

NATURAL GAS PIPELINE FROM ALASKA

JOINT HEARINGS
BEFORE THE
SUBCOMMITTEE ON ENERGY AND POWER
COMMITTEE ON
INTERSTATE AND FOREIGN COMMERCE
AND THE
SUBCOMMITTEE ON
INDIAN AFFAIRS AND PUBLIC LANDS
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
HOUSE OF REPRESENTATIVES
NINETY-FIFTH CONGRESS
FIRST SESSION
ON
THE PRESIDENT'S DECISION ON AN ALASKAN NATURAL
GAS TRANSPORTATION SYSTEM

SEPTEMBER 22, 23, AND OCTOBER 14, 1977

Serial No. 95-79

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Alaska, State of:

Gallagher, J. Sterling, Commissioner of Revenue.

Thomas, Lowell, Jr., Lt. Governor.

Alberta Gas Trunk Line Co., Ltd., Calgary, Alberta, S. Robert Blair, president.

Alcan Pipeline Co., John G. McMillian, chairman and chief executive officer.

American Natural Resources Co., Arthur R. Seder, chairman.

Atlantic Richfield Co.:

Dickerson, Kenneth, counsel.

Goldsmith, Claude O., vice president, financing and tax division.

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Baldwin, Malcolm, senior staff member, program staff.

Jamieson, Ballard, counsel.

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Boyd, Harold, chairman.

Petty, Travis, president, El Paso Natural Gas Co.

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Executive Office of the President:

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Smith, Richard M., staff member, Energy Policy and Planning.

Executive Policy Board:

Dubois, Donald, Environmental Protection Agency.

Fearnside, John J., Acting Director, Materials Transportation Bureau, Department of Transportation.

Garrett, Lee, Chief of Engineering, Military Construction Directorate, U.S. Army Corps of Engineers.

Goldman, Leslie J., Acting Deputy Assistant Secretary for Policy Development, Department of Energy.

Martin, Guy R., Assistant Secretary, Land and Water Resources, Department of the Interior.

Exxon Co., U.S.A., L. G. Rawl, executive vice president.

Federal Energy Administration, Leslie J. Goldman, Assistant Administrator.

Federal Energy Regulatory Commission:

Curtis, Hon. Charles B., Acting Chairman.

Sewell, Wade, Acting Deputy Chief, Office of Policy Analysis.

Smith, Don S., Acting Commissioner.

Williams, Kenneth, Acting Chief, Bureau of Natural Gas.

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Foothills Pipe Lines (Yukon) Ltd., Kelly H. Gibson, chairman.

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National Audubon Society, Barbara B. Graham, attorney.

Pacific Interstate Transmission Co., H. L. Lepape, president.

Sierra Club, Barbara B. Graham, attorney.

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State, Department of:

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Crook, John R., Office of the Legal Adviser.

Treasury, Department of the, Roger C. Altman, Assistant Secretary (Domestic Finance).

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Westcoast Transmission Co., Ltd., Vancouver, British Columbia, Edwin C., Phillips, president.

White, Weld & Co., Jeremiah K. Ross, Jr., senior vice president.

Wilderness Society, Barbara B. Graham, attorney.

NATURAL GAS PIPELINE FROM ALASKA

THURSDAY, SEPTEMBER 22, 1977

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
AND THE
SUBCOMMITTEE ON INDIAN AFFAIRS AND PUBLIC LANDS,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittees met at 10 a.m., pursuant to notice, in room 2123, Rayburn House Office Building, Hon. John D. Dingell, chairman, Subcommittee on Energy and Power, and Hon. Teno Roncalio, chairman, Subcommittee on Indian Affairs and Public Lands, presiding.

Mr. DINGELL. The subcommittee will come to order.

The Subcommittee on Energy and Power and the Subcommittee on Indian Affairs and Public Lands hold today a joint hearing on the President's decision on an Alaskan natural gas transportation system. The hearing will continue tomorrow.

Dr. James R. Schlesinger was to be with us this morning but has found it necessary to be in the Senate to deal with the question of natural gas pricing.

I recognize at this time my dear friend and colleague, a most valuable member of the House, and the cochairman for these hearings, for such statement as he wishes to make at this time, Hon. Teno Roncalio.

Mr. RONCALIO. Thank you Mr. Chairman. I am pleased to be a part of these proceedings, today. I am particularly pleased to see Mr. Howard Boyd, chairman of the El Paso Natural Gas Co. here at the witness table who has asked to be the leadoff witness with a very short statement that will have serious and helpful national significance in helping this Nation meet its energy requirements. I would suggest, Mr. Chairman, that we ask Mr. Boyd to make any statement he has today.

Mr. DINGELL. The Chair observes that this is a hearing which relates to the Alaska Natural Gas Transportation Act which sets forth procedures to be used in arriving at a sound decision for selecting a system for transporting Alaskan natural gas to the lower 48 States. My good friend Mr. Roncalio and I and our two subcommittees worked closely together to achieve this piece of legislation.

Pursuant to that act, the President is today transmitting his decision on the matter to the Congress. For the President's decision to take effect, both Houses of Congress must adopt a resolution of

approval within 60 days. The Commerce Committee has 30 days from the date of the President's decision to report the matter to the full House. These time constraints require that we proceed without delay to a full consideration of the issues raised by the President's decision.

Today's hearing is a joint hearing of both the Energy and Power Subcommittee of the Commerce Committee and the Indian Affairs and Public Lands Subcommittee of the Interior Committee, chaired by my good friend and colleague from Wyoming, Teno Roncalio. The joint hearing of our subcommittees is designed to eliminate the need for two separate sets of hearings on this matter.

Mr. Roncalio, I welcome you and the members of your subcommittee to the hearing this morning.

During the next 2 days we will receive testimony on the issues raised by the President's decision from the Secretary of Energy, the State Department, the successful applicant to build the Alaskan natural gas transportation system, financial witnesses, the producers who will produce and sell the gas, some of the pipelines in the lower 48 States that hope to buy the Alaskan gas for resale, the State of Alaska, and a witness on the environmental effects of the Alcan pipeline. We will require a third day of hearings in October to receive testimony from the Council on Environmental Quality and the Federal Power Commission regarding their reports on the President's decision. In addition, the administration is prepared to appear again on the third day of hearings in October, if necessary, to testify further regarding the President's decision.

As I have noted earlier, Dr. Schlesinger will not be with us this morning in order that he may be present to work with the Senate on important matters relating to national gas policy and the National Energy Act. He will appear tomorrow at 10 a.m. to present his perspective on the details of the President's decision.

Before proceeding with the scheduled witnesses, the Chair would like to recognize my good friend and cochairman, Mr. Roncalio, to introduce our first witness, Mr. Howard Boyd.

Mr. RONCALIO. Thank you very much, John, and thank you for your excellent and flattering remarks about your cochairman. I suspect that you drafted those statements after you heard that I would not be continuing my career in Congress for another year and a half.

Mr. DINGELL. I was out in Wyoming last year and I returned here to try to deter you from that unwise step.

Mr. RONCALIO. Colleagues and friends, as I stated earlier, I believe this culminates a very spirited competitive effort entered into by three outstanding American enterprises to try to help solve our problems to deliver the Prudhoe Bay gas to the lower 48 and I will, without further adieu, be pleased to ask that Mr. Howard Boyd, chief executive officer and chairman of the board of El Paso Natural Gas proceed with his statement which is of such national importance at this time. I welcome Mr. Boyd also as a friend of my State of Wyoming. In 1953 the Union Pacific Corp. closed all of its mines, at the time converting its system from coal to diesel oil to run the railroad. That step put over 3,000 people out of work in my home town and within 6 months thereafter El Paso Natural Gas Co. came along and hired as many of those people as they could, up

to about 1,100 at one time, in exploration practices, employment in that area, which meant so much to my people at that time.

We are delighted to have you here and you may proceed with your statement.

Mr. DINGELL. Our colleague from Alaska, Mr. Young, has a brief statement he wishes to make.

Mr. YOUNG. Thank you, Mr. Chairman, and members of the committee.

As a Representative from Alaska, the only one who represents that great State, it never ceases to amaze me how much interest Alaska has been able to generate over the last 5 years. Oil, now gas and, of course, this is a hearing on the administration recommendation for a route to be selected.

I would like to, at this time, express my dismay and disappointment that the Members have had so little time prior to this hearing to review the administration recommendation. It is my understanding it is now before us and we now have Secretary Schlesinger unable to appear before us.

All of the Alaskan gas projects involve billions of dollars, important international issues, human rights, environmental concerns, and I am sure in the hearings we will receive many of the answers to the questions we will have.

I know, myself, I have had no opportunity to review the document that was signed in Canada and I do not believe that any of the members of these subcommittees have had time to review the document.

I must also register disappointment that the administration has seen fit to reject the trans-Alaskan all-American project. I continue to regard this project as being the best in terms of providing gas at the earliest moment and providing superior direct benefits to the U.S. economy. Nevertheless, I have to concede that the Alcan proposal is not a total loss for the State of Alaska; it will benefit Alaska. However, going beyond my parochial concerns, I still see some significant national problems arising from a decision to go with the trans-Canada line.

