export gas if they are to tap the potential wealth, because their populations are too small to use all they have *(see chart)*. Yet apart from a trickle of imports flowing in by pipeline from Canada, the gas deposits in most other countries might just as well be on Mars for all the help they offer in easing American shortages any time soon.

Unlike the relatively simple procedures for shipping crude oil across vast stretches of ocean, importing foreign gas to the U.S. poses a cluster of complex problems—financial, political, technical and environmental. Though some imported gas is now seeping in from distant points, and efforts are under way to bring in more, it will probably be five years at least before any appreciable supplies of such fuel enter the U.S. to help warm homes and run factories. Even then the amount is unlikely to fill more than a small fraction of U.S. demand.

Giant Fireball. A key problem is that the wildly expensive technology needed to ship gas over water requires long start-up times and makes the fuel extremely costly to import. For example, Algeria, which has taken the lead in trying to boost exports to the U.S., is spending billions of dollars to build six liquefaction plants, but they are not expected to be fully operational for a decade. These facilities freeze the fuel into liquid natural gas (LNG), which is then loaded on specially constructed tankers that cost up to $150 million each.

A fleet of nine newly constructed LNG ships owned by El Paso Natural Gas Co. will begin carrying gas from Arzew, Algeria, to Cove Point, Md., and Elba Island, Ga., early next year. That gas, for which El Paso signed a contract before the Arab oil embargo, will sell in the U.S. for about $1.25 per 1,000 cu. ft., v a top federally controlled price of $1.44 for domestic gas shipped across state lines and $2 or more for uncontrolled intrastate gas. Algerian gas bought under a post-embargo agreement, however, will cost Americans $3.30 per 1,000 cu. ft. The Algerians are expected to lift the price even higher in future contracts.

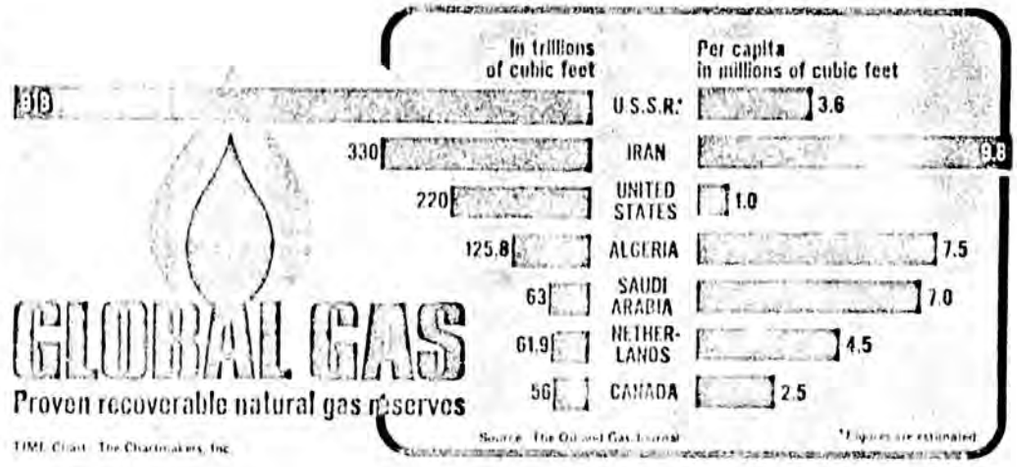
Another drawback to increased gas imports is the danger of a ship spilling some of its cargo in or near a port. That could result in a catastrophe far worse than the oil spills from tankers that have worried many Americans this winter. As the frozen LNG warms into gas, it could ignite, creating an immense fireball threatening lives and property in the vicinity. Last year New York, New Jersey, Delaware and other coastal states petitioned the Federal Power Commission to promulgate national safety standards that would keep LNG port facilities out of populous areas. The agency is still considering the request. On top of that, independent gas producers, who fear competition from imports, loudly argue that buying from foreigners would only make the U.S. more dependent for its energy needs on unreliable sources. Asks Dallas Gasman D.K. Davis: "Do you want Chicago to become dependent on Algerian gas so that they can shut the pipe some day?"

Despite the hurdles, however, a growing number of gas-producing countries are making plans to cash in on the rich American market. For example, Saudi Arabia recently decided to pipe its gas instead of simply flaring it off. To get the job done, the Saudis signed a $7.5 billion contract with the Arabian American Oil Co. (Aramco), which eventually intends to export gas to the U.S. Iran is sinking $6 billion into liquefaction plants and a fleet of 35 LNG carriers to ship gas to its American and European markets beginning in 1982.

The Soviet Union, which is believed to have the world's largest deposits of gas, could become a major source of U.S. imports. The Russians have been pushing hard in recent years to exploit their vast gas reserves in Siberia, including the northern Tyumen Oblast, near the Ob Gulf, and the Urengoy field, reportedly the world's largest. Their aim: to make the Soviet Union a major exporter by 1980 (at present, so few of the reserves have been tapped that the Soviets themselves import gas from Iran). The only deal involving Americans, however, is a tentative agreement between the Soviets, Occidental Petroleum, El Paso and a group of Japanese firms to develop a major field near Yakutsk in Siberia. After years of negotiating, the Soviets are still surveying the area. If the deal finally goes through, gas would be piped 2,000 miles to Vladivostok for shipment to the U.S. and Japan.

Mixed Blessing. By contrast, the U.S. will probably not be importing much gas from Europe. Holland, the Continent's leading producer and exporter, is phasing out shipments to other countries in an effort to conserve its supplies. Britain, too, intends to hold on to most of the gas that it is beginning to pump from underneath the North Sea. Indeed, according to the Paris-based Organization for Economic Cooperation and Development, European demand is already outstripping its reserves. By 1985, the organization estimates, European gas imports from Iran, Algeria, the Soviet Union and elsewhere will total almost 3 trillion cu. ft. a year, six times the 1975 figure.

For the U.S., however, the cost and difficulties of shipping LNG long distances will, for the foreseeable future at least, keep gas imports from becoming the major energy prop that oil imports now are. At a time when the Government is striving to lessen dependence on foreign energy, that could be at least an ironically mixed blessing.



El Paso COMPANY

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HOWARD BOYD CHAIRMAN OF THE BOARD

April 25, 1977

The Honorable John L. Rader
Alaska State Senator
State Capitol Building
Pouch V
Juneau, Alaska 99811

Dear Senator Rader:

Sometime this summer the President is expected to make a decision, subject to Congressional review, on which project to move Alaskan natural gas to market best serves the national interest. Because of your interest in this important decision, it might be helpful to summarize the economic benefits of the El Paso project, compared with the two trans-Canadian alternatives.

First, El Paso's commitment to purchase all possible goods and services within the American economy will provide a direct infusion of $8 billion--$4-5 billion more than either of the trans-Canadian projects.

Second, the El Paso proposal (over the 20-year financing "life" of the project) will pay more taxes to American entities than will either of the trans-Canadian projects--by a margin of up to $10 billion.

Third, El Paso will avoid an outflow of taxes to Canadian authorities (at present tax rates) of up to $7 billion.

There is no question where these dollars come from--the American gas consumer's pocket. But where the dollars end up shows a difference of more than $20 billion lost or added to the American economy.

I am enclosing a study just completed by Robert R. Nathan Associates, detailing by region and state the new American jobs to be created by the El Paso project. The total of 765,000 man-years of additional jobs--three times that provided by either trans-Canadian project--would be generated wholly within the private sector.

As the decision-making process proceeds, I think you will agree that, in addition to delivering the Alaskan natural gas at the earliest date, minimizing adverse environmental impacts, and maintaining U. S. control of costs to the consumer, the El Paso project certainly benefits the American economy much more than either of the trans-Canadian schemes.

Thank you for your continuing interest in this important decision. Should you wish any additional information on any aspect of our proposal, please let me know.

Sincerely yours,

Edward Boyd

El Paso ALASKA COMPANY

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ANCHORAGE, ALASKA 99510

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April 4, 1977

The Honorable John L. Rader
Alaska State Senator
Pouch V, State Capitol Building
Juneau, Alaska 99811

Dear Senator Rader,

Congressman Tino Roncalio (Democrat, Wyoming) has convened a series of meetings of his Sub-Committee on Indian Affairs and Public Lands to hear testimony on the subject of how best to transport Prudhoe Bay natural gas to market. A number of parties have appeared before the sub-committee to date, including representatives of the State of Alaska, the project sponsors and environmental groups. Of particular significance were the statements made by officials of three Canadian native organizations respecting the status of land claims negotiations and the position of the native membership regarding the trans-Canadian pipeline proposals of Arctic Gas and Alcan. As you know, sponsors of those proposals have repeatedly claimed that Canadian native claims would not be an obstacle to either route, and Judge Litt was of the same view, although he at the same time denied responsibility for such "political matters."

Testimony of the Dene people was that no pipeline would be allowed in the Mackenzie Corridor until their land claims were settled and implemented. The Dene representative said that his people's opposition to such a pipeline is "unanimous," and that disregard for the rights of the Dene by non-Dene would be "genocide." Also, he sharply criticized Judge Litt's report as "based on misinformation" and "total misunderstanding" of the Dene position.

Mr. Sam Raddi, speaking for the Inuit (Eskimos) in the Yukon and Northwest Territories, said that "there will be no pipeline in the Western Arctic until the government of Canada settles the Land Claims." Furthermore, he called Judge Litt's opinion "alarming," and charged that Litt has prejudiced land claims negotiations.

Testimony for the Council of Yukon Indians was given by Mr. Daniel Johnson, its Chairman. CYI, which has laid claim to the entire Yukon Territory, wants no pipeline across the southern Yukon "until the land

claims of the Yukon people have been settled and implemented." And it wants the northern slope area of the Yukon "closed for purposes of pipeline construction forever."

Obviously, we are gratified that the land claims issues facing both Alcan and Arctic Gas is finally receiving the public airing they deserve. The statements made by the native representatives reflect their insistence that claims not only be settled, but also implemented prior to pipeline construction. While no one has a good handle on how long this process will take, CYI believes 6 years would be optimistic, and the Berger staff has suggested 10-15 years.

Clearly, because of the hardships of last winter resulting from the natural gas shortage, the American gas consumer will not wait for an additional 6-15 years for the Prudhoe Bay supplies. The trans-Alaska route faces no such delays, and this is another reason that our project is best for all-America.

Enclosed are copies of the prepared remarks of all three Canadian native leaders. Feel free to pass them along to influential friends and Congressmen!

Best regards.

Sincerely,

EL PASO ALASKA COMPANY

Michael C. Holland
Assistant to Vice President
John C. Bennett

Enclosures

STATEMENT OF

SAM RADDI

PRESIDENT OF

COPE

BEFORE THE

HOUSE INTERIOR AND INSULAR AFFAIRS COMMITTEE,

SUBCOMMITTEE ON INDIAN AFFAIRS AND PUBLIC LANDS

FEBRUARY 17, 1977

I am Sam Raddi, president of the Committee of original peoples entitlement. "Cope" is incorporated as a nonprofit society under the Company Law of the Northwest Territories of Canada. Cope represents the Inuvialuit of the Western Arctic of Canada. This is an area that includes the North Slope of the Yukon right to the Alaskan Border, the Mackenzie Delta and east to Coppermine, including Banks and Victoria Islands. Cope was formed on January 28, 1970, to protect the rights of the native peoples in Canada's western Arctic. We became a regional association of Inuit Tapiritsat of Canada (National Eskimo Brotherhood) when it was formed. I.T.C. was handling the Land Claims for the Inuit of the Northwest Territories and presented to the Cabinet of Canada a Land Claims proposal "Nunavut" on February 27, 1976.

In September of that year the proposal was withdrawn from the Federal government and Cope followed the wishes the Inuvialuit of the Western Arctic and proceeded on its own Land Claims proposal for the settlement of Inuvialuit aboriginal Land Claims with the Government of Canada. It was our desire to have a just settlement of our Land Claims before any pipeline was built. It was also our desire to secure an agreement in principle with our Federal government before a pipeline decision was made. This would serve the best interests of Canada and the Inuvialuit.

The Inuvialuit are ready to begin our Land Claims process with the Federal government to secure that approval in principle by that time. Our Federal government has always stated that it was willing to settle our land rights question. However, I am increasingly skeptical that they have the ability or the desire to in fact deal with our aboriginal rights fairly. I want everyone to know that the Inuvialuit are enthusiastic Canadian citizens. Our Land Claims will only be considered just if we are able to bring our lands and our knowledge into Canada to participate fully in Canada's future.

Our lawyers tell us that Native rights are protected with the British North American Act, and that is a matter of public policy in both U.S. and Canada.

The construction of a pipeline through our land and a decision to proceed with construction prejudices the just settlement of our Land Claims. To proceed with a pipeline before our land rights question suggests our Canadian government is planning to extinguish our rights to our land by a process other than what applies to all other Canadian citizens (i.e. expropriation).

There will be no pipeline in the Western Arctic until the government of Canada settles the Land Claims with the Inuvialuit.

Judge Litt's decision which has created a cause of action for Inuvialuit to be here. We are alarmed that Judge Litt supported the Arctic gas proposal at the cost of the Inuvialuit rights and Land Claims process. I understand that in U.S. that only Congress can extinguish aboriginal title not an administrative judge of the U.S. This pipeline is a private interest that will be trespassing on our lands, if our rights and Land Claims are not settled by that time. Judge Litt has prejudiced that process of negotiating the land rights between the Government of Canada and the Inuvialuit. At this time I wish to state that we are opposed to any ruling of an administrative judge of the U.S. on the proposed gas line routes prior to the resolution of the Inuvialuit land rights question. The Inuvialuit do not wish a lengthy court battle which will further delay peaceful energy coexistence between Canada and the U.S. We are asking the patience of the U.S. to avoid this situation.

We wish to commend Congress for the fair treatment that they gave to our Inupiat brothers in resolving their land rights prior to construction of the trans Alaska pipeline. We understand the best the need for energy because of our 10,000 years of occupation of a cold land space in the Arctic of Canada. To prevent an undue delay of the energy requirements of both nations I would recommend to Congress speedy negotiations of this particular problem with Canada and our native people as the number one priority in determining energy policy.

I am leaving with you a copy of Cope's final argument to Justice Thomas Berger. There were other interveners who provided evidence that supported Cope's position on Land Claims, environmental and social issues. I am distressed to hear again the Arctic gas treatment of the environmental issues to this Congressional Subcommittee. I would recommend that Congress hear what Justice Thomas Berger, who has held exhaustive hearings from all of the experts, thinks about the environmental and social issues.