I will conclude by stating these specific concerns and ask that the witnesses explain to the committee how these matters will be or have been resolved. Timing remains the most critical item. Very simply our national interest will be served by the earliest delivery of needed North Slope gas. Therefore, I am concerned about potential delays affecting Alcan emanating from insufficient engineering work and Native land claims settlement. Judge Litt recommended against Alcan on the grounds that it failed to meet basic Federal Power Commission preproject engineering standards; what assurances can be given to Congress that this problem will not delay construction? Regarding Native claims, the settlement of the James Bay claims in Canada have dragged on for years. If similar delays occur in the Yukon and generate uncertainty about the project's fate, will pipeline construction be held up and will financing be available in the face of uncertainty?

Financing this project is my second concern. Will Government backing or guarantees be needed? Which financial institutions have indicated a willingness to invest in this project? What will be the role of the North Slope gas producers? Who will bear the risk

on noncompletion of the line? Before Congress approves any of these projects, these basic questions require clear answers.

The sources of labor and equipment for the Alcan pipeline are my third concern. A prime advantage of the El Paso proposal is its reliance on American labor and equipment. I hope the administration can explain where the pipe for the Alcan line will come from, who will work on the line, et cetera. Given the continued sluggishness of our economy, we should be on the lookout for projects which can add a little stimulus.

Lastly, I have a broad general concern: What will be the congressional role during the rest of the pipeline process? I am wary of presenting the administration a blank check via the joint resolution we will consider. If Congress approves a multibillion-dollar project that may well involve Federal financial involvement and international protocols, among other items, Congress should be guaranteed a continued role in rendering key decisions.

Mr. RONCALIO. Let me respond to my dear friend from Alaska with whom I have labored so many hours in his State recently.

I ask unanimous consent, Mr. Chairman, that there be admitted into the record following Mr. Boyd's remarks, the entire 26-page document executed by the Governments of the United States and Canada the day before yesterday in Ottawa, Ontario, Canada, one called "Agreement on Principles Applicable to a Northern Natural Gas Pipeline." This document, together with all of its appendixes, constitutes the basis of the hearing today and I know my colleague from Alaska will want to look it over.

Mr. YOUNG. If the gentleman will yield, this, I agree, is the short document but it is not a total Presidential decision and the Congress is acting in the dark. This wouldn't be the first time. I hope the administration gets it to the Congress in time for us to digest it and understand really what we are doing. In the final analysis the Congress must be responsible.

Mr. DINGELL. With all respect for the gentleman from Alaska, it is not the practice of either of us, Mr. Roncalio or myself, to sit idly by and allow legislation to go through without adequate exploration of the legislation and the circumstances that surround it.

I give my good friend my assurance that we will pursue this matter forcefully and we will try to see to it that all aspects are properly and fully explored by our subcommittees. I know in this matter I speak not only for myself but for my distinguished co-chairman, Mr. Roncalio.

With that, Mr. Boyd, with apologies to you for the delay in recognizing you, we recognize you at this time

[The documents referred to follow:]

AGREEMENT BETWEEN CANADA AND THE UNITED STATES
OF AMERICA ON PRINCIPLES APPLICABLE TO
A NORTHERN NATURAL GAS PIPELINE

The Government of Canada and the Government of
the United States of America,

DESIRING to advance the national economic and
energy interests and to maximize related industrial
benefits of each country, through the construction and
operation of a pipeline system to provide for the trans-
portation of natural gas from Alaska and from Northern
Canada,

Hereby agree to the following principles for the
construction and operation of such a system:

1. Pipeline Route

The construction and operation of a pipeline for
the transmission of Alaskan natural gas will be along the
route set forth in Annex I, such pipeline being herein-
after referred to as "the Pipeline". All necessary action
will be taken to authorize the construction and operation
of the Pipeline in accordance with the principles set out
in this Agreement.

2. Expeditious Construction; Timetable

(a) Both Governments will take measures to ensure
the prompt issuance of all necessary permits, licenses,
certificates, rights-of-way, leases and other authorizations
required for the expeditious construction and commencement
of operation of the Pipeline, with a view to commencing
construction according to the following timetable:

- Alaska - January 1, 1980
- Yukon - main line pipe laying January 1, 1981
- Other construction in Canada to provide for
timely completion of the Pipeline to enable
initial operation by January 1, 1983

(b) All charges for such permits, licenses, certi-
ficates, rights-of-way, leases and other authorizations will
be just and reasonable and apply to the Pipeline in the same
non-discriminatory manner as to any other similar pipeline.

(c) Both Governments will take measures necessary to facilitate the expeditious and efficient construction of the Pipeline, consistent with the respective regulatory requirements of each country.

3. Capacity of Pipeline and Availability of Gas

(a) The initial capacity of the Pipeline will be sufficient to meet, when required, the contractual requirements of United States shippers and of Canadian shippers. It is contemplated that this capacity will be 2.4 billion cubic feet per day (bcfd) for Alaska gas and 1.2 bcfd for Northern Canadian gas. At such time as a lateral pipeline transmitting Northern Canadian gas, hereinafter referred to as "the Dempster Line", is to be connected to the Pipeline or at any time additional pipeline capacity is needed to meet the contractual requirements of United States or Canadian shippers, the required authorizations will be provided, subject to regulatory requirements, to expand the capacity of the Pipeline in an efficient manner to meet those contractual requirements.

(b) The shippers on the Pipeline will, upon demonstration that an amount of Canadian gas equal on a British Thermal Unit (BTU) replacement value basis will be made available for contemporaneous export to the United States, make available from Alaska gas transmitted through the Pipeline, gas to meet the needs of remote users in the Yukon and in the provinces through which the Pipeline passes. Such replacement gas will be treated as hydrocarbons in transit for purposes of the Agreement between the Government of Canada and the Government of the United States of America concerning Transit Pipelines, hereinafter referred to as "the Transit Pipeline Treaty". The shippers on the Pipeline will not incur any cost for provision of such Alaska gas except those capital costs arising from the following provisions:

(i) the owner of the Pipeline in the Yukon will make arrangements to provide gas to the communities of Beaver Creek, Burwash Landing, Destruction Bay, Haines Junction, Whitehorse, Teslin, Upper Liard and Watson Lake at a total cost to the owner of the Pipeline not to exceed Canadian \$2.5 million;

(ii) the owner of the Pipeline in the Yukon will make arrangements to provide gas to such other remote communities in the Yukon as may request such gas within a period of two years following commencement of operation of the Pipeline at a cost to the owner not to exceed the product of Canadian \$2500 and the number of customers in the communities, to a maximum total cost of Canadian \$2.5 million.

4. Financing

(a) It is understood that the construction of the Pipeline will be privately financed. Both Governments recognize that the companies owning the Pipeline in each country will have to demonstrate to the satisfaction of the United States or the Canadian Government, as applicable, that protections against risks of non-completion and interruption are on a basis acceptable to that Government ~~before proof of financing is established and construction~~ allowed to begin.

(b) The two Governments recognize the importance of constructing the Pipeline in a timely way and under effective cost controls. Therefore, the return on the equity investment in the Pipeline will be based on a variable rate of return for each company owning a segment of the Pipeline, designed to provide incentives to avoid cost overruns and to minimize costs consistent with sound pipeline management. The base for the incentive program used for establishing the appropriate rate of return will be the capital costs used in measuring cost overruns as set forth in Annex III.

(c) It is understood that debt instruments issued in connection with the financing of the Pipeline in Canada will not contain any provision, apart from normal trust indenture restrictions generally applicable in the pipeline industry, which would prohibit, limit or inhibit the financing of the construction of the Dempster Line; nor will the variable rate of return provisions referred to in subparagraph (b) be continued to the detriment of financing the Dempster Line.

5. Taxation and Provincial Undertakings

(a) Both Governments reiterate their commitments as set forth in the Transit Pipeline Treaty with respect to non-discriminatory taxation, and take note of the statements issued by Governments of the Provinces of British Columbia, Alberta and Saskatchewan, attached hereto as Annex V, in which those Governments undertake to ensure adherence to the provisions of the Transit Pipeline Treaty with respect to non-interference with throughput and to non-discriminatory treatment with respect to taxes, fees or other monetary charges on either the Pipeline or throughput.

(b) With respect to the Yukon Property Tax imposed on or for the use of the Pipeline the following principles apply:

(i) The maximum level of the property tax, and other direct taxes having an incidence exclusively, or virtually exclusively, on the Pipeline, including taxes on gas used as compressor fuel, imposed by the Government of the Yukon Territory or any public authority therein on or for the use of the Pipeline, herein referred to as the Yukon Property Tax, will not exceed \$30 million Canadian per year adjusted annually from 1983 by the Canadian Gross National Product price deflator as determined by Statistics Canada, hereinafter referred to as the GNP price deflator.

(ii) For the period beginning January 1, 1980, and ending on December 31 of the year in which leave to open the Pipeline is granted by the appropriate regulatory authority, the Yukon Property Tax will not exceed the following:

1980--\$5 million Canadian

1981--\$10 million Canadian

1982--\$20 million Canadian

Any subsequent year to which this provision applies--\$25 million Canadian.