STATEMENT

TO THE
SUBCOMMITTEE ON
INDIAN AFFAIRS AND PUBLIC LANDS

BY THE
INDIAN BROTHERHOOD OF
THE NORTHWEST TERRITORIES

WASHINGTON, D.C.
MARCH 17, 1977

We represent the Dene People of the Mackenzie Valley. It is our custom at home to thank people who take the time to listen. We wish to thank you for inviting us here today to tell you our position on the proposed Arctic Gas pipeline down the Mackenzie Valley.

The Dene people are very concerned about the proposed Arctic Gas pipeline. It is the official position of our people that there will be no pipeline in the Mackenzie Valley until we have completed negotations on a land settlement agreement with the Federal Government of Canada, and have had the time necessary to implement that settlement to our satisfaction.

Who are the Dene?

The Dene are the original inhabitants of the Mackenzie Valley. From time immemorial, we have lived on, and made our living from, this land. Unlike the rest of North America, native people

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are still a majority in the N.W.T. There are about 15,000 people of Dene descent; 15,000 Inuit (Eskimos), and 13,000 whites. The Canadian government has divided Indian people into categories of status or registered Indians, non-status, and Metis. But the Dene do not recognize these artificial divisions. In our delegation today we have status, non-status, and Metis, all representing and supporting the Dene position.

Through countless generations of living on our land, we have developed a complete Dene society, with our own institutions, our own government, our own religion, our own ways of educating our children. Our traditional values and our way of life are still strong.

The Dene Position:

After years of research, of community meetings and workshops, of consultation with the elders, and discussions at our assemblies, the Dene presented our official position on our land claims to the Government of Canada last October 25, in the form of an Agreement-in-Principle. We are submitting copies of this document as evidence with your committee.

As Dene, we are the owners of our traditional lands in the Mackenzie Valley. The treaties which the Government of Canada signed with the Dene - Treaties 8 and 11 - have been proved

virtually fraudulent by the Supreme Court or the N.W.T. We maintain that our aboriginal title to the land has never been extinguished, and that a new agreement must be negotiated with the Canadian people, one which is not based on the treaties.

The agreement that we are proposing to the Government of Canada is one where our aboriginal rights are not extinguished, but are protected by legislation. Our political rights must be recognized and guaranteed - the right to be a self-determining people, and to control development on our land. This is the only way we can survive as a people, and preserve our land for future generations.

We are proposing that a large area of our traditional lands will be under the exclusive jurisdiction of a Dene government, with powers similar to those of a province.

The Dene position on the proposed pipeline:

We do not want to see a decision made without a full and clear understanding of the situation in the Mackenzie Valley on your part.

The statements made by Judge Litt in his report to the Federal Power Commission, and statements by our own Federal Government officials, may have left you with the impression that the Dene land claims will not be a significant factor in the decision about whether to build a Mackenzie Valley pipeline, and that the details and implementation of a settlement with the Dene can be

worked out during construction of a pipeline. Such statements are based on misinformation and are a total misunderstanding of our position.

Dene opposition to a pipeline down the Mackenzie Corridor at this time is virtually unanimous. The Dene as a people cannot survive the social, economic, and environmental impact of pipeline construction at this time. We need time - time to negotiate an agreement with the Federal Government, and time to implement that agreement, to develop our own political and economic institutions further.

Should the decision to build a pipeline be made by non-Dene, before the right of the Dene to collectively decide their own future has been fully recognized by the Federal Government, it is obvious that the right to self-determination of the Dene will have been ignored. Such disregard for the right of self-determination of a people is genocide.

Evidence for support of the Dene position:

There is no doubt that the Dene position, as presented to the Federal Government and described here, is a majority position among our people. We Dene have stated unanimously to the Berger Inquiry at the community hearings that the land is ours. We have said over and over that the land has always been ours, that we

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have never sold or surrendered it and that we want recognition as property owners. We have expressed the intention to decide our own future on our own land. We have stated that we do not want a pipeline and we do not need it. We have voiced the belief that in fact the pipeline would destroy our people. This position is also supported by the evidence of Chiefs and elders, including eye-witnesses to the negotiation of the treaties, before the N.W.T. Supreme Court.

Almost 1,000 Dene people testified to Justice Berger at the community hearings. Fewer than 5 said that they were in favor of a pipeline.

At our joint general Assemblies, including non-status and Metis, over the last three years, we have stated that we do not recognize Treaties 8 and 11, that we do not wish to sell our land but want to have our rights recognized and protected by the Federal Government.

We are filing as evidence over 2,000 pages of research done with and for the Indian Brotherhood by top Dene and non-Dene experts, in the fields of economics, the Canadian constitution, Canadian and international law, education, and other areas, that supports and elaborates on our position. We will be filing a set of these research volumes with your committee as evidence.

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In addition, there is overwhelming public support for the Dene right to self-determination, and to a land settlement before discussion of a pipeline, in southern Canada. We are submitting as further evidence a list of individuals and organizations who appeared before Justice Berger's southern hearings to state their support for the Dene, and opposition to a pipeline.

There is a small minority of our people, represented by the Metis Association of the N.W.T., who do not support the Dene position as we have presented it here. They are willing to accept the existing colonial structure of government, and would be willing to sell their rights for a certain amount of money, title to some land, and limited rights governing the use of that land. They have stated publicly that they would welcome construction of a pipeline immediately after land claims are settled.

We recognize the right of this group to define their own interests. However, we do not accept their right to undermine the political rights of the Dene by pretending to represent more than a very small minority of the native people of the Mackenzie Valley.

Summary:

You should not underestimate the strength and determination of the Dene people. Our position is clear - there can be no consideration of a pipelin on our land until we are ready to discuss such a development on our own terms.

We have legal avenues open to us. The Supreme Court of Canada rejected our application to file a caveat on a technical point, but they have not yet dealt with the whole question of aboriginal title to Dene land.

We have the strong support of the Canadian public. In addition to the evidence we have submitted about support for our position, many southern Canadians are opposed to the proposed pipeline for other reasons - because they are convinced that it is not in the public interest at this time.

We ask you to consider the effect a decision by the U.S. Government to go ahead with the Arctic Gas proposal would have on the Canadian situation at this time. It would create undue pressure on the Canadian government to negotiate a hasty land settlement with the Dene.

We understand that your Committee was instrumental in making certain that the Alaskan natives were given time to negotiate a land settlement before construction on the Alaska pipeline got the go-ahead. We ask the same consideration for the Dene people. Read our position, listen to what we have to say, and believe us when we say that the Dene cannot survive the construction of a pipeline at this time. We intend to survive.

BRIEF TO HOUSE OF [illegible]

LANDS AND INDIAN AFFAIRS: (Washington, March 17, 1977)

INTRODUCTION:

MR. CHAIRMAN AND MEMBERS OF THE SUB-COMMITTEE. I WOULD LIKE TO SAY THAT IT IS WITH PLEASURE AND PRIVILEGE THAT I APPEAR BEFORE YOU ON BEHALF OF ALL YUKON INDIAN PEOPLE.

IN THIS PRESENTATION I WILL TELL YOU OF OUR ORGANIZATIONAL STRUCTURE, OUR OBJECTIVE OF SETTLING AND IMPLEMENTING LAND CLAIMS AND FINALLY OUR POSITION ON PIPELINES IN THE YUKON TERRITORY. HOWEVER, BEFORE I DO THAT, I WOULD LIKE TO GIVE SOME BACKGROUND ON THE YUKON TERRITORY. THE TOTAL POPULATION OF YUKON IS 22,000 PEOPLE AND OF THAT WE REPRESENT APPROXIMATELY 7,000 INDIAN PEOPLE. IN CANADA, THE INDIAN PEOPLE HAVE BEEN CLASSIFIED BY THE CANADIAN GOVERNMENT AS EITHER STATUS INDIANS OR NON-STATUS INDIANS. STATUS INDIANS ARE GOVERNED BY A PIECE OF FEDERAL LEGISLATION CALLED THE INDIAN ACT. AND UNDER THE MEMBERSHIP SECTIONS OF THE INDIAN ACT THE INDIAN PEOPLE WHO QUALIFY ARE UNDER THE JURISDICTION OF THE FEDERAL DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS. THE INDIAN PEOPLE WHO COME UNDER THE FEDERAL GOVERNMENT HAVE CERTAIN PRIVILEGES AND RETAIN A CERTAIN STATUS IN THE CANADIAN SOCIETY. HOWEVER, THE NON-STATUS INDIANS ARE TREATED AS THOUGH THEY ARE NON-NATIVE AS THEY ARE NOT ON THE INDIAN BAND LISTS WHICH ARE ADMINISTERED BY THE INDIAN ACT. THERE ARE MANY FULL-BLOODED INDIANS WHO HAVE BEEN ENFRANCHISED BECAUSE THEY WERE SEEKING PRIVILEGES WHICH WERE NOT GRANTED TO NATIVE PEOPLE WHO WERE ON THE BAND LISTS OR WHO ARE GENERALLY CALLED STATUS INDIANS. I DO NOT WISH TO DWELL ON THIS AREA VERY LONG, HOWEVER, TO GIVE YOU SOME IDEA AS TO WHY STATUS INDIANS GAVE UP THEIR STATUS, HERE ARE A FEW EXAMPLES: THEY WISHED TO SEND THEIR CHILDREN TO PUBLIC SCHOOL; THEY WISHED TO BE GRANTED THE RIGHT TO VOTE IN FEDERAL AND TERRITORIAL ELECTIONS; THEY WISHED TO ENTER THE

BUSINESS WORLD AND BE GIVEN A BUSINESS LICENCE; THEY WISHED TO GO INTO AREAS WHERE LIQUOR WAS SERVED. IN THE YUKON THIS DISTINCTION BETWEEN STATUS INDIANS AND NON-STATUS INDIANS IS BEING DEALT WITH IN A MANNER IN WHICH WE DO NOT RECOGNIZE THIS DISTINCTION WHICH THE FEDERAL GOVERNMENT, THROUGH THE INDIAN ACT, HAS PLACED UPON THE INDIAN PEOPLE THROUGHOUT CANADA. INSTEAD THE COUNCIL FOR YUKON INDIANS IS NOW NEGOTIATING TO SETTLE THE LAND CLAIMS OF ALL YUKON INDIAN PEOPLE REGARDLESS OF STATUS.

THE INDIAN PEOPLE OF THE YUKON HAVE NEVER CEDED OR SURRENDERED THEIR LANDS AND THEY HAVE NEVER SIGNED A TREATY WITH THE GOVERNMENT OF CANADA. THERE ARE MANY AREAS IN CANADA WHICH ARE COVERED BY TREATIES. HOWEVER, THE YUKON IS NOT ONE OF THESE AREAS. THIS IS WHY WE WISH TO SETTLE OUR LAND CLAIMS BEFORE THERE ARE ANY OTHER MAJOR DEVELOPMENTS. IN 1973 WE BEGAN TO NEGOTIATE WITH THE FEDERAL GOVERNMENT ON OUR LAND CLAIMS AND WE HAVE ATTEMPTED TO SETTLE BY NEGOTIATING WITH THE FEDERAL GOVERNMENT THE BASIS AND THE MEANINGS OF OUR LAND CLAIMS. THE PROCESS OF NEGOTIATIONS IS STILL CONTINUING. I WOULD JUST LIKE TO SAY THAT THE NEGOTIATING PROCESS IS A SLOW ONE AS WE MUST SEEK APPROVAL ON THE MAJOR ISSUES FROM OUR TWELVE INDIAN COMMUNITIES AND THE FEDERAL NEGOTIATORS MUST ALSO SEEK INSTRUCTIONS FROM THE FEDERAL CABINET OF CANADA. WE DO NOT SEEK ONLY TO SETTLE OUR LAND CLAIMS WITH THE FEDERAL GOVERNMENT PRIOR TO THE CONSTRUCTION OF A PIPELINE ACROSS THE YUKON BUT RATHER WE INSIST UPON IMPLEMENTING OUR SETTLEMENT AND OBTAINING BENEFIT FROM IT BEFORE WE WILL CONSIDER ANY PIPELINE DEVELOPMENT.

I WISH, AT THIS TIME, TO TELL YOU SOMETHING OF THE STRUCTURE AND PURPOSE OF THE ORGANIZATION THAT I REPRESENT. THE COUNCIL OF YUKON INDIANS CONSISTS OF TWELVE MAIN INDIAN COMMUNITIES IN THE YUKON TERRITORY. EACH YEAR EVERY COMMUNITY ELECTS FIVE

PERSONS TO THE GENERAL COUNCIL. THE GENERAL COUNCIL IS RESPONSIBLE FOR MAKING ALL OF THE MAJOR POLICY DECISIONS FOR OUR ORGANIZATION.

ONE OF THE FIVE MEMBERS ELECTED TO THE GENERAL COUNCIL FROM EACH COMMUNITY, IS ELECTED AS A BOARD MEMBER AND IT IS THESE PERSONS WHO ARE RESPONSIBLE FOR CARRYING ON THE DAY-TO-DAY ADMINISTRATIVE AFFAIRS OF OUR ORGANIZATION, AS WELL AS, CARRYING OUT THE DIRECTION AND POLICILS OF THE GENERAL COUNCIL.

FROM THESE TWELVE BOARD OF DIRECTORS, THERE ARE FOUR PERSONS ELECTED TO THE EXECUTIVE POSITIONS OF CHAIRMAN, VICE-CHAIRMAN, TREASURER AND SECRETARY. I HAVE BEEN ELECTED IN THE POSITION OF CHAIRMAN OF THE COUNCIL FOR YUKON INDIANS, AND IT IS WITH HONOUR AND PRIVILEGE THAT I AM ABLE TO PRESENT TO THIS SUB-COMMITTEE OUR POSITION IN RELATION TO PIPELINE DEVELOPMENT IN THE YUKON TERRITORY. I SHOULD ALSO ADD THAT THE COUNCIL FOR YUKON INDIANS WAS FORMED ON NOVEMBER 15, 1973 TO NEGOTIATE A LAND CLAIMS SETTLEMENT, BASED ON OUR ABORIGINAL RIGHTS, IN THE YUKON TERRITORY, WITH THE GOVERNMENT OF CANADA.

THE COUNCIL FOR YUKON INDIANS REPRESENTS ALL PEOPLE OF INDIAN ANCESTRY AND TO ENSURE THAT ALL INDIAN PEOPLE ARE INFORMED OF THE COUNCIL FOR YUKON INDIANS' ACTIVITIES, WE HAVE INCLUDED THE PRESIDENTS OF BOTH MAJOR INDIAN ORGANIZATIONS, THE YUKON NATIVE BROTHERHOOD REPRESENTING STATUS INDIAN PEOPLE, AND THE YUKON ASSOCIATION OF NON-STATUS INDIANS, REPRESENTING NON-STATUS INDIAN PEOPLE, AS EX-OFFICIO MEMBERS OF THE GENERAL COUNCIL.

AS YOU CAN SEE FROM OUR CONSTITUTIONAL STRUCTURE, THE BOARD AND EXECUTIVE MEMBERS ARE DIRECTLY RESPONSIBLE TO THE GENERAL COUNCIL WHO ARE THE POLICY MAKERS OF THE COUNCIL FOR YUKON INDIANS. ON TWO OCCASIONS WE HAVE APPEARED BEFORE THE NATIONAL ENERGY BOARD OF CANADA TO CONVEY OUR POSITION CONCERNING PIPELINES TO THEM.

ON SEPTEMBER 27TH, 1976, I PRESENTED TO THE NATIONAL ENERGY BOARD A SHORT HISTORY OF THE INDIAN PEOPLE IN THE YUKON TERRITORY.

PRESENT POSITION:

ON MARCH 4TH, 1977 THE COUNCIL FOR YUKON INDIANS PRESENTED ANOTHER BRIEF TO THE NATIONAL ENERGY BOARD IN WHITEHORSE, YUKON. THE BRIEF UPDATED THE POSITION OF THE COUNCIL FOR YUKON INDIANS IN RESPECT TO PIPELINE DEVELOPMENT. IN THE FIVE MONTHS BETWEEN SEPTEMBER 27TH, 1976 AND MARCH 4TH, 1977 THE COUNCIL FOR YUKON INDIANS HAS HAD SUFFICIENT TIME TO CONSULT WITH THE TWELVE INDIAN COMMUNITIES ON THE QUESTION OF PIPELINE CONSTRUCTION. THE RESPONSE WE HAVE RECEIVED HAS BEEN CLEAR AND UNEQUIVICAL. THE YUKON INDIAN PEOPLE ARE OPPOSED TO ANY PIPELINE IN THE NORTHERN YUKON IN PERPETUITY, AND IN THE SOUTHERN YUKON WE ARE OPPOSED TO PIPELINE CONSTRUCTION UNTIL THERE HAS BEEN A LAND CLAIMS SETTLEMENT WHICH HAS BEEN IMPLEMENTED. THIS POSITION WAS RATIFIED AT OUR GENERAL ASSEMBLY MEETING IN WHITEHORSE, YUKON ON FEBRUARY 17TH, 1977, BY A MOTION THAT WAS UNANIMOUSLY PASSED BY THE GENERAL COUNCIL DELEGATES.

THIS MOTION READS AS FOLLOWS: "THAT THE COUNCIL FOR YUKON INDIANS ARE 100% OPPOSED TO THE BUILDING/CONSTRUCTION OF A PIPELINE UNTIL SUCH TIME AS A LAND CLAIMS HAS BEEN SETTLED AND IMPLEMENTED BY THE COUNCIL FOR YUKON INDIANS AND WITH RESPECT TO THE OLD CROW AND NORTH SLOPE AREAS, THERE SHALL BE NO PIPELINE IN THIS AREA, FOREVER."

THE PIPELINE PROPOSALS PRESENTLY BEFORE YOU ARE NOT THE FIRST LARGE SCALE DEVELOPMENTS THAT WE HAVE ENCOUNTERED. OUR FIRST MAJOR CONTACT WITH NON-NATIVE PEOPLE OCCURRED DURING THE

KLONDIKE GOLD RUSH WHEN 30,000 PEOPLE WHO WERE PRIMARILY AMERICAN, DESCENDED ON DAWSON CITY IN THE YUKON TERRITORY. THEY LEFT AS QUICKLY AS THEY CAME, LEAVING OUR PEOPLE TO COPE WITH EPIDEMICS, LOSS OF LAND, CULTURAL DISLOCATION AND NO CONTROL OVER THEIR POLITICAL DESTINY. WE HAVE YET TO REGAIN THAT CONTROL OVER OUR OWN DESTINY AND REMAIN A MINORITY IN A LAND THAT BELONGS TO US.

LARGE SCALE DEVELOPMENT OF THE YUKON WAS NOT TO STOP WITH THE KLONDIKE GOLD RUSH. IN 1943 THE CANADIAN AND AMERICAN GOVERNMENTS DECIDED THAT THE ALASKA HIGHWAY WAS A NECESSITY. THE POPULATION OF WHITEHORSE SKYROCKETED FROM 300 PEOPLE TO 40,000. OUR PEOPLE ARE STILL SUFFERING FROM THAT IMPACT. THE TERM SOCIAL IMPACT MAY BE RELATIVELY NEW BUT THE DISEASE, ALCOHOLISM, FAMILY BREAK-UP, VIOLENCE AND DESPAIR SUFFERED BY OUR PEOPLE CONTINUES TODAY. WHAT NON-NATIVE YUKONERS SEE AS PROGRESS, WE SEE AS DESTRUCTION OF OUR WAY OF LIFE. THERE HAVE BEEN MANY OTHER DEVELOPMENTS IN THE YUKON TERRITORY SUCH AS THE AISHIHIK HYDRO POWER PROJECT, THE ANVIL MINING PROJECT AND THE CONSTRUCTION OF THE DEMPSTER HIGHWAY. EACH OF THESE HAVE PREJUDICED OUR POSITION IN RESPECT TO A LAND CLAIMS SETTLEMENT. THERE WERE ASSURANCES GIVEN FOR MANY OF THESE DEVELOPMENTS, IN THAT OUR RIGHTS WOULD NOT BE PREJUDICED IN ANY MANNER, HOWEVER, WE HAVE LEARNED OTHERWISE. WE ARE DETERMINED THAT WE WILL NOT NOW COMPROMISE OUR POSITION. WE WILL NOT AGAIN HEAR OF HOLLOW ASSURANCES AND GUARANTEES. WE WILL NOT TOLERATE ABUSES OF OUR PEOPLE AND OUR LAND FOR THE SAKE OF DEVELOPMENT ALONE. WE WILL DEDICATE OUR ENTIRE RESOURCES TO THE COMPLETION AND IMPLEMENTATION OF A LAND CLAIMS SETTLEMENT BEFORE WE CONSIDER ANY MAJOR DEVELOPMENT IN THE YUKON.

ONCE OUR LAND CLAIMS HAVE BEEN RESOLVED, WE WILL BE IN A POSITION TO CONSIDER OTHER MAJOR CONCERNS.

YOUR CONERN TODAY IS A PIPELINE ROUTE. OUR CONCERN IS IN MANY OTHER AREAS, BUT ONE WHICH YOU CAN CONSIDER IS YOUR ILL TREATMENT OF OUR PEOPLE IN YUKON OVER THE SALMON FISHING.

OUR WATER HAS BEEN THE TRADITIONAL SPAWNING GROUNDS FOR SALMON THAT LATER GO TO THE SEA THROUGH ALASKA, WHEN THEY RETURN FOUR YEARS LATER TO SPAWN, THE ALASKANS CATCH THEM, LEAVING ONLY A FEW FOR US.

YOUR PEOPLE APPARENTLY HAVE LITTLE OR NO CONCERN FOR OUR PLIGHT, WE HAVE BEEN TOLD BY THE CANADIAN GOVERNMENT FISHERIES REPRESENTATIVES THAT THE TALKS WITH YOUR PEOPLE ARE UNSUCCESSFUL,

THIS HAS RESULTED IN A GREAT DEPLETION OF OUR FOOD SUPPLY IN THE YUKON,

WE ASK YOU, WHY SHOULD WE CO-OPERATE WITH YOU TO PROVIDE A ROUTE FOR A GASLINE THROUGH OUR LAND WHEN YOU CUT OFF OUR SALMON FOOD SUPPLY?

WE HAVE CONSIDERED OUR POSITION VERY CAREFULLY, WE REALIZE THAT THERE ARE SOME TOKEN BENEFITS THAT WE AS INDIAN PEOPLE MAY TAKE ADVANTAGE OF IN CASE OF PIPELINE CONSTRUCTION WHICH WOULD ALLOW AMERICAN GAS TO FLOW OVER OUR LAND, HOWEVER, THESE TOKEN BENEFITS ARE NOT ENOUGH TO OUTWEIGH THE PREJUDICIAL EFFECT A PIPELINE WOULD HAVE ON OUR PEOPLE, WE FEAR THAT THE IMPACT OF ANOTHER LARGE SCALE DEVELOPMENT EVEN AFTER OUR LAND CLAIMS ARE SETTLED AND IMPLEMENTED, THE PAST EXPERIENCES THAT I HAVE CONVEYED TO YOU AND THE PRESENT EVIDENCE OF MODERN DEVELOPMENTS ARE WHY WE INSIST ON THE SETTLEMENT AND IMPLEMENTATION OF OUR LAND CLAIMS BEFORE ANY LARGE SCALE DEVELOPMENT TAKES PLACE, THIS POSITION IS NOT ONE OF TACTICS

OF NEGOTIATION OR A DESIRE TO SETTLE OUR CLAIM WHILE THE DEVELOPMENT PRESSURE IS ON BUT RATHER IT IS FOR THE SURVIVAL OF OUR PEOPLE.

IT IS NOW OUR PARAMOUNT POSITION TO FIRST OF ALL, SETTLE AND IMPLEMENT THE LAND CLAIMS SETTLEMENT BEFORE ANY CONSIDERATION OF CONSTRUCTING A MAJOR DEVELOPMENT AND THIS INCLUDES A PIPELINE. WE WILL NOT BE SWAYED FROM THIS POSITION. WE WILL CONTINUE TO OPPOSE PIPELINE CONSTRUCTION, AND IN THE EVENT ONE IS AUTHORIZED BY THE FEDERAL GOVERNMENT BEFORE THE SETTLEMENT AND IMPLEMENTATION OF OUR LAND CLAIMS, WE WILL GATHER OUR COLLECTIVE RESOURCES AND FULLY UTILIZE THESE RESOURCES IN COMPLETE OPPOSITION TO THE CONSTRUCTION OF A PIPELINE. IF THIS OPPOSITION MEANS USE OF THE COURTS, WE WILL USE THE COURTS. WE ALSO FEAR THAT THERE WILL BE PHYSICAL PROTESTS BY MANY OF OUR PEOPLE. BUT WE SHALL NOT COMPROMISE OUR PRESENT POSITION UNTIL OUR LAND CLAIMS HAVE BEEN IMPLEMENTED. WE DO NOT VIEW A MORATORIUM ON CURRENT NORTHERN DEVELOPMENT AS NEGATIVE BUT RATHER WE VIEW SUCH DEVELOPMENT AS POSITIVE, IN THAT WE, THE ORIGINAL INHABITANTS OF THIS LAND, WILL BE ABLE TO CONSIDER IT AND COMPETE ON AN EQUAL BASIS. I DO NOT FEEL THAT I HAVE TO REPEAT TO THIS SUB-COMMITTEE THE NATIONAL TREATEMENT THAT WE AS INDIAN PEOPLE IN CANADA HAVE RECEIVED, BUT WE IN THE YUKON ARE DETERMINED THAT WE WILL NOT BE SUBJECTED TO CONTINUED DEGRADATION AND HUMILIATION IN OUR OWN LAND. WE ARE DETERMINED TO ATTAIN THE NECESSARY AUTONOMY AND CONTROL OVER OUR LANDS AND OUR LIFESTYLES, AND WE FEEL THAT AN EQUITABLE AND JUST LAND CLAIMS SETTLEMENT WOULD AFFORD THIS OPPORTUNITY. CONTINUED DEVELOPMENT IN THE YUKON TERRITORY WITHOUT SETTLEMENT AND IMPLEMENTATION OF THE LAND CLAIMS SETTLEMENT WOULD ALSO WIDEN THE ECONOMIC AND SOCIAL GAP WHICH PRESENTLY EXISTS BETWEEN INDIAN AND NON-INDIAN COMMUNITIES IN THE YUKON TERRITORY. CONTINUED DEVELOPMENT BEFORE OUR LAND CLAIMS SETTLEMENT WOULD DEPRIVE US OF THE OPPORTUNITY TO MEANINGFULLY CONTRIBUTE TO FUTURE NORTHERN DEVELOPMENT.

IN CLOSING, WE RECOMMEND THAT: 1) NO PIPELINE BE CONSTRUCTED ACROSS THE SOURTHERN YUKON UNTIL THE LAND CLAIMS OF THE YUKON INDIAN PEOPLE HAVE BEEN SETTLED AND IMPLEMENTED. 2) THE NORTHERN SLOPE AREA OF THE YUKON AND THE AREA THROUGH THE OLD CROW COMMUNITY LAND BE CLOSED FOR PURPOSES OF PIPELINE CONSTRUCTION FOREVER.

THESE RECOMMENDATIONS AND INHERENT POSITIONS WHICH WE HAVE CONVEYED TO YOU TODAY, IS A POSITION WHICH WE FEEL WOULD ALLOW US THE OPPORTUNITY TO CONTRIBUTE TO ANY MAJOR NORTHERN DEVELOPMENT, AND TO REGULATE TO SOME EXTENT FUTURE DEVELOPMENT IN ORDER THAT IT IS MORE COMPATIBLE WITH OUR YUKON INDIAN CULTURES. FROM OUR POINT OF VIEW, THIS CAN ONLY BE POSITIVE, NOT NEGATIVE.

THANK YOU MR. CHAIRMAN AND MEMBERS OF THE SUB-COMMITTEE.

El Paso ALASKA COMPANY

JOHN C. BENNETT

6 May, 1977

The Honorable John L. Rader
Alaska State Senator
State Capitol Building
Pouch V
Juneau, Alaska 99811

Dear John:

As we move toward the final decision concerning an Alaskan gas transportation system, I thought that you might be interested in reviewing El Paso Alaska's final documentary presentation before the Federal Power Commission. This document addresses several important issues concerning new proposals made recently by both Alcan and Arctic Gas.

For your convenience, we have highlighted those sections that are of particular interest.

Pages 1-2	-	The Federal Power Commission has adopted procedures which preclude adequate examination of the new proposals.
Pages 2-4	-	Alcan's new proposal suffers from critical omissions of pertinent information.
Pages 4-11	-	Alcan's schedule ignores preconstruction activities; therefore, the Alcan claim that it can deliver gas sooner than any other applicant is untenable.
Pages 11-21	-	Unrealistic construction schedules will increase Alcan's costs and delay completion.
Pages 22-26	-	Inadequate environmental preparation will further delay the Alcan project.
Pages 27-36	-	Alcan's new 48-inch proposal will increase costs and severely strain capital markets.
Pages 36-37	-	The Arctic Gas so-called frost heave design is actually a new construction plan for almost 2,000 miles of its Canadian line.