(iii) The Yukon Property Tax formula described in subparagraph (b)(i) will apply from January 1 after the year in which leave to open the Pipeline is granted by the appropriate regulatory authority until the date that is the earlier of the following, hereinafter called the tax termination date:

(A) December 31, 2008, or

(B) December 31 of the year in which leave to open the Dempster Line is granted by the appropriate regulatory authority.

(iv) Subject to subparagraph (b)(iii), if for the year ending on December 31, 1987, the percentage increase of the aggregate per capita revenue derived from all property tax levied by any public authority in the Yukon Territory (excluding the Yukon Property Tax) and grants to municipalities and Local Improvement Districts from the Government of the Yukon Territory, as compared to the aggregate per capita revenue derived from such sources for 1983, is greater than the percentage increase for 1987 of the Yukon Property Tax as compared to the Yukon Property Tax for 1983, the maximum level of the Yukon Property Tax for 1987 may be increased to equal the amount it would have reached had it increased over the period at the same rate as the aggregate per capita revenue.

(v) If for any year in the period commencing January 1, 1988, and ending on the tax termination date, the annual percentage increase of the aggregate per capita revenue derived from all property tax levied by any public authority in the Yukon Territory (excluding the Yukon Property Tax) and grants to municipalities and Local Improvement Districts from the Government of the Yukon Territory as compared to the aggregate per capita revenue derived from such sources for the immediately preceding year exceeds the percentage increase for that year of the Yukon Property Tax as compared to the Yukon Property Tax for the immediately preceding year, the maximum level of the Yukon Property Tax for that year may be adjusted by the percentage increase of the aggregate per capita revenue in place of the percentage increase that otherwise might apply.

(vi) The provisions of subparagraph (b) (i) ~~will apply to the value of the Pipeline for the capacities contemplated in this Agreement.~~ The Yukon Property Tax will increase for the additional facilities beyond the aforesaid contemplated capacity in direct proportion to the increase in the gross asset value of the Pipeline.

(vii) In the event that between the date of this Agreement and January 1, 1983, the rate of the Alaska property tax on pipelines, taking into account the mill rate and the method of valuation, increases by a percentage greater than the cumulative percentage increase in the Canadian GNP deflator over the same period, there may be an adjustment on January 1, 1983, to the amount of \$30 million Canadian described in subparagraph (b) (i) of the Yukon Property Tax to reflect this difference. In defining the Alaska property tax for purposes of this Agreement, the definition of the Yukon Property Tax will apply mutatis mutandis.

(viii) In the event that, for any year during the period described in subparagraph (iii), the annual rate of the Alaska property tax on or for the use of the Pipeline in Alaska increases by a percentage over that imposed for the immediate preceding year that is greater than the increase in percentage of the Yukon Property Tax for the year, as adjusted, from that applied to the immediately preceding year, the Yukon Property Tax may be increased to reflect the percentage increase of the Alaska property tax.

(ix) It is understood that indirect socio-economic costs in the Yukon Territory will not be reflected in the cost of service to the United States shippers other than through the Yukon Property Tax. It is further understood that no public authority will require creation of a special fund or funds in connection with construction of the Pipeline in the Yukon, financed in a manner which is reflected in the cost of service to U.S. shippers, other than through the Yukon Property Tax. However, should public authorities in the State of Alaska require creation of a special fund or funds, financed by contributions not fully reimbursable, in connection with construction of the Pipeline in Alaska, the Governments of Canada or the Yukon Territory will have the right to take similar action.

(c) The Government of Canada will use its best endeavors to ensure that the level of any property tax imposed by the Government of the Northwest Territories on or for the use of that part of the Dempster Line that is within the Northwest Territories is reasonably comparable to the level of the property tax imposed by the Government of the Yukon Territory on or for the use of that part of the Dempster Line that is in the Yukon.

6. Tariffs and Cost Allocation

It is agreed that the following principles will apply for purposes of cost allocation used in determining the cost of service applicable to each shipper on the Pipeline in Canada:

(a) The Pipeline in Canada and the Dempster Line will be divided into zones as set forth in Annex II. Except for fuel and except for Zone 11 (the Dawson-Whitehorse portion of the Dempster Line), the cost of service to each shipper in each zone will be determined on the basis of volumes as set forth in transportation contracts. The volumes used to assign these costs will reflect the original BTU content of Alaskan gas for U.S. shippers and Northern Canadian gas for Canadian shippers, and will make allowance for the change in heat content as the result of commingling. Each shipper will provide volumes for line losses and line pack in proportion to the contracted volumes transported in the zone. Each shipper will provide fuel requirements in relation to the volume of his gas being carried and to the content of the gas as it affects fuel consumption.

(b) It is understood that, to avoid increased construction and operating costs for the transportation of Alaskan gas, the Pipeline will follow a southern route through the Yukon along the Alaska Highway rather than a northern route through Dawson City and along the Klondike Highway. In order to provide alternative benefits for the transportation of Canadian gas to replace those benefits that would have been provided by the northern route through Dawson City, U.S. shippers will participate in the cost of service in Zone 11. It is agreed that if cost overruns on construction of the Pipeline in Canada do not exceed filed costs set forth in Part D of Annex III by more than 35 percent, U.S. shippers will pay the full cost of service in Zone 11. U.S. shipper participation will decline if overruns on the Pipeline in Canada exceed 35 percent; however, at the minimum the U.S. shippers' share will be the greater of either two-thirds of the cost of service or the proportion of contracted Alaskan gas in relation to all contracted gas carried in the Pipeline. The proportion of the cost of service borne by U.S. shippers in Zone 11 will be reduced should overruns on the cost of construction in that Zone exceed 35 percent after allowance for the benefits to U.S. shippers derived from Pipeline construction cost savings in other Zones. Notwithstanding the foregoing, at the minimum, the U.S. shippers' share will be the greater of either two-thirds of the cost of service or the proportion of contracted Alaskan gas in relation to all contracted gas carried in the Pipeline. Details of this allocation of cost of service are set out in Annex III.

(c) Notwithstanding the principles in subparagraphs (a) and (b), in the event that the total volume of gas offered for shipment exceeds the efficient capacity of the Pipeline, the method of cost allocation for the cost of service for shipments of Alaskan gas (minimum entitlement 2.4 bcfd) or Northern Canadian gas (minimum entitlement 1.2 bcfd) in excess of the efficient capacity of the Pipeline will be subject to

review and subsequent agreement by both Governments; provided however that shippers of either country may transport additional volumes without such review and agreement, but subject to appropriate regulatory approval, if such transportation does not lead to a higher cost of service or share of Pipeline fuel requirements attributable to shippers of the other country.

(d) It is agreed that Zone 11 costs of service allocated to U.S. shippers will not include costs additional to those attributable to a pipe size of 42 inches. It is understood that in Zones 10 and 11 the Dempster Line will be of the same gauge and diameter and similar in other respects, subject to differences in terrain. Zone 11 costs will include only facilities installed at the date of issuance of the leave to open order, or that are added within three years thereafter.

7. Supply of Goods and Services

(a) Having regard to the objectives of this Agreement, each Government will endeavor to ensure that the supply of goods and services to the Pipeline project will be on generally competitive terms. Elements to be taken into account in weighing competitiveness will include price, reliability, servicing capacity and delivery schedules.

(b) It is understood that through the coordination procedures in paragraph 8 below, either Government may institute consultations with the other in particular cases where it may appear that the objectives of subparagraph (a) are not being met. Remedies to be considered would include the renegotiation of contracts or the reopening of bids.

8. Coordination and Consultation

Each Government will designate a senior official for the purpose of carrying on periodic consultations on the implementation of these principles relating to the construction and operation of the Pipeline. The designated senior officials may, in turn, designate additional representatives to carry out such consultations, which representatives, individually or as a group, may make recommendations with respect to particular disputes or other matters, and may take such other action as may be mutually agreed, for the purpose of facilitating the construction and operation of the Pipeline.

9. Regulatory Authorities: Consultation

The respective regulatory authorities of the two Governments will consult from time to time on relevant matters arising under this Agreement, particularly on the matters referred to in paragraphs 4, 5 and 6, relating to tariffs for the transportation of gas through the Pipeline.

10. Technical Study Group on Pipe

(a) The Governments will establish a technical study group for the purpose of testing and evaluating 54-inch 1120 pounds per square inch (psi), 48-inch 1260 psi, and 48-inch 1680 psi pipe or any other combination of pressure and diameter which would achieve safety, reliability and economic efficiency for operation of the Pipeline. It is understood that the decision relating to pipeline specifications remains the responsibility of the appropriate regulatory authorities.

(b) It is agreed that the efficient pipe for the volumes contemplated (including reasonable provision for expansion), subject to appropriate regulatory authorization, will be installed from the point of interconnection of the Pipeline with the Dempster Line near Whitehorse to the point near Caroline, Alberta, where the Pipeline bifurcates into a western and an eastern leg.

11. Direct Charges by Public Authorities

(a) Consultation will take place at the request of either Government to consider direct charges by public authorities imposed on the Pipeline where there is an element of doubt as to whether such charges should be included in the cost of service.