Pages 43-44	-	Arctic Gas' redesign indicates a lack of confidence in its engineering and geotechnical presentations.
Pages 48-49	-	Arctic Gas has erroneously overestimated Mackenzie Delta reserves.
Pages 50-51	-	Two separate studies, one commissioned by the Environmental Protection Agency and the other by the Department of Interior, predict time schedule slippage is significantly more likely for Arctic Gas than El Paso.

I hope you find this document a useful reference. Should you need more information, please let me know.

Sincerely yours,

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL POWER COMMISSION

El Paso Alaska Company, et al.	)	Docket Nos. CP75-96, et al.
	)	
Order Providing for Suspension of Proceedings, et al.	)	Docket No. RM77-6
	)	

RESPONSE OF EL PASO ALASKA COMPANY TO THE SUBMISSIONS OF ARCTIC GAS AND ALCAN

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April 8, 1977

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	)	

RESPONSE OF EL PASO ALASKA COMPANY TO
THE SUBMISSIONS OF ARCTIC GAS AND ALCAN

The actions of this Commission in accepting submissions of additional materials under Order No. 558-C from Arctic Gas and Alcan, especially the latter's submission of an entirely new proposal, and the attempt to provide an opportunity for the testing of that new material by the interrogatory and response process of Order No. 558-E and by argument offered under Order No. 558-D, are violative of due process of law under the Fifth Amendment to the Constitution if these actions result in the Commission's use of the newly filed materials in the decisional process by which the Commission makes a comparative judgment among proposals for an Alaskan gas transportation system under Section 5(b)(1) of the Alaska Natural Gas Transportation Act of 1976.[1/]

The time afforded and the procedures offered are inadequate to test the newly filed materials for accuracy, candor, bias

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1/ If it be contended that the procedures adopted are authorized by Section 5(b)(2), then El Paso Alaska submits that such an interpretation would make this latter section unconstitutional. Section 5(b)(2) also provides for a delegation of authority which is itself unconstitutional.

or completeness. We have not been afforded adequate opportunity for discovery, confrontation and cross-examination. The procedure adopted permits a decision or recommendation outside a record made in the course of a due process hearing.

While our responses to many new matters are not complete, and with protest to the procedures adopted, El Paso Alaska nevertheless submits the following in response to the Commission's Orders Nos. 558-C and 558-E.

THE ALCAN PROJECT

The new Alcan 48" project continues to suffer from all the problems which inhered in its original 42" filing. With respect to that 42" filing, El Paso Alaska had made the following observations:

> "As El Paso Alaska noted earlier, the Alcan project is in such an incipient state of development that no real meaning can be given to its schedules, cost estimates or pricing suggestions. At this stage, they are nothing more than an 'educated guess.' Tr. 221/38,538 (Hauser). Given that state of events, there is no way in the world that a fact finder can conclude that the Alcan project can and will complete within the time proposed or within the cost figure suggested.
>
> * * *
>
> " * * * The Alcan project sponsors clearly prepared their schedule before either knowing or solving the problems which a critical path analysis for the proposed Alaskan gas delivery system would have revealed. No lawyers' brief can develop a critical path analysis. The assignment of duration time, probability and interrelating nodes requires an exercise of

> engineering judgment. However, it takes no such expertise to realize that the absence of coordinated and comprehensive engineering judgment for the entire Alcan project is a major defect." Reply Brief of El Paso Alaska Company With Respect to Cost, Scheduling and Economics, filed December 13, 1976, pp. 112-13.

Responsive to that and other criticisms, the Administrative Law Judge arrived at the following well-founded conclusions:

> "Construction is another matter. Assuming that Alcan could demonstrate that it would be permitted to build on the Alyeska right-of-way, it could not say how close to Alyeska's line it would be permitted to come, and construction costs -- when a line cannot be specifically placed -- begin to be vague. Not that its costs elsewhere can be accepted with confidence. Its engineers are excellent; Westcoast's in particular displayed a great knowledge of their art. But, given the time constraints and magnitude of the job to be done and the vagueness of much of the specific alignment at the time their estimates were made, they were not able to support costs in more than a general way in either the U.S. or Canada. Blind faith in its engineers' expertise cannot replace the ability to independently check figures against known plans of pipeline construction on fixed right-of-way." I.D., at 345.

The new 48" filing does nothing to alleviate these problems. It is a totally new system design, with new hydraulics, a new construction schedule, new project planning and a new route over almost 500 miles. Alcan offers no additional project planning evidence and no additional evidence by environmental, geotechnic or engineering consultants to show why any more credence should be given to its 48" proposal than was previously given to its 42" line. Even on the issue of system expansibility, the

Alcan 48" alternative departs from an optimized design and results in an ultimate system of low efficiency with high fuel consumption, which approaches the same inefficiencies of their original 42" system. Moreover, even the most cursory examination of the Alcan filings, together with what materials were submitted in response to interrogatories, reveals the following problems.

A. Preconstruction Schedule

Alcan has seriously underestimated the length of time required for preconstruction activities. This period can be defined as the time between receipt of approval of the application (Congressional approval of the Presidential decision) and the start of construction. The functions that Alcan omitted and must complete are:

1. Prepare a preliminary detailed route selection: The present route selection is merely a line drawn on a map. Details, such as crossings of Alyeska, river crossings, specific locations on terrain features, use of the Alyeska haul road, and utilization of the Alyeska guidelines for distances between pipelines are non-existent.
2. Accumulate field data on a site-specific basis: This includes negotiations for and purchase of existing Alyeska data, geophysical surveys of permafrost limits, environmental studies,

archeological studies, soil borings and laboratory analyses on compressor station sites, at river crossings, and along the pipeline route, weather data and the hydrological data and stream characteristics necessary to design stream crossings.

3. Prepare a final detailed alignment: This includes the preparation of completely detailed alignment sheets on orthophoto mosaics.

4. Acquire rights-of-way and permits for land use: Assuming Congressional approval of the Presidential decision automatically carries with it a permit for right-of-way on federal land, it will still be necessary to determine title to every parcel of land crossed by the pipeline, prepare property plats and obtain easements from the BLM, the State of Alaska, native villages and corporations and private individuals. Mining claims must be settled and the Haines pipeline rights-of-way (including the existing products pipeline) must be purchased from the GSA.

5. Prepare detailed design: This includes a safe and reliable design of the pipeline, compressor stations and all ancillary facilities. Details must be prepared for mitigating permafrost

degradation and protecting the environment. Stream crossings, road crossings and pipeline crossings must be individually designed and drawings and applications for permits must be prepared. The route of the pipeline must be analyzed by use of an acceptable thermal simulation computer model to determine if the proposed mitigative measures are sound and effective. A thorough, effective quality assurance program must be developed.

6. Apply for and obtain authorizations to construct: These must be prepared and submitted to the DOI, DOT, State of Alaska and the various subagencies having jurisdiction such as the State Highway Department, Joint Fish and Wildlife Advisory Team and the State Department of Natural Resources. The most serious aspect of this phase is that a denial of authorization at any level will mean a complete revision of that particular phase, and a major denial from DOI, DOT, or the State could mean a complete revision of the entire project and a return to Item No. 1 on this list for a recycle through the entire process. Prior to issuance of authorization to construct, site-specific field archeological investigation must

take place. A significant archeological discovery on the pipeline right-of-way would require a re-route and a recycle of the pre-construction activities.

Concurrently with the above procedures, the Canadian companies (Foothills, Westcoast and AGTL) will be concerned with similar agencies in Canada plus the time required to settle the Yukon native claims. The time required to settle these native claims is not easily estimated. It can range from several years down to the time frame approximately equal to the time required to process the other permits.

7. Arrange for procurement of long delivery items of materials and equipment: This includes preparation of specifications, bidding, negotiations of purchase contracts, and issuance of purchase orders. The various suppliers must fit the orders into their production schedules, acquire raw materials, convert these raw materials into the basic components such as steel plate, castings, and electronic parts, and manufacture and test the finished products.

Compressors, refrigeration equipment, electrical generators and switch gear, electronics,

and computer controls ordinarily require the longest lead times. However, all these items are installed on the pipeline in the later years of the schedule, and should not be critical items.

Pipe, then, becomes the critical item. This is especially true of the Alcan project because the pipe to be used must be rolled from arctic grade steel in larger than normal size (48") and with greater than normal wall thicknesses. Special items such as this require longer lead times than normal.

But the production of pipe is not the final step in this process. A sample of the finished pipe must be thoroughly tested to the satisfaction of the governmental agencies. Welding procedures must be developed and radiographic inspection techniques set up. A failure anywhere along the time in this process will send the metallurgists and purchasing agents back to the beginning of this item.

The various applicants in these proceedings have indicated that pipe specifications have been drafted and initial contacts have been made with the pipe mills. No one has testified for Alcan that a commitment has been made which will start

the processes described above.

8. Acquire granular materials: This will probably be a combination of purchase of excess materials stockpiled by Alyeska (if any) and mining borrow sources after receipt of permits from the DOI (BLM) and the State of Alaska.

9. Start civil construction: This includes preparation of storage yards, double jointing yards, work pads, access roads, camp sites, and sites for ancillary facilities. This item requires the receipt of many permits described in Item No. 6 above.

10. Select pipeline contractors: This procedure can start after Item No. 6 has proceeded to a point of confidence that permits will be awarded and can be continued during the processing of Item No. 7 -- acquisition of materials and equipment. But this item must be completed prior to the start of Item No. 11.

11. Mobilize pipeline contractors: This is the prelude to the start of construction. It has a controllable flexibility and must be fitted into the critical path whether first pipe delivery or receipt of governmental permits becomes critical. It is, in fact, the "bridge" that connects the

"paths" followed by the two possible critical items, pipe and permits, and they converge on this item.

Thus, it can be seen that preconstruction activities are complicated, detailed, and time consuming. Alcan has done none of them and has scheduled none. The above listed items must be done in sequence except where noted otherwise. The preconstruction schedules of the various proposals can be found in the record in the following references:

Company	Reference
Westcoast	Vol. 1A, Tab 11
AGTL	Vol. 1, Fig. 3-D-1
El Paso	Ex. EP-172
Arctic	Ex. AA-35

From these references, it can be seen that the time required for preconstruction activities should be approximately 24 months to the start of civil construction and approximately 31 months to the start of pipeline construction. Two of the applicants, Alcan and Foothills, have not provided for such time in their project schedule. This conclusion is verified by the cash flow schedules in the capital cost estimates of the applicant. This analysis does not include the time required to arrange financing for the project and obtain approvals of tariffs. It is possible for these two items to require more time than all of the other preconstruction activities described. However, for the

purposes of this analysis, time for financing and tariff approvals has not been included.

Alcan has simply omitted adequate preconstruction time from its schedule. Alcan's claim that it can deliver gas sooner than any other applicant is simply lawyer's puffing.

B. Optimistic Alcan Schedule

1. Pipeline Construction

The Alcan 48" express proposal plans to install the following mileages of pipeline, including Northern Border and PGT-PG&E.

1979 - 561 miles
1980 - 2367 miles
1981 - 1816 miles

By comparison, the total amount of large-diameter pipeline (30 inches and larger) installed in the U.S. and Canada in 1976 was approximately 1900 miles. Alyeska installed 496 miles or 28% of the 1976 total. The total large-diameter pipeline installation planned for 1977 in the U.S. and Canada is only 1055 miles. Thus, Alcan is grand in scale.

The Alyeska project attracted five joint venture companies consisting of most of the major big-inch pipeline contractors operating in the U.S. and Canada. The gathering line construction at Prudhoe Bay required by the Alyeska project attracted three other major pipeline construction companies. These companies committed all available equipment, their best management personnel,

and attracted the most productive manpower available in the North American pipeline labor pool to complete the Alyeska project. The result of this effort was that the large demand for equipment caused equipment prices to increase at nearly twice the national wholesale price index. Management personnel and productive skilled labor were in short supply. Pipeline contractors working in the lower 48 in 1976 experienced productivity much lower than estimated or previously experienced and costs higher than estimated. Labor rates for operators, teamsters and laborers in Alaska increased 51% between January 1, 1974 and January 1, 1977, an annual inflation rate of nearly 15% (compared to an annual increase of the wholesale price index of 8.5%).

The over-optimism of the Alcan construction plan is summarized below.

Proposed Alcan Mileage U.S. Industry
(30-Inch Diameter and Larger)

	Year	Miles	% Alyeska 1976 (496 Miles)	% Total 1976 (1800 Miles)	% Estimate Total 1977 (1055 Miles)
Alcan (Total System)	1979	561	113%	31%	53%
	1980	2367	477%	132%	224%
	1981	1816	366%	101%	172%
Alyeska	1976	496	100%	28%	---

The pipeline construction industry is an extremely cyclical industry. Many pipeline companies are owned by parent companies who achieve financial stability by diversification. Most pipeline contractors own very little equipment, meeting

their requirements by leasing from dealers from each project. Naturally, no pipeline contractor retains hourly labor on the payroll between projects. Seccnd tier supervision also is released to work for other contractors between projects, although many of these people have primary allegiance to a single general superintendent.

A pipeline contractor, then, offers experienced key management personnel, limited owned equipment, a capable organization, knowledge of the labor pool and project financing ability. Second tier supervision (spread superintendents, foremen, administrative help, etc.), skilled hourly labor, and most equipment come from a pool common to the entire industry. The ability to meet industry's requirements from this common pool is not unlimited.

During periods of low economic opportunity, such as will be experienced in 1977 with the shutdown of Alyeska, the pool shrinks. Equipment is junked, sold to foreign markets, converted to other use, deteriorates while idle or becomes obsolete. The labor pool shrinks from diversion to other fields of opportunity and by death or retirement.

During economic buildup the equipment pool is not able to increase as quickly as demand. This results in over-inflated prices and the use of less than efficient equipment. Similarly, the labor pool is not able to expand with trained and experienced manpower until incompetent and inefficient members of the pool are fully employed.

Given the huge demand on the industry planned by Alcan, its construction schedule and cost estimate are not worthy of consideration. The high level of activity that Alcan expects to achieve simply will not commence without a great deal of difficulty. If it is achieved, project completion will only be obtained after massive cost overruns and significant delays. Significant cost overruns on the Alcan project must be assumed.

2. Production Rates

Alcan, based upon the Alyeska experience, has filed a construction plan for installing 48" pipe in Alaska at the rate of 0.43 miles per calendar day. Such a rate compares favorably with the final rate experienced by Alyeska and generates a cost estimate that is comparable with the El Paso Alaska estimate.

However, the Canadian applicants indicate a much higher rate of progress. The Canadian companies, who will not be using a work pad for the most part and plan to snake their line through the rugged Canadian Rockies, plan a winter installation rate for 48" pipe from 79% to 142% of the Alcan Alaska rate and a summer rate of 128% to 212%[2/] of the Alcan Alaska rate. While experience in constructing big-inch pipelines in Canada indicates better performance records by Canadian welders than by their U.S.

2/ Planned by AGTL in the summer working only six days per week. Effective rate per scheduled work day in 247%.

counterparts, this experience does not reflect installing pipelines when the demand on the labor pool exceeds 100% of the supply as stated by AGTL in its application (3.D.5-1). If the industry in Canada is fortunate in training or attracting welders, they may experience a 10% production advantage over the U.S. portion of the project. To plan on anything more is imprudent to say the very least.

The Northern Border project, presumably based on comparable continental U.S. pipeline construction experiences, plans an average rate per calendar day per spread of 0.55 miles for its 42" line. The Canadian applicants again plan a more optimistic rate, ranging from 122% to 182% of the Northern Border rate.

On the 36" western leg, PGT and PG&E plan a rate equal to 147% of the Northern Border rate for their looped line. Westcoast's construction rate on the 36" leg is 191% of the Northern Border rate and AGTL plans 182% in the valley and 113% in the Rocky Mountains. No credence can be given to any such construction scheduling.

3. Cost Impact

Failure to meet production rates will cause increased construction costs and schedule delays. Failure to mobilize 24 pipeline spreads concurrently will impact costs and schedule. Should the Alcan system be planned with a five-year construction schedule instead of the three years now planned, the impact on

the North American pipeline industry would only be twice the impact caused by Alyeska.

Presently the Canadian wage rates used by the applicants in their estimates are approximately 50% of the Alaska wage rates. Present Canadian economic conditions and future pressure by labor to approach parity with their counterparts across the border will result in higher labor costs -- that's what can be expected from projecting historical trends. Foothill's consultant, Canuck Engineers, has predicted exactly this outcome during its cost critique of the Arctic Gas project as filed before the NEB. This increase may be added to the omissions category.

Other omissions are:

1. No provision for work pads in Canada;
2. No cost for air support for mobilization and re-supply of labor and emergency supplies. (Alcan Answers to Interrogatories, Vol. I, pp. 9-12);
3. Only meager provisions for supply of granular material (12 inches for pads in the Yukon Territory) (Ibid., pp. 3-5); and
4. Inaccurate representation of Northern Border cash flow and inconsistent and inaccurate de-escalation of Canadian costs (Ibid., pp. 112, 76, 77).

Three substantial items of cost will impact the computed cost of service for the Alcan 48" project.

1. Rate of construction - overestimated in Canada.

2. Duration of construction - A minimum of five years instead of three, increased AFUDC.

3. Omissions - underestimated in Canada.

The minimum expected impact on cost of service of these omissions would be a 20% increase in costs.

C. Construction Manpower

It is clear that the Alcan project stretches beyond belief the available construction manpower in Canada. The following tables, extracted from the Alcan filing, reveal that in one construction season, the summer of 1981, they require 24 mainline construction spreads, 18 compressor station crews, or a total of 42 separate crews.

48" Alternative

Mainline Spread Requirements 1/

Segment	Year/Season 1979 Summer	1979 Winter	1980 Summer	1980 Winter	1981 Summer	1981 Winter
Alcan	-	-	6	-	6	-
Foothills-Yukon	2	2	2	1	-	-
Foothills-Saskatchewan	-	-	1	-	1	-
Westcoast:						
48"	-	2	2	1	2	-
36"	-	-	-	-	1	-
AGTL Canada	-	-	4	2	4	-
PGT-PGE	-	-	2	-	4	-
Northern Border	4	-	6	-	6	-
Total Mainline Spreads	6	4	23	4	24	-

Compressor Crews 2/

Segment	Year/Season 1980 Summer	1980 Winter	1981 Summer	1981 Winter	1982 Summer
Alcan	4	-	4	-	-
Foothills	4	-	4	-	-
Westcoast	2	-	2	-	-
AGTL Canada	-	-	4	-	4
PGT-PGE	-	-	-	-	-
Northern Border	4	-	4	-	-
Total Compressor Spreads	14	-	18	-	4

1/ Does not include catering.

2/ Does not include camp or catering--Alcan indicates eight camps will be needed for two seasons.

ALCAN PROJECT

48" Alternative

Manning Requirements

(Pipeline Spreads and Compressor Crews)

Type	1979 Summer	1979 Winter	1980 Summer	1980 Winter	1981 Summer	1981 Winter	1982 Summer
Welders	396	330	2,034	295	2,199	-	120
Welder Helpers	404	387	2,269	364	2,391	-	120
Subtotal	800	717	4,303	659	4,590	-	240
Foremen	86	60	407	60	440	-	20
Operators & Mechanics	835	867	4,802	700	4,910	-	120
Teamsters	240	224	1,389	220	1,434	-	20
Laborers	1,049	797	5,399	796	5,984	-	192
GRAND TOTAL	3,010	2,665	16,300	2,435	17,358	-	592

Their total pipeline manpower requirement during that construction season exceeds 17,000. This is far in excess of even the most optimistic estimates as to availability within the North American labor force. It may be recalled that even Arctic Gas has admitted that its project, requiring only 9 mainline construction spreads in any given season, depends upon marshalling manpower from Canada in a number never before imagined, a number which will require the "upgrading" of existing skills to meet the manpower requirements. Tr. 23/3,385 (Dau). Even accepting the manpower requirements posited by one of the Canadian partners (AGTL), the existing work force is woefully inadequate to meet the necessary manpower. The following table, at page 3.D.5-1 of AGTL's portion of Alcan's 48" alternate filing, makes that point even more clear than we could attempt to do. Note the disparity between the last two columns.

5. CONSTRUCTION RESOURCES

5.1 INTRODUCTION

The construction program will require the use of four construction spreads during the 1980 summer construction season. Manpower and equipment for this program are not extensive but must be included as a segment of a major project involving construction by other companies simultaneously.

5.2 MANPOWER REQUIREMENTS

The following table shows estimated peak manpower requirements for AGT (Canada) and the estimated manpower requirements for others for pipeline construction in connection with the Alaska Highway Project - 48" Alternative during the 1980 summer construction season and an estimate of the number of experienced people presently available in Canada.

	Applicant	Foothills (Y)	Westcoast	Total Required	Existing* Work Force
Supervision	150	120	150	420	250
Welders	260	210	190	660	350
Operators	505	430	580	1,515	800
Teamsters	195	160	170	525	525+
Skilled Labour	320	200	310	830	480
Others	770	450	700	1,920	1,920+
TOTALS	2,200	1,570	2,100	5,870	4,325+

* Construction Problems - Arctic Pipeline
W. Gant - R. D. Meeres
Canadian Northern Pipeline Research Conference (February 1972)

Upon receiving a permit the Applicant will initiate an extensive training program in conjunction with the Pipe Line Contractors Association of Canada, Unions, Canada Manpower and other government agencies utilizing construction of the AGTL system.

D. Environmental Considerations

At the end of the cross-examination on Alcan's 42" filing, their environmental testimony was left in a shambles. In describing their environmental case, El Paso Alaska wrote as follows:

> "The Alcan presentation in this proceeding shows that the environmental consultants did not have adequate input into the selection of the pipeline route. Further, the environmental consultants acknowledged that the collection of additional baseline data will lead to further environmental assessments which, in turn, may require changes in pipeline alignment. Such changes could affect the engineering design of the Alcan project; the likelihood that there will be such changes makes uncertain the reliability of Alcan's cost estimates. These points emerged during the cross-examination of nearly all the Alcan witnesses.
>
> "Alcan's hydrologist, Dr. R. F. Carlson, who undertook a hydrological reconnaissance between Delta Junction and the Canadian border (Tr. 194/32,748 (Carlson)), testified that about a year would be needed to do the necessary hydrological work at major crossings. Tr. 194/32,767 (Carlson). Such data is necessary both to determine where to cross a river and how to design the crossing. Dr. Carlson had not participated in the costing of the Alcan pipeline. Tr. 194/32,755 (Carlson). In the stretch between Delta Junction and the Yukon Border, Alcan fisheries' biologists have catalogued the streams but have not gathered baseline information on the fish using them. Tr. 193/32,676-32,678 (Holden and Van Hyning). Such information is necessary to arrive at a construction plan that mitigates impact on fish. It could also affect the siting of stream crossings.
>
> "The Alcan environmental witnesses (Gordon, Foster, and Mathewes), who addressed both

Alaskan and Canadian portions of Alcan's environmental report (Tr. 194/32,780 (Mathewes)), had no input into the routing of the pipeline in Canada. Tr. 195/33,039 (Gordon). Alcan did not offer other witnesses to fill this gap. As a result, the alignment in Canada, as far as the record reflects, did not take into account sensitive environmental areas in Canada. If further studies uncover such areas, costly realignments could be the result. Further, the Alcan witnesses could not address the issue of proper construction timing in Canada, as they lacked proper baseline data. Tr. 194/32,984 (Gordon). Dennis E. Baker, of the environmental consulting firm of F. F. Slaney & Co. (Tr. 195/33,067 (Baker)), who discussed land use along the Alcan pipeline (Tr. 195/33,074 (Baker)), testified that there 'has not been sufficient work done on the specific line location' to permit him to make site-specific recommendations on relocation, except that he had advised Alcan to stay generally within existing corridors. Tr. 195/33,112 (Baker). Dr. L. W. Mottus, of C. D. Schultz & Co. (Tr. 195/33,318 (Mottus)), who testified about Canadian impacts, admitted that he lacked the underlying data to advise the engineers on the timing of construction, on mode of construction, on gravel sources, and on blasting schedules. Tr. 196/33,361 (Mottus).

"The foregoing review shows that Alcan has a great deal of site-specific environmental data to collect before it can proceed to final design. Alcan's notion that it can be in operation more quickly than El Paso Alaska in view of the amount of baseline environmental work ahead of it, is just a notion. It has no predictive meaning." Reply Brief of El Paso Alaska Company on the Environmental Issues, filed November 18, 1976, pp. 61, 62.

Judge Litt completely concurred. Describing Alcan's environmental presentation in his Initial Decision, he wrote:

"As far as this record is concerned, Alcan's descriptions on brief of the story it has to tell on its environmental preparation

> far exceeds the contents of the story. From Prudhoe Bay to Delta Junction, as of now, it simply relies on Alyeska work as supervised by JFWAT and a literature search by its consultants (Rebuttal Br. 23). From Delta Junction to the U.S.-Canadian border, it 'follows the Haines pipeline and highway,' even though its environmental witnesses were not sure where the pipeline would go. The corridor concept is argued as if it were on a common pipeline right-of-way -- which it is not -- leaving Delta Junction and as if merely saying the magic word 'corridor' eliminates the problems of site-specific work. In both its Environmental Rebuttal Brief and Economic Brief, Alcan argues that its ongoing studies on environment will be more complete by May 1, 1977, when the Commission's decision will be entered -- an almost bald admission that the record showing it has made so far is deficient on its face. There are no JFWAT studies east of Delta Junction, and there simply is not sufficient biological evidence in this record to find that Alcan has met the Commission's requirements under NEPA. The environmental showing made as to the Canadian portions of its project were not even used by the engineers in Canada in designing the line. On the basis of this record, the only advantage that Alcan can be found to have is that it crosses neither the Wildlife Range nor the Chugach Forest. Other than that, which is a philosophical finding, it has not made a case sufficient to make appropriate environmental findings that it is as satisfactory, and certainly not that it is superior, on environmental grounds as either Arctic Gas or El Paso." I.D. 245 (footnotes omitted) (emphasis supplied).

That description was accurate then and it remains an accurate description of Alcan's 48" alternative. They have done nothing to improve their previous environmental submissions. They were defective then and they are defective now. Moreover, to the extent that Alcan utilizes a new 500-mile

alignment through British Columbia and Alberta, even the preliminary studies made with respect to their 42" alternative are of no help to them. That 500 miles is unstudied, a fact which must disqualify the Alcan project on NEPA considerations.

Indeed, a review of the Alcan environmental filing shows that its environmental consultants are by no means persuaded that the pipeline is routed or that compressor stations are located to avoid environmentally sensitive areas in Canada. The consultants therefore recommend that management undertake further studies, that management either reroute or consider rerouting the pipeline in certain sensitive areas, and that management either relocate or consider relocating compressor stations in certain areas. Our review of the Alcan material suggests that there are a considerable number of miles of pipeline which may have to be significantly realigned and a number of compressor stations that may have to be relocated. These realignments and relocations could result in substantial redesign of the pipeline, with significant cost and schedule impacts.

We here give some specific examples illustrating our comments.

In Document 50, filed by Alcan on March 22, 1977, page 243, it is stated that compressor station C5-64 should be relocated from Hackel Hill (MP 258.5) to a less environmentally sensitive location. On the same page, it is stated that the pipeline should be rerouted around the Ibex River Valley (MP

235.75) to a less environmentally sensitive region. At page 653, it is stated that the proposed alignment from MP 45-175 should be examined to see if alternative routes are available which would avoid the proposed ecological reserves and the Kluane Game Sanctuary. In Addendum C to Volume 3, Section B, filed February 28, 1977, relating to the section of the Alcan line to be built by Westcoast Transmission Co., it is stated at page 418 that:

> "With the construction of the pipeline, a signigicant area of land east of the [Liard] hotsprings that is presently isolated will be opened up. Of special significance is the Grand Canyon of the Liard, an area of high scenic quality . . . . An item of serious concern is the possibility of a compressor station and an all-weather access road into the Nordquist Lake area, a critical winter range for elk, and a waterfowl nesting and possible carnivore denning area. If these concerns are not resolved through avoidance or mitigation measures, a highly negative impact could result, both in the short-term and the long-term."

Indeed, at pages 424-425, this report makes the point that a detailed environmental study is needed along the southern portion of the Alcan route in British Columbia.

Except for minor adjustments, the final alignments of El Paso Alaska and Arctic Gas are known. Their compressor stations have been located to minimize, to the extent practicable, environmental impact. Alcan, on the other hand, is still engaged in the process of aligning its pipeline; the location of many

compressor stations is subject to doubt and change. This uncertainty is one of several reasons that makes suspect the engineering, cost, and schedule proffered by Alcan for its pipeline.