(b) It is understood that the direct charges imposed by public authorities requiring approval by the appropriate regulatory authority for inclusion in the cost of service will be subject to all of the tests required by the appropriate legislation and will include only

(i) those charges that are considered by the regulatory authority to be just and reasonable on the basis of accepted regulatory practice, and

(ii) those charges of a nature that would normally be paid by a natural gas pipeline in Canada. Examples of such charges are listed in Annex IV.

12. Other Costs

It is understood that there will be no charges on the Pipeline having an effect on the cost of service other than those:

(i) imposed by a public authority as contemplated in this Agreement or in accordance with the Transit Pipeline Treaty, or

(ii) caused by Acts of God, other unforeseen circumstances, or

(iii) normally paid by natural gas pipelines in Canada in accordance with accepted regulatory practice.

13. Compliance with Terms and Conditions

The principles applicable directly to the construction, operation and expansion of the Pipeline will be implemented through the imposition by the two Governments of appropriate terms and conditions in the granting of required authorizations. In the event of subsequent non-fulfillment of such a term or condition by an owner of the Pipeline, or by any other private person, the two Governments will not have responsibility therefor, but will take such appropriate action as is required to cause the owner to remedy or mitigate the consequences of such non-fulfillment.

14. Legislation

The two Governments recognize that legislation will be required to implement the provisions of this Agreement. In this regard, they will expeditiously seek all required legislative authority so as to facilitate the timely and efficient construction of the Pipeline and to remove any delays or impediments thereto.

15. Entry Into Force

This Agreement will become effective upon signature and shall remain in force for a period of 35 years and thereafter until terminated upon 12 months' notice given in writing by one Government to the other, provided that those provisions of the Agreement requiring legislative action will become effective upon exchange of notification that such legislative action has been completed.

ANNEX IThe Pipeline RouteIn Alaska:

The Pipeline constructed in Alaska by Alcan will commence at the discharge side of the Prudhoe Bay Field gas plant facilities. It will parallel the Alyeska oil pipeline southward on the North Slope of Alaska, cross the Brooks Range through the Atigun Pass, and continue on to Delta Junction.

At Delta Junction, the Pipeline will diverge from the Alyeska oil pipeline and follow the Alaska Highway and Haines oil products pipeline passing near the towns of Tanacross, Tok, and Northway Junction in Alaska. The Alcan facilities will connect with the proposed new facilities of Foothills Pipe Lines (South Yukon) Ltd. at the Alaska-Yukon border.

In Canada:

In Canada the Pipeline will commence at the Boundary of the State of Alaska and the Yukon Territory in the vicinity of the towns of Border City, Alaska and Boundary, Yukon. The following describes the general routing of the Pipeline in Canada:

From the Alaska-Yukon border, the Foothills Pipe Lines (South Yukon) Ltd. portion of the Pipeline will proceed in a southerly direction generally along the Alaska Highway to a point near Whitehorse, Yukon, and thence to a point on the Yukon-British Columbia border near Watson Lake, Yukon where it will join with the Foothills Pipe Lines (North B.C.) Ltd. portion of the Pipeline.

The Foothills Pipe Lines (North B.C.) Ltd. portion of the Pipeline will extend from Watson Lake in a southeasterly direction across the northeastern part of the Province of British Columbia to a point on the boundary between the Provinces of British Columbia and Alberta near Boundary Lake where it will interconnect with the Foothills Pipe Lines (Alta.) Ltd. portion of the Pipeline.

The Foothills Pipe Lines (Alta.) Ltd. portion of the Pipeline will extend from a point on the British Columbia - Alberta boundary near Boundary Lake in a southeasterly direction to Goid Creek and thence parallel to the existing right-of-way of The Alberta Gas Trunk Line Company Limited to James River near Caroline.

From James River a "western leg" will proceed in a southerly direction, generally following the existing right-of-way of The Alberta Gas Trunk Line Company Limited to a point on the Alberta-British Columbia boundary near Coleman in the Crow's Nest Pass area. At or near Coleman the Foothills Pipe Lines (Alta.) Ltd. portion of the Pipeline will interconnect with the Foothills Pipe Lines (South B.C.) Ltd. portion of the Pipeline.

The Foothills Pipe Lines (South B.C.) Ltd. portion of

the Pipeline will extend from a point on the Alberta-British Columbia boundary near Coleman in a southwesterly direction across British Columbia generally parallel to the existing pipeline facilities of Alberta Natural Gas Company Ltd. to a point on the International Boundary Line between Canada and the United States of America at or near Kingsgate in the Province of British Columbia where it will interconnect with the facilities of Pacific Gas Transmission Company.

Also, from James River, an "eastern leg" will proceed in a southeasterly direction to a point on the Alberta-Saskatchewan boundary near Empress, Alberta where it will interconnect with the Foothills Pipe Lines (Sask.) Ltd. portion of the Pipeline. The Foothills Pipe Lines (Sask.) Ltd. portion of the Pipeline will extend in a southeasterly direction across Saskatchewan to a point on the International Boundary Line between Canada and the United States of America at or near Monchy, Saskatchewan where it will interconnect with the facilities of Northern Border Pipeline Company.

ANNEX IIZones for the Pipeline and the Dempster Line
in Canada

- Zone 1 Foothills Pipe Lines (South Yukon) Ltd.
Alaska Boundary to point of interconnection with the
Dempster Line at or near Whitehorse.
- Zone 2 Foothills Pipe Lines (South Yukon) Ltd.
Whitehorse to Watson Lake.
- Zone 3 Foothills Pipe Lines (North B.C.) Ltd.
Watson Lake to point of interconnection with Westcoast's
main pipeline near Fort Nelson.
- Zone 4 Foothills Pipe Lines (North B.C.) Ltd.
Point of interconnection with Westcoast's main pipeline
near Fort Nelson to the Alberta-B.C. border.
- Zone 5 Foothills Pipe Lines (Alta.) Ltd.
Alberta-B.C. border to point of bifurcation near Caroline,
Alberta.
- Zone 6 Foothills Pipe Lines (Alta.) Ltd.
Caroline, Alta. to Alberta-Saskatchewan border near Empress.
- Zone 7 Foothills Pipe Lines (Alta.) Ltd.
Caroline to Alberta-B.C. border near Coleman.
- Zone 8 Foothills Pipe Lines (South B.C.) Ltd.
Alberta-B.C. border near Coleman to B.C.-United States
border near Kingsgate.
- Zone 9 Foothills Pipe Lines (Sask.) Ltd.
Alberta-Saskatchewan border near Empress to
Saskatchewan-United States border near Monchy.
- Zone 10 Foothills Pipe Lines (North Yukon) Ltd.
Mackenzie Delta Gas fields in the Mackenzie
Delta, N.W.T., to a point near the junction of
the Klondike and Dempster Highways just west of Dawson,
Yukon Territory.
- Zone 11 Foothills Pipe Lines (South Yukon) Ltd.
A point near the junction of the Klondike and Dempster
Highways near Dawson to the connecting point with the
Pipeline at or near Whitehorse.

ANNEX IIICost Allocation in Zone 11

The cost of service in Zone 11 shall be allocated to United States shippers on the following basis:

- (i) There will be calculated, in accordance with (iii) below, a percentage for Zones 1 - 9 in total by dividing the actual capital costs by filed capital costs and multiplying by 100. If actual capital costs are equal to or less than 135% of filed capital costs, then United States shippers will pay 100% of the cost of service in Zone 11. If actual capital costs in Zones 1 - 9 are between 135% and 145% of filed capital costs, then the percentage paid by United States shippers will be adjusted between 100% and 66 2/3% on a straight-line basis, except that in no case will the portion of cost of service paid by United States shippers be less than the proportion of the contracted volumes of Alaskan gas at the Alaska-Yukon border to the same volume of Alaskan gas plus the contracted volume of Northern Canadian gas. If the actual capital costs are equal to or exceed 145% of filed capital costs, the portion of the cost of service paid by United States shippers will be not less than 66 2/3% or the proportion as calculated above, whichever is the greater.
- (ii) There will be calculated a percentage for the cost overrun on the Dawson to Whitehorse lateral (Zone 11). After determining the dollar value of the overrun, there will be deducted from it:
 - (a) the dollar amount by which actual capital costs in Zones 1, 7, 8 and 9 (carrying Alaskan gas only) are less than 135% of filed capital costs referred to in (iii) below;
 - (b) in each of Zones 2, 3, 4, 5 and 6 the dollar amount by which actual capital costs are less than 135% of filed capital costs referred to in (iii) below, multiplied by the proportion that the U.S. contracted volume bears to the total contracted volume in that Zone.

If the actual capital costs in Zone 11, after making this adjustment, are equal to or less than 135% of filed capital costs, then no adjustment is required to the percentage of the cost of service paid by United States shippers as calculated in (i) above. If, however, after making this adjustment, the actual capital cost in Zone 11 is greater than 135% of the filed capital cost, then the proportion of the cost of service paid by

United States shippers will be a fraction (not exceeding 1) of the percentage of the cost of service calculated in (i) above, where the numerator of the fraction is 135% of the filed capital cost and the denominator of the fraction is actual capital cost less the adjustments from (a) and (b) above.