E. Financing the 48-Inch Alternative

1. Negative Impact on Financial Feasibility on All Counts

The Alcan sponsors stated that their 48" alternative proposal "does result in increased capital costs."[3/] More importantly, as capital costs have increased, related external financing needs have increased more than proportionately. Financing difficulties have therefore been generally aggravated. Further, those markets least able to support higher capital demands bear the larger share of these required increases under the new Alcan plan.

The 48" alternative circumvents none of the basic impediments to financeability which beset the earlier proposal. Available capital is still limited. No new financing entities or new sources of capital have been suggested. Other major Canadian federal and municipal government projects would still compete for funds, as would privately financed Canadian natural resource projects. A sound basis of project credit support has

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3/ Proposal of Alcan Pipeline Company for a 48-Inch Express Line Alternative for an Alaska Natural Gas Transportation System, III A, p. 5.

still not been set forth nor have any significantly stronger assurances been given that the Maple Leaf Project would not compete for labor, materials and capital.

2. Higher Capital Costs

The overall system cost estimate for the 48" alternative is $9,630.6 million, or $583.1 million higher than the 42" alternative. In addition, except for Northwest Pipeline, whose pipeline system would not be expanded under the 48" proposal, none of the component operating and project companies has significantly lower capital costs under the 48" proposal, and most have higher amounts. Both the Canadian and the U.S. portions of the new alternative require increases in capital costs. (See Table 1.)

3. Higher External Financing Requirements

More dramatic than the greater cost of the 48" proposal is the resultant $1.46 billion increase in overall funding requirements. As Table 2 sets forth, the new plan provides no significant decreases in external financing needs for any security category either in the U.S. or Canada. No capital market has been relieved under the new proposal, but the pressure on several has grown significantly.

Table 1

SUMMARY OF COMPOSITE SYSTEM COST ESTIMATES FOR THE ALCAN PROJECT

Comparison of the 42-Inch and 48-Inch Alternatives

(Dollars in Millions)

	48" Alt. (a)	42" Alt. (b)	Change (c)
Canadian			
Foothills Pipe Lines Ltd. (Yukon)	$1,309.8	$1,366.3	$ (56.5)
Foothills Pipe Lines Ltd. (Saskatchewan)	192.2	-	192.2
The Alberta Gas Trunk Line Co. Ltd.	971.6	978.1	(6.5)
Westcoast Transmission Co. Ltd.	1,293.5	1,201.4	92.1
Canadian Subtotal	3,767.1	3,545.8	221.3
U. S.			
Alcan Pipeline Co.	3,498.5	3,116.3	382.2
Northwest Pipeline Corp.	-	350.7	(350.7)
Pacific Gas & Electric Co.	387.8	366.9	20.9
Pacific Gas Transmission Co.	363.9	140.4	223.5
Northern Border Pipeline Co.	1,613.3	1,527.4	85.9
U.S. Subtotal	5,863.5	5,501.7	361.8
Total	$9,630.6	$9,047.5	$ 583.1

(a) Source: Alcan Pipeline Project 48 Inch Alternative Proposal, Section 6, Exhibit 6-2, p.2.

(b) Source: AP-15, Schedule F2.

(c) Increase (decrease) of the 48-Inch Alternative as compared with the original 42-Inch Proposal.

Table 2

SUMMARY OF TOTAL ESTIMATED FINANCING REQUIREMENTS OF COMPANIES ASSOCIATED WITH THE ALCAN PROJECT (BY SOURCE OF FUNDS)

Comparison of the 42-Inch and 48-Inch Alternatives (1978-1983)

(Dollars in Millions)

	Canadian Funds			
	48" Alt.(a)	42" Alt.(b)	Change(c)	% Change
Bank Loans	$1,265	$1,306	$(41)	(3.1)%
Long-Term Debt	1,025	1,005	20	2.0
Preferred Stock	525	310	215	69.4
Common Stock	543	448	95	21.2
Total	$3,358	$3,069	$ 289	9.4

	U.S. Funds			
	48" Alt.(a)	42" Alt.(b)	Change(c)	% Change
Bank Loans	$ 966	$ 955(d)	$ 11	1.2%
Long-Term Debt	6,003	4,947	1,056	21.3
Preferred Stock	246	265	(19)	(7.2)
Common Stock	1,410	1,287	123	9.6
Total	$8,625	$7,454	$1,171	15.7

	Total Funds			
	48" Alt.(a)	42" Alt.(b)	Change(c)	% Change
Bank Loans	$ 2,231	$ 2,261	$ (30)	(1.3)%
Long-Term Debt	7,028	5,952	1,076	18.1
Preferred Stock	771	575	196	34.1
Common Stock	1,953	1,735	218	12.6
Total	$11,983	$10,523	$1,460	13.9

(a) Source: Alcan Pipeline Project 48-Inch Alternative Proposal, Section 8, Exhibit C, as amended with Supplemental Financing Information.

(b) Source: AP-15, Schedule C.

(c) Increase (decrease) of the 48-Inch Alternative as compared with the original 42-Inch Proposal.

(d) Adjusted to exclude $400 million of U.S. bank debt for Northern Border Pipeline, originally included in AP-15, Schedule C.

4. **Required Financing Expanded Most in Weaker Markets**

Not only does the 48" proposal entail $1.46 billion (13.9%) in increased total estimated external financing requirements, but the shift in overall financing burden mix is also unfavorable. Three particularly restricted capital markets would have to supply disproportionately larger amounts of funds under the 48" alternative. Table 2 shows increases in funds to be raised via sale of (1) U.S. long-term debt, primarily representing increased borrowings by Canadian participants (up 21.3%), (2) Canadian preferred stock (up 69.4%), and (3) Canadian common stock (up 21.2%). Northwest Pipeline, among the more financeable of the Alcan project participants, is not among the companies requiring external financing under the 48" alternative. However, this reduced financing requirement is offset several times over the increased capital needs of Alcan Pipeline, a U.S. project company, and the three Canadian project and operating company participants. The increased financing burden of the revised project falls, therefore, on the weaker shoulders.

The U.S. long-term debt market available to Canadian borrowers is severely restricted by the Canadian basket limitation which impacts all major U.S. life insurance companies. In spite of Alcan's arguments that a U.S. funding vehicle could circumvent the 10% Canadian basket limitation, there is no evidence in the record to support the supposition that such a

gimmick would work. This consideration, along with the probability that Alberta Gas Trunk and Westcoast would have to pre-commit first mortgage bond financing in the private market[4/] means that the 21.3% increase in long-term debt to be raised by Canadian entities in the U.S. would be even more difficult and probably impossible to obtain.

As pointed out previously, the original 42" proposal, along with associated Maple Leaf Project financings, would have placed financing requirements on the Canadian equity market which would have been more than 300% larger than the total amounts of equity raised by all Canadian pipelines in all markets during the six years 1970-1975. The increases in preferred and common stock financing needs required by the change from the 42" to 48" project would by themselves approximately equal the total amount of external equity funds raised by Canadian pipelines in that same six-year period. This enormous demand on the Canadian equity markets is clearly unprecedented and is in no way supported by any Alcan market capacity study.

5. Previous Criticisms Still Valid

It has been shown that the 48" proposal would produce no significant decreases in external financing requirements for

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4/ See Brief of El Paso Alaska Company Concerning Financing, pp. 91-94.

(1990-2002)
(Dollars in Millions)

	Total Basic Requirements			Estimated Contingency Requirements			Total Estimated Requirements		
	48" Alternative(a)	42" Alternative(b)	Change(c)	48" Alternative(a)	42" Alternative(b)	Change(c)	48" Alternative(a)	42" Alternative(b)	Change(c)
Alcan Pipeline Co.									
U.S. Banks	$ 363	$ 367	$ (4)	$ 113	$ 113	$ -	$ 476	$ 480	$ (4)
U.S. Long-Term Debt	1,900	1,530	370	380	310	70	2,280	1,840	440
U.S. Common Stock	840	710	130	168	143	27	1,008	853	153
Total	3,103	2,607	496	661	568	93	3,764	3,175	589
Foothills Pipe Lines Ltd. (Yukon)									
Canadian Banks	325	301	24	65	60	5	390	361	29
U.S. Long-Term Debt	475	361	114	95	72	23	570	433	137
Canadian Long-Term Debt	200	200	-	40	40	-	240	240	-
U.S. Preferred Stock	205	171	34	41	34	7	246	205	41
Canadian Common Stock	140	113	27	28	23	5	168	136	32
Total	1,345	1,146	199	269	229	40	1,614	1,375	239
The Alberta Gas Trunk Line Co. Ltd.									
Canadian Banks	300	255	45	400	400	-	700	655	45
U.S. Long-Term Debt	615	275	340	-	-	-	615	275	340
Canadian Long-Term Debt	400	405	(5)	-	-	-	400	405	(5)
Canadian Preferred Stock	300	160	140	-	-	-	300	160	140
Canadian Common Stock	225	110	115	-	-	-	225	110	115
Total	1,840	1,205	(635)	400	400	-	2,240	1,605	635
Westcoast Transmission Co. Ltd.									
Canadian Banks	123	20	103	53	278	(218)	175	298	(115)
U.S. Long-Term Debt	865	740	125	-	-	-	865	740	125
Canadian Long-Term Debt	385	360	25	-	-	-	385	360	25
Canadian Preferred Stock	225	150	75	-	-	-	225	150	75
Canadian Common Stock	150	200	(50)	-	-	-	150	200	(50)
Total	1,748	1,470	278	53	278	(218)	1,800	1,748	52
Northwest Pipeline Corp.									
U.S. Banks	-	-	-	-	- (d)	-	-	- (d)	-
U.S. Long-Term Debt	-	280	(280)	-	-	-	-	280	(280)
U.S. Preferred Stock	-	60	(60)	-	-	-	-	60	(60)
U.S. Common Stock	-	50	(50)	-	-	-	-	50	(50)
Total	-	390	(390)	-	-	-	-	390	(390)
Pacific Gas & Electric Co.									
U.S. Banks	-	-	-	-	-	-	-	-	-
U.S. Long-Term Debt	388	367	21	-	-	-	388	367	21
U.S. Common Stock	-	-	-	-	-	-	-	-	-
Total	388	367	21	-	-	-	388	367	21
Pacific Gas Transmission Co.									
U.S. Banks	-	-	-	-	-	-	-	-	-
U.S. Long-Term Debt	364	141	223	-	-	-	364	141	223
U.S. Common Stock	-	-	-	-	-	-	-	-	-
Total	364	141	223	-	-	-	364	141	223
Northern Border Pipeline Co.									
U.S. Banks	290	275	15	-	-	-	290	275	15
U.S. Long-Term Debt	921	871	50	-	-	-	921	871	50
U.S. Common Stock	402	382	20	-	-	-	402	382	20
Total	1,613	1,528	85	-	-	-	1,613	1,528	85
Total Alcan System (Before Duplications)									
U.S. Funds	7,870	6,780	1,090	797	674	123	8,625	7,454	1,171
Canadian Funds	2,773	2,276	497	504	294	(209)	3,258	2,068	288
Total	$10,601	$9,056	$1,545	$1,301	$1,467	$(86)	$11,941	$10,522	$1,460

(a) Source: Alcan Pipeline Project 48-inch Alternative Proposal, Section B, Exhibit C, as amended with Supplemental Financing Information.

(b) Source: AP-15, Schedule C.

[illegible] of the 48-inch Alternative as compared with the 42-inch Proposal.

any security category in either the U.S. or Canada. In several security categories and on an overall basis, the external funding requirements have been significantly increased.

It follows, therefore, that all of the arguments set forth in EP-279 and in Brief of El Paso Alaska Company Concerning Financing questioning the financial feasibility of the Alcan project can be made even more strongly in the 48" case:

> "Unlike El Paso Alaska, which will finance solely in U.S. markets, the participants in the Alcan Project are U.S. and Canadian entities which must rely upon a wide variety of markets and financing vehicles to supply their very substantial capital needs. Great dependence is placed upon the availability of capital to Canadian-based companies from private and public Canadian markets and from that portion of the U.S. private market available to Canadian companies. Since these are relatively limited sources of capital, the requirement to tap these markets, year after year, raises questions about the financial feasibility of the Project.
>
> "Projected funding requirements for Alcan would press the limits of the U.S. and Canadian private placement markets. It would do as much to the U.S. and Canadian banking systems, as well as the Canadian equity market. In the absence of governmental guarantees from the United States, currently of uncertain definition and availability, there is no proof by Alcan that adequate financing will be forthcoming. Even in markets where adequate capacity seems to exist, Alcan's cost of capital, which must ultimately be borne by the American gas consumer, would be substantially higher than the cost to an American-only project of similar credit standing. Finally, the plan involves timing and coordination among a large number

> of companies having various financing requirements and making competing demands in the U.S. and Canadian capital markets." 5/

No significant changes in suggested plans for implementation or in proposed credit support have been set forth by the Alcan project sponsors. The complexity of plan implementation remains. As before, no information has been filed which would suggest that key parties in Alcan's credit support scheme would feel obliged to participate in the manner which Alcan's financial advisers have proposed.

Finally, the competition for funds from the Maple Leaf Project would be even more intense, now that the Alcan project's external financing needs have been increased. The Administrative Law Judge's "Initial Decision" correctly points out that:

> "While Alcan espoused a 13- to 22-month timing gap between projects as a minimum to avoid direct financing competition, the investment and lending communities could well require actual Alcan operations and cash flow before the construction of Maple Leaf to avoid the aggregation of the capital requirements of the two projects. This would mean at least a 4-year timing difference." 6/

In conjunction with this, it should be noted that:

> "Recognition of Maple Leaf's first-born status is set forth for all to see in the agreement

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5/ Brief of El Paso Alaska Company Concerning Financing, pp. 71-72.

6/ F.P.C. Initial Decision, p. 378.

among the Alcan sponsors; and, even toned down as it was before the record closed, it represents an additional set of risks to the American consumer." 7/

In light of these considerations, the most noticeable recent cosmetic addition to the Alcan Definitive Agreement, stating that the participants "contemplate" a 13-month interval between the two projects, is not compelling. 8/ It certainly does not assure that an Alaska gas delivery system would receive the priority treatment and corporate commitment it deserves.

THE ARCTIC GAS PROJECT

A. New Frost Heave Design

Despite the reassuring words of counsel for the Arctic Gas project, the new so-called frost heave design filed with this Commission is in reality a new construction plan for almost 2,000 miles of their line in Canada. Simply as an example, we note that all of their compressor stations in Alberta have been derated from 55,000 HP to 38,000 HP, that the Caroline to Coleman lateral has been resized from 30" at 1680 psi to 36" at 1440 psi, that gas heaters and propane refrigerator systems have been added. In addition, cursory analysis reveals that in the northern portion of the line, immediately

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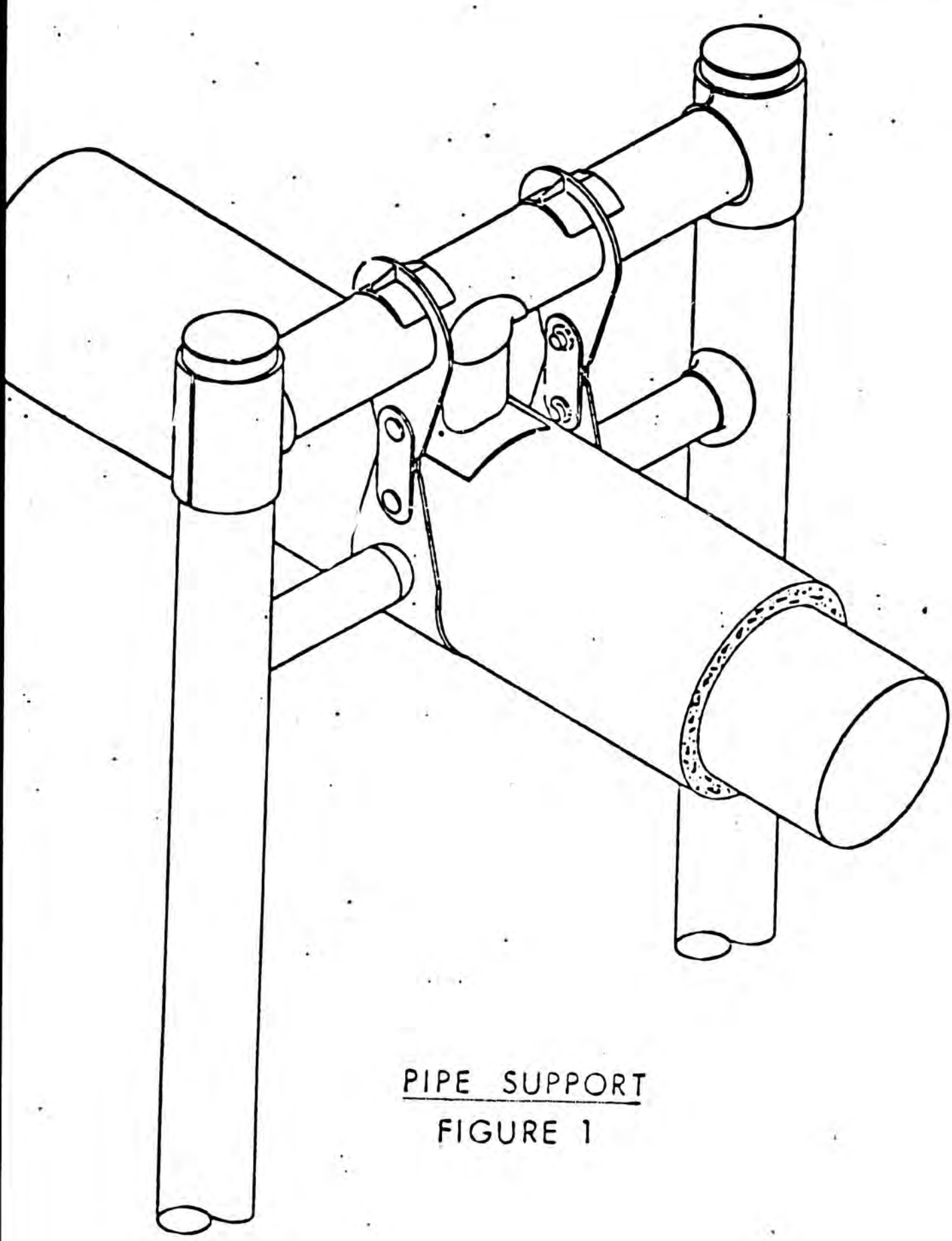
7/ Ibid., App. I-21.

8/ Alcan Pipeline Project 48-Inch Alternative Proposal, Section 10, 2.1(d), p. 5.

south of Tununuk Junction, they have added 400 miles of above-ground power transmission cable and several hundred miles of cable transmission line. In the same 400 mile-stretch of line, there are no fewer that 1,800 mode changes between insulated and heat-traced pipe and non-insulated pipe. The average mode length is no more than 700 feet. Over yet another 200 miles of line, directly to the south, they are installing more than 1,000 underground VSMs similar to those of the Alyeska project. What these changes do to their construction schedule, to their manpower requirements, to their hydraulics and to their overall energy balance cannot be tested. One need only look at the Rube Goldberg design of the underground VSMs to conclude, notwithstanding the facile assertions of Arctic Gas counsel, that the installation of a thousand of them over 200 miles of line must necessarily have an adverse impact upon their already too tightly constricted construction schedule. The following page, extracted from the Arctic Gas filing with this Commission of March 22, shows the design of the underground VSMs.



PIPE SUPPORT

FIGURE 1

In connection with their frost heave filing, Arctic Gas continues the assertion that El Paso Alaska still must confront the frost heave problem. In this regard, we repeat what we have previously said. Judge Litt was plainly wrong when he said, at I.D. 111, that "El Paso has . . . not yet specifically addressed frost heave avoidance in its design." All parties agree that frost heave occurs only under certain discreet soil conditions. There must be a combination of freezing temperature, frost-susceptible soil and an appropriate source of water. To sketch the parameters of this problem, Arctic Gas confronts the type of soil conditions susceptible to frost heave over 200 to 300 miles of its line. This is not the assertion of counsel; this is the testimony of one of the Arctic Gas geotechnical consultants, Dr. John Ivor Clark. Tr. 20/3,148 (Clark). By contrast, El Paso Alaska encounters such conditions for but 50 miles of its line. Tr. 42/6,331 (Wright), Tr. 169/27,758

(Winn).[9/]

El Paso Alaska examined the Alyeska alignment, the mode of Alyeska construction and the Alyeska core logs to make estimates of the mileage of pipeline where frost heave potential may exist. Tr. 169/27,759 (Wright). El Paso Alaska acknowledges that site-specific examination and testing will have to take place prior to final design, id., and time and money have been provided to effect such site-specific analysis.

El Paso Alaska has recognized the potential for frost heave. At the time of final site-specific design, the suspect areas within that 50-mile range will be assessed utilizing a

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9/ It should be noted that Arctic Gas witness Clark stated that El Paso Alaska would encounter 100 miles of frost-susceptible soils along its route. Tr. 154/25,302-06, 25,501-02 (Clark). Dr. Clark's opinion in this regard is apparently based on his review of the USGS open-file maps, Tr. 154/25,317 (Clark), input from his staff, some of whom had done some work on the Alyeska project but none of whom had even assessed the actual El Paso Alaska alignment in the field, Tr. 154/25,317-24 (Clark), and a limited fixed-wing flight over the Alyeska route for purposes admittedly other than analyzing El Paso Alaska's pipeline route. Tr. 154/25,318 (Clark). Dr. Clark had not reviewed any additional Alyeska core hole information. It is clear that neither Dr. Clark nor any member of his staff conducted anywhere near the analysis of El Paso Alaska's route that Mr. Wright and Pipeline Technologists did. El Paso Alaska witness Wright reached his conclusion with respect to the existence of 50 miles of frost-susceptible soil after extensive field work along the El Paso Alaska route, and after reviewing USGS open-file maps, the Alyeska project description and some 1,200 Alyeska core holes. Tr. 43/6,408 (Wright). Mr. Robert Winn, the Dames & Moore partner who directed Dames & Moore's efforts as Alyeska's geotechnical consultant, confirmed Wright's judgment. Tr. 169/27,758 (Winn).

mathematical model consisting of a series of proven components to determine if, and to what extent, frost heave will exist and what measures may be taken to abate any predicted frost heave. Tr. 41/6,902-04, 6,104 (Wright). The effectiveness of each of the components of this mathematical model have been proven. Tr. 41/6,093, 6,184, 6,185 (Wright). For example, the conduction component has been used to predict the migration of the Mackenzie River, the depression of permafrost in the new channels and the rebuilding of the permafrost in the channels from which the river migrated. Id. Such a conduction component accurately predicted the thickness of the active layer on the North Slope. Tr. 42/6,283 (Wright). The pipe stress component was utilized as the basis for the Alyeska stress analysis. Tr. 42/6,280 (Wright). The soil stress component has been used in the development of projects for the U.S. Navy and other governmental entities. Id. The convection component has been used to trace contaminants in contained aquifiers for the USGS. Tr. 41/6,094 (Wright).

The model enables the pipeline designer to synthesize all aspects of the environment through which the pipeline will be constructed. The operation of the pipeline can then be superimposed on the synthesized environment to determine if the pipeline's operations will cause alterations to the environment, such as frost heave, which will require special design, construction or operation features. Remedial measures to accommodate any alterations to the environment can be proposed and synthesized

by the model to determine their effectiveness. Tr. 41/6,109-10, 42/6,277 (Wright).

When areas of frost heave are predicted by the mathematical model, any of several remedial measures can be examined through the model to determine their effectiveness. One such measure would be to replace the frost-susceptible soils with non-frost-susceptible granular backfill. Tr. 41/6,134, 169/27,758 (Wright); 246/42,918 (Dau). The granular material would be placed in the ditch to completely surround the pipeline (Tr. 42/6,326 (Wright)) and would provide soil with larger pore spaces so that migration of water to the freeze front, would not occur. This method would not necessarily prevent the formation of a frost bulb but would interrupt the exact mechanism needed to produce frost heave. Tr. 42/6,327 (Wright). Although Mr. Wright has ascertained only 50 miles of frost heave potential along the El Paso Alaska route, he had provided enough granular backfill to replace completely over 400 miles of ditch. Tr. 41/6,137, 6,268 (Wright).

Another remedial measure proposed by El Paso Alaska to abate frost heave is deeper pipeline burial. Tr. 41/6,104 (Wright), 169/27,758 (Winn). This method will be particularly effective at locations where the permafrost table is deeper than the normal depth of the ditch. This method will be utilized wherever it is determined to be appropriate and at all road crossings. Tr. 42/6,276 (Wright). Even after the recently

announced Arctic Gas test failures, they still propose to counteract frost heave by increasing the overburden "on some of the soils". Tr. 246/42,916 (Dau).

Insulating the pipe is another method proposed both by El Paso Alaska and by Arctic Gas for abatement of frost heave. Tr. 41/6,104 (Wright); 246/42,916-17 (Dau). This method alters the heat transfer from the soil to the pipeline so that the frost heave mechanism would be interrupted. Tr. 42/6,327 (Wright).

In situations where the frost heave forces are predicted to be of certain magnitude, pipeline anchors could be used to abate the frost heave. Tr. 42/6,323, 6,327 (Wright); 246/42,917-18 (Dau).

We should note at this point that proposals put forth by El Paso Alaska in the Spring of 1975 were once adopted by Arctic Gas to handle its frost heave problems. See Tr. 246/42,916-19 (Dau). One distinction is that while El Paso Alaska has 50 miles with which to cope (Tr. 42/6,331 (Wright)) Arctic Gas has 250 miles. Tr. 246/42,915 (Dau).

Arctic Gas has sequentially proposed three separate and distinct types of frost heave solution. They initially proposed a berm construction mode. They vigorously defended that construction mode through 16 months of hearing, denigrating anyone with the temerity to suggest a different solution. Abruptly, in November of last year, almost at the close of the hearing, they reluctantly and with some embarrassment admitted some insecurity

with the berm construction method. They recommended five other procedures, some of which, as the foregoing text demonstrates, had been planned by El Paso Alaska all along. Now, with the hearing completed, and with no opportunity to cross-examine, they have proposed yet another "solution". Whatever can be said about the Arctic Gas frost heave "solution", one thing is clear. Despite their justifiable pride in the amount of engineering and geotechnical experimentation which they have conducted, they themselves still do not feel comfortable with whatever "solution" they have proposed. And, even if we were to assume (for that is all we can do) that the new "solution" will work, a layman's review of it must suggest that it will have to result in higher cost and lower progress rate.

Moreover, the adverse environmental impacts resulting from these new design concepts include the formation of thermokarsts and thaw ponding along a heat-traced pipeline, together with the easily recognizable aesthetic impact of 400 miles of overhead transmission cables. It is obvious that this heat tracing will create ponding above the pipeline. This ponding could create problems of erosion and siltation. El Paso Alaska is unable to evaluate the extent, if any, of the impact caused by ponding. There has, of course, been no examination of this problem on the record compiled before Judge Litt.

B. **Financing**

The financial implications of the frost heave filing by the Arctic Gas project are adverse to their overall case. The $475,000,000 estimated additional capital cost simply adds to the bloated demands which Arctic Gas makes on its numerous capital markets, aggravating its already infeasible financial plan. In addition, the frost heave problem's solution highlights the difficult nature of Arctic Gas' construction problems which suggest to all who have made a study of it that the construction schedule of Arctic cannot be met and massive cost overruns are most probable.

C. Mackenzie Delta Gas Supply

El Paso Alaska here comments on the response of the Arctic Gas project to gas supply interrogatories of El Paso Alaska and on the Sproule NEB study Arctic Gas filed with the Commission.

Arctic Gas made no effort to respond to the interrogatories that El Paso Alaska Company filed. It is apparent from a review of the Arctic Gas answers that Arctic Gas did not really undertake to answer the questions that were posed in any meaningful way, but rather dodged the questions by making a reference to nonresponsive materials. For example, in Interrogatory 26, El Paso Alaska asked Arctic Gas to state whether it had any documents in its possession or under its control which reflect

that a Mackenzie Delta producer or operator is, as of this time, unwilling to invest in development wells for field processing facilities necessary to market reserves under its control. Arctic Gas was obviously aware of the statement of counsel for the producers before the NEB of February 17, 1977 that the producers have not made a commitment to invest in the necessary processing facilities. NEB Tr. 24,176 (Ballem). We think this Commission should give no weight to the Arctic Gas answers.

Even on the basis of the Arctic Gas answers, it is clear that all recent wildcat wells have been failures. There have been ten such wells since June 1, 1976; all have been dry and abandoned. This includes two wells in the Beaufort Sea. El Paso Alaska lacks specific information on the well drilled by the Dome Petroleum Corporation, but believes the report to be true that Dome in fact abandoned the well it was drilling in deep water in the Beaufort Sea. While El Paso Alaska concedes that the advent of a pipeline would spur development drilling, El Paso Alaska does not believe that the advent of a pipeline would result in increased discoveries from wildcat drilling. The more promising structures, both onshore and offshore, have already been drilled.