Notwithstanding the adjustments outlined above, in no case will the percentage of the actual cost of service borne by United States shippers be less than the greater of 66 2/3% or the proportion of the contracted volumes of Alaskan gas at the Alaska-Yukon border to the same volume of Alaskan gas plus the contracted volume of Northern Canadian gas.

- (iii) The "filed capital cost" to be applied to determine cost overruns for the purpose of cost allocation in (i) and (ii) above will be:

"Filed Capital Cost"
Estimates for the
Pipeline in Canada
(millions of Canadian
dollars)

The Pipeline in Canada (Zones 1 - 9) 1/

48" - 1260 lb. pressure pipeline -	3,873
or 48" - 1680 lb. pressure pipeline -	4,418
or 54" - 1120 lb. pressure pipeline -	4,234

"Filed Capital Cost"
Estimates for the
Pipeline in Canada
(millions of Canadian
dollars)

Zone 11 of the Dempster Line 2/

30" - Section of Dempster line from Whitehorse to Dawson -	549
or 36" - Section of Dempster line from Whitehorse to Dawson -	585
or 42" - Section of Dempster line from Whitehorse to Dawson -	705

Details for Zones 1 - 9 are shown in the following table:

1/ These filed capital costs include and are based upon (a) a 1260 psi, 48-inch line from the Alaska-Yukon border to the point of possible interconnection near Whitehorse; (b) a 1260 psi, 48-inch; or 1680 psi, 48-inch; or 1120 psi, 54-inch line from the point of possible interconnection near Whitehorse to Caroline Junction; (c) a 42-inch line from Caroline Junction to the Canada-United States border near Monchy, Saskatchewan; and (d) a 36-inch line from Caroline Junction to the Canada-United States border near Kingsgate, British Columbia. These costs are escalated for a date of commencement of operations of January 1, 1983.

2/ The costs are escalated for a date of commencement of operations of January 1, 1985.

Filed Capital Costs for the Pipeline in Canada

Zone	48" 1260 psi	48" 1680 psi	54" 1120 psi
	\$ million (Canadian)	\$ million (Canadian)	\$ million (Canadian)
1	707	707	707
2	721	864	805
3	738	850	803
4	380	488	456
5	677	859	813
6	236	236	236
7	126	126	126
8	83	83	83
9*	<u>205</u>	<u>205</u>	<u>205</u>
Total Zones 1-9	3,873	4,418	4,234

* The last compression station in Zone 9 includes facilities to provide compression up to 1440 psi.

It is recognized that the above are estimates of capital costs. They do not include working capital, property taxes or the provision for road maintenance in the Yukon Territory (not to exceed \$30 million Canadian).

If at the time construction is authorized, both Governments have agreed to a starting date for the operation of the Pipeline different from January 1, 1983, then the capital cost estimates shall be adjusted for the difference in time using the GNP price deflator from January 1, 1983. Similarly at the time construction is authorized for the Dempster Line, if the starting date for the operation agreed to by the Canadian Government is different from January 1, 1985, then the capital cost estimate shall be adjusted for the difference in timing using the GNP price deflator from January 1, 1985. The diameter of the pipeline in Zone 11, for purposes of cost allocation, may be 30", 36" or 42", so long as the same diameter pipe is used from the Delta to Dawson (Zone 10).

The actual capital cost, for purposes of this Annex, shall be the booked cost as of the date "leave to open" is granted plus amounts still outstanding to be accrued on a basis to be approved by the National Energy Board. Actual capital costs shall exclude working capital, property taxes, and direct charges for road maintenance of up to \$30 million Canadian in the Yukon as specifically provided herein.

For purposes of this Annex, actual capital costs will exclude the effect of increases in cost or delays caused by actions attributable to the U.S. shippers, related U.S. pipeline companies, Alaskan producers, the Prudhoe Bay deliverability or gas conditioning plant construction and the United States or State Governments. If the appropriate regulatory bodies of the two countries are unable to agree upon the amount of such costs to be excluded, the determination shall be made in accordance with the procedures set forth in Article IX of the Transit Pipeline Treaty.

The filed capital costs of facilities in Zones 7 and 8 will be included in calculations pursuant to this Annex only to the extent that such facilities are constructed to meet the requirements of U.S. shippers.

ANNEX VStatement by the Government of the Province of Alberta

The Government of the Province of Alberta agrees in principle to the provisions contained in the Canada-United States Pipeline Treaty of January 28, 1977, and furthermore, Alberta is prepared to cooperate with the Federal Government to ensure that the provisions of the Canada-United States Treaty, with respect to non-interference of throughput and non-discriminatory treatment with respect to taxes, fees, or other monetary charges on either the Pipeline or throughput, are adhered to. Specific details of this undertaking will be the subject of a Federal-Provincial Agreement to be negotiated when the Canada-United States protocol or understanding has been finalized.

Statement by the Government of the Province of Saskatchewan

The Government of Saskatchewan is willing to cooperate with the Government of Canada to facilitate construction of the Alcan Pipeline through southwestern Saskatchewan and, to that end, the Government of Saskatchewan expresses its concurrence with the principles elaborated in the Transit Pipeline Agreement signed between Canada and the United States on January 28, 1977. In so doing, it intends not to take any discriminatory action towards such pipelines in respect of throughput, reporting requirements, and environmental protection, pipeline safety, taxes, fees or monetary charges that it would not take against any similar pipeline passing through its jurisdiction. Further details relating to Canada-Saskatchewan relations regarding the Alcan Pipeline will be the subject of Federal-Provincial agreements to be negotiated after a Canada-United States understanding has been finalized.

Statement by the Government of the Province of British-Columbia

The Government of the Province of British Columbia agrees in principle to the provisions contained in the Canada-United States Pipeline Treaty of January 28, 1977, and furthermore British Columbia is prepared to co-operate with the Federal Government to ensure that the provisions of the Canada-United States Treaty, with respect to non-interference of throughput and non-discriminatory treatment with respect to taxes, fees or other monetary charges on either the Pipeline or throughput, are adhered to. Specific details of this undertaking will be the subject of a Federal-Provincial Agreement to be negotiated at as early a date as possible. Such agreement should guarantee that British Columbia's position expressed in its telex of August 31 is protected.

AD REFERENDUM TEXT OF AN AGREEMENT BETWEEN THE GOVERNMENT
OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT
OF CANADA CONCERNING TRANSIT PIPELINES

The Government of the United States of America and the Government of Canada;

Believing that pipelines can be an efficient, economical and safe means of transporting hydrocarbons from producing areas to consumers, in both the United States and Canada;

Noting the number of hydrocarbon pipelines which now connect the United States and Canada and the important service which they render in transporting hydrocarbons to consumers in both countries;

Convinced that measures to ensure the uninterrupted transmission by pipeline through the territory of one Party of hydrocarbons not originating in the territory of that Party, for delivery to the territory of the other Party, are the proper subject of an agreement between the two Governments;

Have agreed as follows:

ARTICLE I

For the purpose of this Agreement:

- (a) "Transit Pipeline" means a pipeline or any part thereof, including pipe, valves and other appurtenances attached to pipe, compressor or pumping units, metering stations, regulator stations, delivery stations, loading and unloading facilities, storage facilities, tanks, fabricated assemblies, reservoirs, racks, and all real and personal property and works connected therewith, used for the transmission of hydrocarbons in transit. "Transit Pipeline" shall not include any portion of a pipeline system not used for the transmission of hydrocarbons in transit.
- (b) "Hydrocarbons" means any chemical compounds composed primarily of carbon and hydrogen which are recovered from a natural reservoir in a solid, semi-solid, liquid or gaseous state, including crude oil, natural gas, natural gas liquids and bitumen, and their derivative products resulting from their production, processing or refining. In addition, "hydrocarbons"

includes coal and feedstocks derived from crude oil, natural gas, natural gas liquids or coal used for the production of petro-chemicals.

- (c) "Hydrocarbons in transit" means hydrocarbons transmitted in a "Transit Pipeline" located within the territory of one Party, which hydrocarbons do not originate in the territory of that Party, for delivery to, or for storage before delivery to, the territory of the other Party.

ARTICLE II

1. No public authority in the territory of either Party shall institute any measures, other than those provided for in Article V, which are intended to, or which would have the effect of, impeding, diverting, redirecting or interfering with in any way the transmission of hydrocarbons in transit.

2. The provisions of paragraph 1 of this Article apply:

(a) In the case of Transit Pipelines carrying exclusively hydrocarbons in transit, to such volumes as may be transmitted to the Party of destination in the Transit Pipeline;

(b) In the case of Transit Pipelines in operation at the time of entry into force of this Agreement not carrying exclusively hydrocarbons in transit, to the average daily volume of hydrocarbons in transit transmitted to the Party of destination during the 12 month period immediately prior to the imposition of any measures described in paragraph 1;

(c) In the case of Transit Pipelines which come into operation subsequent to the entry into force of this Agreement not carrying exclusively hydrocarbons in transit, to such volumes of hydrocarbons in transit as may be authorized by the appropriate regulatory bodies; or
(d) To such other volumes of hydrocarbons in transit as may be agreed upon subsequently by the Parties.

3. Each Party undertakes to facilitate the expeditious issuance of such permits, licenses, or other authorizations as may be required from time to time for the import into, or export from, its territory through a Transit Pipeline of hydrocarbons in transit.

ARTICLE III

1. No public authority in the territory of either Party shall impose any fee, duty, tax or other monetary charge, either directly or indirectly, on or for the use of any Transit Pipeline unless such fee, duty, tax or other monetary charge would also be applicable to or for the use of similar pipelines located within the jurisdiction of that public authority.

2. No public authority in the territory of either Party shall impose upon hydrocarbons in transit any import, export or transit fee, duty, tax or other monetary charge. This paragraph shall not preclude the inclusion of hydrocarbon throughput as a factor in the calculation of taxes referred to in paragraph 1.

ARTICLE IV

1. Notwithstanding the provisions of Article II and paragraph 2 of Article III, a Transit Pipeline and the transmission of hydrocarbons through a Transit Pipeline shall be subject to regulations by the appropriate governmental authorities having jurisdiction over such Transit Pipeline in the same manner as for any other pipelines or the transmission of hydrocarbons by pipeline subject to the authority of such governmental authorities with respect to such matters as the following:

- a. Pipeline safety and technical pipeline construction and operation standards;
- b. environmental protection;
- c. rates, tolls, tariffs and financial regulations relating to pipelines;
- d. reporting requirements, statistical and financial information concerning pipeline operations and information concerning valuation of pipeline properties.

2. All regulations, requirements, terms and conditions imposed under paragraph 1 shall be just and reasonable, and shall always, under substantially similar circumstances with respect to all hydrocarbons transmitted in similar pipelines, other than intra-provincial and intra-state pipelines, be applied equally to all persons and in the same manner.

ARTICLE V

1. In the event of an actual or threatened natural disaster, an operating emergency, or other demonstrable need temporarily to reduce or stop for safety or technical reasons the normal operation of a Transit Pipeline, the flow of hydrocarbons through such Transit Pipeline may be temporarily reduced or stopped in the interest of sound pipeline management and operational efficiency by or with the approval of the appropriate regulatory authorities of the Party in whose territory such disaster, emergency or other demonstrable need occurs.

2. Whenever a temporary reduction of the flow of hydrocarbons through a Transit Pipeline occurs as provided in paragraph 1:

- (a) In the case of a Transit Pipeline carrying exclusively hydrocarbons in transit, the Party for whose territory such hydrocarbons are intended shall be entitled to receive the total amount of the reduced flow of hydrocarbons,
- (b) In the case of a Transit Pipeline not carrying exclusively hydrocarbons in transit, each Party shall be entitled to receive downstream of the point of interruption a proportion of the reduced flow of hydrocarbons equal to the proportion of its net inputs to the total inputs to the Transit Pipeline made upstream of the point of interruption. If the two Parties are able collectively to make inputs to the Transit Pipeline upstream of the point of interruption, for delivery downstream of the point of interruption, of a volume of hydrocarbons which exceeds the temporarily reduced capacity of such Transit Pipeline, each Party shall be entitled to transmit through such Transit Pipeline a proportion of the total reduced capacity equal to its authorized share of the flow of hydrocarbons through such Transit Pipeline prior to the reduction. If no

share has been authorized, specified or agreed upon pursuant to Article II, paragraph 2, the share of the Parties in the reduced flow of hydrocarbons shall be in proportion to the share of each Party's net inputs to the total flow of hydrocarbons through such Transit Pipeline during the 30 day period immediately preceding the reduction.

3. The Party in whose territory the disaster, emergency or other demonstrable need occurs resulting in a temporary reduction or stoppage of the flow of hydrocarbons shall not unnecessarily delay or cause delay in the expeditious restoration of normal pipeline operations.

ARTICLE VI

Nothing in this Agreement shall be considered as waiving the right of either Party to withhold consent, or to grant consent subject to such terms and conditions as it may establish consistent with the principles of uninterrupted transmission and of non-discrimination reflected in this Agreement, for the construction and operation on its territory of any Transit Pipeline construction of which commences subsequent to the entry into force of this Agreement, or to determine the route within its territory of such a Transit Pipeline.

ARTICLE VII

The Parties may, by mutual agreement, conclude a protocol or protocols to this Agreement concerning the application of this Agreement to a specific pipeline or pipelines.

ARTICLE VIII

The Parties may, by mutual agreement, amend this Agreement at any time.

ARTICLE IX

1. Any dispute between the Parties regarding the interpretation, application or operation of this Agreement shall, so far as possible, be settled by negotiation between them.

2. Any such dispute which is not settled by negotiation shall be submitted to arbitration at the request of either Party. Unless the Parties agree on a different procedure within a period of sixty days from the date of receipt by either Party from the other of a notice through diplomatic channels requesting arbitration of the dispute, the arbitration shall take place in accordance with the following provisions. Each Party shall nominate an arbitrator within a further period of sixty days. The two arbitrators nominated by the Parties shall within a further period of sixty days appoint a third arbitrator. If either Party fails to nominate an arbitrator within the period specified, or if the third arbitrator is not appointed within the period specified, either Party may request the President of the International Court of Justice (or, if the President is a national of either Party, the member of the Court ranking next in order of precedence who is not a national of either Party) to appoint such arbitrator. The third arbitrator shall not be a national of either Party, shall act as Chairman and shall determine where the arbitration shall be held.
3. The arbitrators appointed under the preceding paragraph shall decide any dispute, including appropriate remedies, by majority. Their decision shall be binding on the Parties.
4. The costs of any arbitration shall be shared equally between the Parties.

ARTICLE X

1. This Agreement is subject to ratification. Instruments of Ratification shall be exchanged at Ottawa.
2. This Agreement shall enter into force on the first day of the month following the month in which Instruments of Ratification are exchanged.
3. This Agreement shall remain in force for an initial period of thirty-five years. It may be terminated at the end of the initial thirty-five year period by either Party giving written notice

to the other Party, not less than ten years prior to the end of such initial period, of its intention to terminate this Agreement. If neither Party has given such notice of termination, this Agreement will thereafter continue in force automatically until ten years after either Party has given written notice to the other Party of its intention to terminate the Agreement.

IN WITNESS WHEREOF the undersigned representatives, duly authorized by their respective Governments, have signed this Agreement.

DONE in duplicate at Washington, D.C. in the English and French languages, both versions being equally authentic, this twenty-eighth day of January 1977.

Julius L. Katz

For the Government of the
United States of America

J. H. Warren

For the Government of Canada

* * * * *

STATEMENT OF HAROLD BOYD, CHAIRMAN, EL PASO NATURAL GAS PIPELINE CO., ACCOMPANIED BY TRAVIS PETTY, PRESIDENT, EL PASO NATURAL GAS CO., AND JOHN BENNETT, VICE PRESIDENT, EL PASO—ALASKA

Mr. BOYD. Thank you Mr. Chairman. May I open by expressing my thanks also to Chairman Roncalio for according to me on such short notice the opportunity to make a brief statement at the outset of these proceedings. I made that request because I have the feeling that the statement I am prepared to make will have significant bearing upon the character of this hearing and the course of the following proceedings in considering the President's recommendation.

Mr. DINGELL. Would you identify your associates? I notice Messrs. Bennett and Petty are with you.

Mr. BOYD. On my right is Mr. Travis Petty who is president of El Paso Natural Gas Co., which is one of the subsidiaries of El Paso on which I serve as chairman. On my left is Mr. John Bennett, vice president of El Paso—Alaska, which is the technical applicant for the certificate which has been the subject of extensive hearings before the Federal Power Commission.

Let me also say at the outset that my statement does not come with ease. El Paso sponsored a project to market Alaska gas by an all-American route, convinced that the overall national interest would thereby be best served. We are today unshakingly convinced

of the wisdom of that view but our judgment is not determinative of the issue.

The President of the United States, exercising the responsibility reposed in him by this Congress, has selected a different project and his decision is now before the Congress for ratification.

Human emotion tempts me to describe the benefits which we visualize in our project but political reality tells me that further proceedings before this Congress, followed by such judicial review as may be available, does not enjoy sufficient prospect of success to justify the harm to the public interest inherent in such a course. Above all else, Alaskan gas is needed in the lower 48 States at the earliest practicable date. To that end, we suggest that the sponsors of the trans-Canada project be permitted to commence their efforts to finance and to get on with the project.

Let me add that although our project did not succeed, I take pride in the fact that it made possible improvements of a significant nature in the project now recommended to Congress. Moreover, El Paso has developed a great body of expertise and substantial engineering and environmental data which can be of assistance to the project and which we are prepared to make available to it.

In conclusion, let me take this occasion to express our deep appreciation to those people, including Members of the Senate and the House who, sharing our view, have vigorously supported us during the long proceedings to this point.

With that, gentlemen, I conclude my statement.

Mr. RONCALIO. Major Boyd, I commend you for that statement. You have, indeed, strong and vigorous allies in your drive, one of which is not yet determined to go along with you, as we heard from the gentleman from Alaska.

I am glad you recognize the geographic international realities that have attended to this matter.

We can no longer resist what the two Governments have stated as their desire. I happen to believe that the act you do today will augur well for your company. You are a world pioneer in LNG transmission of natural gas and its delivery from great nations to great nations in this world. I hope you will continue in that very needed effort to bring commerce to this world between all of its people from all continents and all nations and to help with international trade, which is the finest effort we can make toward a peaceful and profitable world and the preservation of our own ideals in this country.