The Mackenzie Delta is clearly a disappointment. We would observe that no new commercial field has been found in

the Mackenzie Delta since April of 1973.[10/] Indeed, as of this time, there are only three fields of questionable commerciability -- Taglu, Parsons Lake, and Niglintgak. The remaining fields are clearly noncommercial. Further, raw gas from these fields cannot be piped to processing facilities in the three fields where processing facilities might be built. There are technical difficulties of significant magnitude if raw gas is piped for any distance in the Mackenzie Delta. Hydrates in the raw gas, for example, could freeze the line; unprocessed gas could corrode the line. Therefore, it would be necessary to develop special engineering techniques to transport raw gas for any significant distance. There is no suggestion in this record that it is technically and economically feasible to develop and implement such techniques. El Paso Alaska adheres to its view, therefore, that it is absurd to schedule gas from the clearly noncommercial fields in the Mackenzie Delta. There is simply no reason to believe that it can be marketed.

Sproule, in scheduling gas reserves, did not make a forecast of gas production based upon the ability of the reservoirs to produce. Like D&M, Sproule scheduled gas on a contract rate-of-take basis. El Paso Alaska in its Brief on Exceptions

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10/ The discovery dates for the Taglu, Parsons Lake and Niglintgak fields were August 18, 1971, April 19, 1972, and April 7, 1973, respectively.

has adequately discussed the glaring deficiency of this approach. But Sproule carried the methodology that it used to an even further, absurd extreme. The methodology is stated on page 189 of the Sproule report:

> "Because the test data available indicated a high degree of damage around the wellbore, it was not possible to use this test data directly to identify the well productivities to be expected from future wells. Deliverability characteristics to be expected from undamaged wells in the Parsons Lake and Taglu areas were calculated from permeability data from cores and logs for the various zones. Insufficient data was available from wells in the other areas to develop their deliverability characteristics."

We make four criticisms. First, as seen, Sproule did not schedule deliverability on a reservoir basis. Second, Sproule ignored all well tests in the Mackenzie Delta. One wonders why the producers ran the tests in the first place if they were to be ignored in calculating reserves. Third, Sproule assumed that wells could be drilled and completed without wellbore damage. There is no reason to believe that the producers can in fact accomplish this with development wells. They have not been able to do so to date. Fourth, Sproule applied theoretical deliverability characteristics; one zone in the Taglu field is applied to all zones in all fields except Parsons Lake. This is apparent from a review of footnote 2 appearing on the deliverability forecast for each of the areas. This is nothing short of astounding. The Commission can, and should, ignore the Sproule deliverability report.

El Paso Alaska does not accept the new, assertedly proved level of reserves at Parsons Lake. The reason is that Gulf has been surprised in the past with development drilling. The L-60 dry hole, a development well, was drilled in an area where D&M had assigned significant proved reserves, and resulted in a net reduction of proved reserves in the Parsons Lake area of about 200 Bcf. The recently drilled F-38 well, a less-than-a-mile step-out, was a dry hole. On the basis of these wells, El Paso Alaska does not think it is prudent to assign large acreage to reservoirs appearing in already drilled wells. Yet, for example, Sproule in the Cretaceous A-1 field studies has assigned 9860 acres -- more than 15 square miles -- to this sandstone found in the F-09 well. Because Parsons Lake is highly faulted, it is imprudent to assign as proven such large acreage to reservoirs on the basis of sparse drilling.

El Paso Alaska adheres to its view that about 500 million a day is all that can be expected from the Mackenzie Delta.[11/] This Commission should know that El Paso Alaska alone scheduled gas production on a reservoir-by-reservoir basis. Further, El Paso Alaska was not niggardly in its approach. El Paso

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11/ This figure is endorsed by the Department of Interior/ Aerospace Study Team in a recent update to DOI's Report to Congress (Exhibit EP 231), as is hereinafter discussed.

Alaska scheduled gas from all gas-bearing reservoirs. The Commission should understand, however, that the fields in the Mackenzie Delta are lenticular. The producing sands are thin. This is confirmed by the Taglu Field-Dual Induction Lateral Log for the P-03 well appearing at EP 241, Tab 4. Thus, no producer will find it economically attractive to complete in all reservoirs. Many of the stringers are no doubt uneconomic to complete in. El Paso Alaska remains firm in its view, therefore, that this Commission should assume no more than 500 Bcf in actual production from the Mackenzie Delta. See Gas Supply Reply Brief of El Paso Alaska filed before Judge Litt.

D. Risk Analyses

The Commission should have the benefit of the three recent analyses, attached as Tabs A, B, and C hereto.

The first is an excerpt from a preliminary discussion draft of a report prepared by Resource Planning Associates, Inc., for the Environmental Protection Agency. The preface states that this discussion draft has been circulated to federal and state agencies for review and comment. El Paso Alaska assumes that the Federal Power Commission has already received a copy, but in the event that the Commission has not, a copy is attached hereto under Tab A. The important conclusions of this paper

appear on page 12. It finds that schedule slippage is significantly more likely for Arctic Gas than for El Paso,[12/] and that there is a 20% to 40% chance that Arctic Gas will not be able to construct in the manner proposed by it, and may be required to abandon its project. This conclusion is clearly warranted in view of Alyeska's inability to construct in the middle of the Alaskan winter, as well as the inaccessibility of much of Arctic Gas' alignment to permanent roads.

The second is an update (March 1977 Supplement) to the early submission of the Department of Interior to the Congress (Exhibit EP 231). EP 231 is the Department of Interior study discussed by Judge Litt at p. 425 of his decision. It is therefore especially important that this Commission have the update, and it is for that reason that the update is submitted under Tab B.

In the update, the Department of Interior/Aerospace Study Team, after reviewing the Arctic Gas comments and criticisms, expressly reconfirms (p. 3-21) the conclusions pertaining to schedule delay and cost overrun appearing in its risk analysis in EP 231, pp. 128-147. In EP 231, p. 143, the study team estimated that an Alaska-LNG system could slip 6-18 months, whereas an Alaska-Canada system could slip 12-36 months. The

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12/ The draft discussed Alcan's 42" proposal, and therefore is not relevant to Alcan at this stage.

average difference in delay is, therefore, one year. This again confirms the position of El Paso Alaska that schedule slippage, with attendant cost overrun, is considerably more likely for an Alaska-Canada system than it is for an Alaska-LNG system, essentially because the former lacks the construction accessibility (roads) of the latter.

In the update, the Department of Interior/Aerospace Study Team summarizes the NNEB of Alaska-Canada at 7.865 billion, Alaska-LNG at 6.87 billion, and Fairbanks-Alcan at 6.660 billion. In evaluating these figures, however, it is important to remember that the Alaska-Canada system does not include the western leg proposed by Arctic Gas and does not take into account the conclusions of the DOI/Aerospace Study Team estimate that "the average change in NNEB per year of schedule slip and including cost overrun at one billion per year of delay is approximately 1.7 billion." Thus, it is apparent that when schedule slip and cost overrun, as well as the cost of the western leg facilities, are deducted from the 7.865 billion NNEB for an Alaska-Canada system, the real NNEB of that system falls significantly behind that for an Alaska-LNG system. This confirms the argument of El Paso Alaska that it is in the national interest to prefer an Alaska-LNG system over an Alaska-Canada system with or without a west coast leg.

Finally, the DOI/Aerospace Study Team studied reserves in the Prudhoe Bay area and in the Mackenzie Delta area. USGS

geologist Max Taves testified for the DOI/Aerospace Study Team in this proceeding. He was a disinterested evaluator of reserves. He expressed the same skepticism toward Mackenzie Delta reserves that El Paso Alaska has in this proceeding. It is interesting that the DOI/Aerospace Study Team, in its update, has concluded (pp. 1-3) that only 500 million per day will be available from the Mackenzie Delta over twenty years. This is precisely the figure that El Paso Alaska said was reasonable in oral argument before this Commission and also in Exhibit EP 241, tab 5. El Paso scheduled slightly lesser volumes.

El Paso Alaska also attaches a cost overrun analysis which was recently filed before the NNEB by Foothills Pipeline, Ltd. Curiously, Alcan did not file that document before this Commission. We suspect, but do not know, that the reason is that the criticisms of Arctic Gas contained therein could be turned against Alcan. It is filed here under Tab C. It fully supports the Alaska, Department of Interior, and Green risk analyses.

EL PASO ALASKA COMPANY

By: J. Alan Galbraith
J. Alan Galbraith

CERTIFICATE OF SERVICE

I hereby certify that I have this 8th day of April, 1977, served a copy of the foregoing Response of El Paso Alaska Company to the Submissions of Arctic Gas and Alcan, upon each person designated on the official restricted service list compiled by the Secretary in this proceeding in accordance with the requirements of Section 1.17 of the Rules of Practice and Procedure.

Copies of the attached tabbed documents have been served on counsel for Arctic Gas, Alcan, Northern Border, Western LNG, Northwest Pipeline, State of Alaska, State of California, California Public Utilities Commission, and the Conservation Intervenors. Copies of the tabbed documents will be made available to other counsel upon request.

J. Alan Galbraith

One of Counsel

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JOHN C. BENNETT VICE PRESIDENT

May 19, 1977

The Honorable John L. Rader
Alaska State Senator
State Capitol Building
Pouch V
Juneau, Alaska 99811

Dear John:

As the nation approaches the decision on how best to move Alaskan natural gas to U.S. markets, a question frequently arises which is as easily answered as it is important: How will the El Paso "All-American" project deliver gas to the Midwest and Northeast?

Although no one will ever accuse the Federal Power Commission (including Judge Litt and the Commission staff) of bias in favor of El Paso, the ability of El Paso to deliver the gas to <u>all</u> U.S. markets has been repeatedly supported throughout the two years of hearings. To quote from Judge Litt's decision:

> "No challenge has been made to the technical feasibility of El Paso's displacement proposal...Consultants for Arctic Gas have studied the feasibility...(and confirmed) the viability of the general concept."

To quote the Federal Power Commission staff counsel on April 6th:

> "We've studied El Paso's displacement, we've listened to the testimony of their witnesses, we've listened to the testimony of Arctic Gas' experts analyze the El Paso displacement, the El Paso displacement was thoroughly analyzed...while they came to a slightly different manner of doing it, they agreed it has been and could be done. As a matter of fact, they agreed it could be done for approximately the cost overall that El Paso thinks it can be done for.
>
> So I think El Paso's displacement on the merits is not really in dispute."

Also on April 6th, Commissioner Holloman referred to the "Commission's experience in this past winter emergency and our demonstrated capability to move gas eastward from the West Coast through Texas..." He further observed, "Well, there's obviously going to be a great deal of excess capacity as the years go on."

The enclosed explanation of how El Paso can move Alaska's natural gas to Middle West, East, and Northeast succinctly describes the plan, which in fact did--on a few days notice--transfer California's gas to Atlantic Coast markets last winter.

Another pertinent fact is that all proposals--including the two trans-Canadian projects--will deliver Alaska's gas to markets east of Chicago only through existing facilities and exchanges. No new pipeline construction is proposed east of Chicago by any applicant.

Why, one may ask, does El Paso "protest so much" on this subject? Again, the answer is as simple as it is factual: proponents of the trans-Canadian projects have repeatedly created the completely erroneous impression that El Paso, if it can move the gas East of California, will encounter all sorts of complex difficulties. The following is a direct quote from the Northwest Pipeline Corporation (proponent of Alcan):

> "The LNG system is dependent upon a complicated nation-wide displacement "theory" for transferring the gas from the West Coast to the rest of the United States."

Again, a quote from an elected official who supports Arctic Gas:

> "The entire El Paso project rests upon the concept of displacement, one which is without doubt physically possible given sufficient pipeline investment, but one which will surely create a legal and contractual night-mare." (emphasis added)

The falsity of that prediction was amply demonstrated last winter, when a "complicated theory" became a functioning system almost overnight and without any time for preparatory planning!

Once Americans throughout our nation realize that all three proposals can deliver gas to all domestic markets, they can focus on the very real differences among those projects--which one will deliver the gas at the earliest date, with greatest economic benefit to the United States, with complete U.S. control of what consumers pay for the gas, with minimal environmental damage, without governmental financing, and with minimal risk of schedule and cost overruns. On all these counts, El Paso is superior to the trans-Canadian proposals. More important, all of these factors are of great importance to all Americans, whether living in Maine or California.

If you have any questions at all concerning El Paso's project, we stand ready to respond immediately.

Thank you for your continued interest in which proposal best serves the nation's interest.

Sincerely yours,

John

AGO 668120

U. S. DELIVERIES OF GAS

In recent years, the U. S. natural gas industry has not been able to find new supplies of gas in quantities sufficient to offset the decline in reserves. This fact has resulted in increasing idle or unused capacity in the existing 1.1 million mile pipeline system crisscrossing the nation.

By 1980, pipelines extending northward from major natural gas production areas in Texas and Louisiana will have over 10 billion cubic feet/day of spare capacity. At the request of the Natural Gas Supply Committee, a study was prepared by the Energy Division of Foster Associates, Inc. to appraise the impact of declining gas supply on interstate pipeline transportation costs. This study reported that if the idle capacity is not filled, natural gas consumers will have to pay between 19¢ and 44¢ more per MCF of gas in order to amortize those facilities. El Paso's Trans-Alaska Gas Project will utilize this idle capacity to deliver Prudhoe Bay natural gas, either directly or through exchange of gas supplies, to markets throughout the nation.

After landing on the West Coast, Alaskan natural gas will be connected to existing major transmission systems in California and then delivered directly to markets in that state. How then, will Alaskan gas be delivered to markets in the Northwest, Middle West, and Eastern U. S.? The procedure is really quite simple. It is also inexpensive and efficient, and will cause an absolute minimum of environmental damage.

Approximately three billion cubic feet of natural gas are presently shipped each day from Texas and New Mexico to California. To the extent that this lower 48 supply can be replaced by volumes of gas delivered from Alaska, an equivalent amount of gas need not move from Texas to California. Instead, this gas can be put into existing pipeline systems for movement to other markets throughout the United States. This process is called displacement. As lower 48 supplies diminish, Alaskan gas will physically move from California to other markets by reversing the flow in the pipeline systems which currently serve California.

At most, the El Paso Trans-Alaska Gas Project will require construction of a few hundred miles of new interconnecting pipelines in California and Texas to facilitate this delivery system. In contrast, both of the trans-Canadian projects propose to build thousands of miles of new pipeline in the South 48, compounding the problem of pipeline under-utilization.