I thank you very much for your statement.

Mr. BOYD. Thank you very much for your kind words, Mr. Chairman.

Mr. DINGELL. You have made an honorable attempt to see that your plan was carried through. You are to be commended for the manner in which you have conducted yourself. I know you view the situation with some personal sorrow.

You and your associates deserve great credit. I am sorry matters have not proceeded more your way, but you need feel neither shame nor displeasure, for the manner in which you and your company conducted yourselves.

Mr. BOYD. I thank you, Mr. Chairman.

Mr. DINGELL. The Chair observes that we will have to move rapidly to the recognition of our witnesses in the scheduled order. Were there any brief questions for our witnesses?

The gentleman from Ohio will be recognized briefly.

Mr. BROWN. Mr. Boyd, you spoke in your statement of the lack of prospect of success of the El Paso project, as the reason you dropped out. I gather that you mean the political success of its consideration, rather than the success of the project as an economic undertaking, don't you?

Mr. BOYD. Yes, sir. As I indicated in my statement, it is the political reality that confronts us with the judgment that further effort in this regard would be futile.

Mr. BROWN. Let's talk a little bit about the economic reality. How much money have you put in the project thus far?

Mr. BOYD. We have spent, to date, somewhere in the range of \$21 million.

Mr. BROWN. And you are washing all of that off the board?

Mr. BOYD. Obviously if our project, as now appears to be the fact, is ultimately rejected, and unless there is some recognition for the contribution that we have made and are in a position to make to some competitive project, that would be the inevitable consequence.

Mr. BROWN. Is there any quid pro quo for your withdrawing?

Mr. BOYD. No, sir.

Mr. BROWN. From anyone?

Mr. BOYD. No, sir.

Mr. BROWN. You spoke of speed as one of the major considerations. I have been concerned about the problem of the Indian claims in the Canadian area and whether that might in fact delay the Alcan project. It seems to me there are two or three other angles to this determination. One is the question of national security for the United States. Another is the environmental cost and finally the economic cost. Are you convinced that the trans-Canada project can be built without the participation of taxpayer funds from the United States?

Mr. BOYD. Mr. Congressman, as has been suggested earlier here by some of your associates, we have not yet seen the President's recommendation.

Mr. BROWN. Nor have we. We are having a hearing without knowing really what is recommended but it isn't the first time.

Mr. BOYD. Thus, without the benefit of the guidelines that may be enumerated there, we are not in a position to respond at this time to your question.

Mr. BROWN. Let me ask it this way: Do you think that the project across Canada is economically viable without the participation of either United States or Canadian Government funds?

Mr. BOYD. Well, I think there are two parts to your question, Mr. Congressman. As to its economic viability, I think the need for gas is so desperate in the lower 48 that the prices that have been mentioned by Dr. Schlesinger in the range of \$2.50 will still make this gas easily salable so that from that standpoint, assuming the validity of the figures, I have no doubt but what the gas is not only salable, but it will be very welcome at that price.

As to the second questions as to what will be necessary by way of Government guarantees, as I understood the question, in order to

permit the financing, that is a matter I would prefer to defer until, as I say, I could see the guidelines that have been laid down by the President.

Mr. BROWN. Finally, if for any reason the Alcan project would not be brought to fruition, is El Paso prepared to pick up its \$21 million and get back in the game?

Mr. BOYD. I would answer that with this statement: That obviously we would review the circumstances as they may exist at that time. We are of the opinion that that is in the national interest that the project be built in the fashion that we sponsored and we have not changed our view and therefore I should think, if I may speculate as to how the circumstances would then appear, the answer to your question would be "Yes".

Mr. RONCALIO. I believe it is appropriate that we recognize at this time before you leave the table, Mr. Boyd, that the Alcan consortium had its birth in the creation of a free enterprise corporation which took a portion of the properties of El Paso Natural Gas under a divestiture decree of the U.S. Supreme Court. That action, in pursuit of antitrust laws, brought about competition in the utility business. I believe it is appropriate to recognize that today in answer to those who would insist that legalizing a break-up of the major oil companies is the way to bring competition. I do not believe that it is.

I believe that a vigorous enforcement of antitrust has excellent public results and I think we see that today. That the little creature, the offshoot of El Paso can come up and give you a bad time, I think that is healthy, wholesome, free enterprise competition, and I would like to commend both of you.

Mr. BOYD. Mr. Chairman, I have a different view on the antitrust features.

Mr. RONCALIO. Thank you very much.

Mr. DINGELL. The gentleman from Texas.

Mr. COLLINS. I hope, Mr. Boyd, this does not mean the complete removal of El Paso from this situation because I think you present a viable alternative which I do not believe this pipeline in Canada represents. You say you don't want to differ with the President. Many of us in Congress are eager to differ with him when he is wrong. Many times he is wrong and companies and individuals still should differ with him.

Here we have a President who has just proceeded, just recently, to give away American property down in the Panama Canal and now he is talking about building more American property up in Canada. I am sure within a few years he would like to give that away and it just does not seem to me practical to build a pipeline across Canada.

You have presented the only workable, sensible, commonsense way that we can do it is to bring our gas down the way that you have suggested it.

I hope that we still will be able to turn to this alternative when we run into these financing problems which the gentleman from Ohio mentioned, and they are going to come to the surface when they get ready to finance this pipeline across Canada.

We appreciate your being with us.

Mr. DINGELL. Gentlemen, you have, by your labors helped serve a most valuable national purpose in seeing to it that we hold a wise debate, not only in this country, but also with our good friends and neighbors, the Canadians to the north. We commend you and thank you for your assistance today.

Our next witness will be Mr. Stephen W. Bosworth, Deputy Assistant Secretary of State. Mr. Bosworth, we are pleased you are with us. If you will identify yourself and such associates as you have or wish to have with you at the committee table for purposes of our record, we will be most pleased to receive your statement.

STATEMENT OF STEPHEN W. BOSWORTH, DEPUTY ASSISTANT SECRETARY OF STATE FOR INTERNATIONAL RESOURCES AND FOOD POLICY, ACCOMPANIED BY JOHN R. CROOK, OFFICE OF THE LEGAL ADVISER, DEPARTMENT OF STATE

Mr. BOSWORTH. I am Stephen W. Bosworth, Deputy Assistant Secretary of State for International Resources and Food Policy. On my right is Mr. John Crook from the Department of State, Office of the Legal Adviser.

I have prepared, Mr. Chairman, a statement which I would be glad to submit for the record. Whether you would like me to read that statement in full at this time or summarize it, I leave myself in your hands.

Mr. DINGELL. It would be well that you summarize it.

Without objection, your full statement will appear. We will recognize you for summary. Then, since the statement does not have a full analysis of the agreement, we will recognize counsel for the purpose of asking some questions regarding the content of the agreement, and then the members of the two subcommittees will be recognized to ask questions.

Mr. BOSWORTH. I am Deputy Assistant Secretary of State for International Resources and Food Policy. I am accompanied by John R. Crook, Office of the Legal Adviser, Department of State.

The President has submitted to the Congress for approval his decision in favor of the Alcan project for the transportation of Alaskan gas through Canada to the lower 48 States. As a part of this decision, the President has also submitted the agreement reached with the Government of Canada concerning the terms and conditions under which the project is to be built and operated.

The President's selection of the Alcan project over its competitors is based on economic factors. This trans-Canada route will provide gas to U.S. consumers at a substantially lower transportation cost. Moreover, in the United States-Canada Transit Pipeline Treaty and in the Agreement on Principles Applicable to a Northern Natural Gas Pipeline we have obtained satisfactory assurances from Canada that the Canadian sections of the Alcan system can be built and operated in a manner which meets U.S. needs.

The Department of State participated fully in the process which led to the selection of the Alcan system by negotiating the United States-Canada Transit Pipeline Treaty, and by participating in the negotiation of the Agreement on Principles Applicable to a Northern Natural Gas Pipeline. Our objective has been to assure that, in making his decision among the alternative proposals, the President

would have the option of a trans-Canada route and could make his decision on economic grounds.

In my testimony today, I would like to explain the applicability of the Transit Pipeline Treaty to the Alcan project. I would like also to highlight some areas dealt with in our recent negotiations with Canada, including taxation in the Yukon, Native claims, socioeconomic impact assistance, and timing of construction.

APPLICABILITY OF THE TRANSIT PIPELINE AGREEMENT

In the legislation which authorized construction of the trans-Alaska oil pipeline, the Congress authorized and requested the President to enter into negotiations with the Government of Canada to determine the willingness of that Government to permit construction of pipelines across Canada for the transportation of natural gas and oil from Alaska to the lower 48 States, and the terms and conditions under which such pipelines could be built. In response to this mandate from the Congress, and an expression of interest by the Canadians in developing such an agreement, negotiations began in 1974.

It was clear at the outset that neither the United States nor Canada was at that time in a position to discuss construction of a specific pipeline. Therefore, the negotiations centered on an agreement to provide general, reciprocal assurances applicable to all existing and future pipelines transiting the United States or Canada. The United States-Canada Transit Pipeline Treaty, which was approved by the Senate on August 3, and has been ratified by both countries, provides the following principal assurances:

1. Assurances of noninterference with the flow of hydrocarbons in transit.
2. Assurances of nondiscriminatory taxation by public authorities in either country.
3. "In bond" treatment of hydrocarbons in transit.

The Alcan project will benefit from these assurances. Protection against interference and "in bond" treatment are unambiguous concepts and present no problems of interpretation when applied to the Alcan project.

However, the assurances of nondiscriminatory taxation require that a standard be chosen against which to measure possible discrimination. The treaty provides that "similar pipelines" within the jurisdiction of a taxing public authority will serve as the standard of comparison.

The Canadian portion of the Alcan pipeline will be subject to the taxing authority of four distinct public authorities; the Yukon Territory, the Province of British Columbia, the Province of Alberta, and the Province of Saskatchewan. In the three Provinces, pipelines exist which provide the standard of comparison required by the treaty. For example, West Coast Transmission, Alberta Gas Trunk Line, and Trans Canada are pipelines which can be used for comparison. The treaty provides that the governments of these Provinces may levy only those taxes upon the Alcan pipeline which are also levied upon similar pipelines within their jurisdiction. All three Provinces have assured the Federal Government of Canada that they will observe the principles of noninterference and nondiscriminatory tax treatment contained in the Transit Pipeline

Treaty. These assurances are annexed to the Agreement on Principles recently negotiated with Canada and are included among the documents the President has provided to the Congress in support of his decision.

Should it be necessary, the Federal Government of Canada has authority under the British North American Act to enforce the terms of the treaty. The treaty also provides for binding arbitration should a dispute arise. In addition, the United States would have recourse against the Federal Government of Canada under international law in the event of a violation of the terms of the treaty.

Apart from the legal remedies available under the terms of the treaty and international law, there is also a strong tradition of cooperation which exists between the United States and Canada. In previous joint projects, such as the Saint Lawrence Seaway and the Alaskan Highway, the Government of Canada has met its commitments and honored the terms of its agreements. For our part, we have not interfered with, nor discriminated against the important pipelines which carry Canadian gas and oil across U.S. territory. We believe that this tradition of cooperation, recognition of shared interests, and respect for lawful agreements will continue in the case of the Alcan pipeline.

TAXATION IN THE YUKON

As stated earlier, the Treaty's nondiscrimination protection depends upon the existence of a standard of comparison. Since no pipeline similar to the Alcan line now exists in the Yukon Territory, there is not now an appropriate standard of comparison for purposes of tax treatment. Consequently, it was necessary to establish a regime of taxation in the Territory to limit the levels of taxation which might be applied to the Alcan pipeline until such time as the proposed Mackenzie Delta to Whitehorse gas pipeline—the Dempster Lateral—is constructed through the Yukon Territory. As the committee will note, the Agreement on Principles which the President has submitted to the Congress as part of his decision deals at some length with this question of taxation in the Yukon. The negotiators developed a complex concept of Yukon taxation which includes the following elements:

1. Yukon Territory property taxes on the Alcan pipeline are to be substantially equivalent to the property tax that would be paid by the pipeline were its Yukon facilities located in Alaska.

2. Specific maximum levels of taxation are specified for the years during which construction is in progress. The agreement also establishes a tax ceiling applicable to subsequent years of operation of the Alcan Pipeline.

3. The maximum levels of taxation after completion of the pipeline may be increased in order to maintain comparability with one of three indicators. The indicator which results in the highest tax liability for Alcan may be employed. The indicators are: (a) The rate of inflation in Canada as measured by the Canadian GNP price deflator, (b) the general level of property taxes in the Yukon Territory after 1986, and (c) the taxes levied on the Alaskan portion of the Alcan pipeline by the State of Alaska.

If the Mackenzie to Whitehorse line is built, it will provide a standard of comparison for taxation under the Transit Pipeline Treaty and this alternative tax regime will be superseded.

In summary, we believe that the Transit Pipeline Treaty protects U.S. interests in the three Provinces of Canada traversed by the Alcan pipeline. In the Yukon Territory, where a pipeline similar to the Alcan pipeline is not presently available to serve as the standard of comparison required by the treaty, a comprehensive, specific tax regime has been negotiated. Thus, the treaty, together with the agreement on principles, provide substantial and satisfactory protection for the Alcan pipeline against discriminatory taxation by Canadian authorities.

SETTLEMENT OF NATIVE CLAIMS IN CANADA

Concern has been expressed by some Members of the Congress that the cost of settling native land claims in the areas traversed by the pipeline carrying Alaskan gas might have to be borne by the pipeline and indirectly by the U.S. consumer. This issue was specifically addressed during negotiation of the Agreement on principles. Paragraphs 11 and 12 of the Agreement on principles identify the types of charges which may be imposed on the pipeline by Canadian public authorities.

Mr. BROWN. Is that specifically in the language of the treaty?

Mr. BOSWORTH. In the language of the Agreement, Mr. Congressman, it simply identifies those charges which will be applied. However, yesterday—I am sorry, on September 20, the Canadian Deputy Prime Minister, Allan MacEachen, at the signing ceremony held in Ottawa, said, "Native claims exist independently from the pipeline and will not give rise to any charges on the pipeline project. Their settlement is a purely Canadian responsibility." So we have two measures of protection. One is specification of the types of charges which may be assessed on the pipeline and the settlement of Native claims is not there included, and the second is the specific assurance by the Deputy Prime Minister of the Government of Canada that Native claims will not be imposed as financial obligation on the pipeline.

Mr. DINGELL. I am sure that comforts my good friend and co-chairman, Mr. Roncalio, greatly, and it does much to assuage our earlier concerns in this matter.

CONSTRUCTION TIMETABLE

Mr. BOSWORTH. Mr. Chairman, there has also been some concern that selection of a trans-Canada route might expose the United States to a greater risk of costly delays in construction than the alternative projects. Therefore, in the course of negotiating the Agreement on Principles, we asked the Canadian officials to commit to specific dates for authorization of commencement of construction. The Canadians have done so. The Agreement on Principles specifies that both Governments will take measures to ensure the prompt issuance of all authorizations in order to allow main pipelaying in the Yukon to begin on January 1, 1981. This would, of course, include insuring that the settlement of Native claims does not delay construction. Other construction in Canada

will be allowed to begin on a schedule which will enable initial operation of the pipeline on January 1, 1983.

In addition, the cost-sharing formula for the Dempster lateral contained in the agreement provides strong incentives for the Canadians to minimize the cost of building the Canadian sections of the Alcan main pipeline. Inasmuch as construction delays are inherently costly, the incentive formula gives the Government of Canada good reason to prevent construction delays.

INDIRECT SOCIOECONOMIC COSTS

During construction of the trans-Alaska oil pipeline, it became clear that the construction activity disrupted the normal development of communities along the pipeline right-of-way. The State of Alaska recognized the problems faced by these communities and appropriated funds to assist them.

Communities in the Yukon Territory will face a similar situation during construction of the Alcan pipeline. The pipeline will, of course, generate substantial tax revenues during its operation. However, funds to meet the indirect social and economic costs will be needed before the major portion of the tax revenues begin to flow.

In order to bridge this time gap between construction impact and commencement of tax receipts, the government of the Yukon Territory will borrow money on commercial terms from the pipeline companies involved in building the pipeline in the Yukon. The borrowed funds will be repaid from tax revenues. The Agreement on Principles states, "... that indirect socioeconomic costs in the Yukon Territory will not be reflected in the cost-of-service to the United States shippers other than through the Yukon property tax." Therefore, the loan of money to the Yukon Territory by the pipeline companies will have no impact on the cost of delivering Alaskan gas to U.S. consumers other than through the agreed levels of taxation.

THE FORM OF THE AGREEMENT ON PRINCIPLES

We believe that existing legislation, including the Alaska Natural Gas Transportation Act and the joint resolutions contemplated thereby will permit implementation of any obligations assumed by the United States under the Agreement Between the United States of America and Canada on Principles Applicable to a Northern Natural Gas Pipeline. We also believe that it was appropriate to conclude the agreement as an executive agreement subject to necessary legislative approval of the President's decision by Congress. Several major factors led to this conclusion:

The agreement is an integral part of a domestic energy policy decision which is expressly reserved to the Congress as a whole in the Alaska Gas Act; the Agreement is a matter of concern to the entire Congress, as evidenced by section 301 of the Trans-Alaska Pipeline Authorization Act, as well as by sections 2 and 6 of the Alaska Gas Act; the agreement is limited to a single project, and does not have provisions of general application; it was desirable to conclude the agreement as an executive agreement in order to obtain firm commitments from the Government of Canada on the

applicable terms and conditions in time for the President to make his recommendation, and to assure that the purposes of the Alaska Gas Act would be met.

As part of the President's decision on the transportation of Alaskan natural gas, the agreement has been submitted to the Congress for approval by joint resolution. In this manner the Congress, both the House and the Senate, has an opportunity to pass on the agreement.

IMPACT OF THE ALCAN PROJECT ON UNITED STATES/CANADIAN RELATIONS

The United States and Canada have a long tradition of cooperation on mutually beneficial projects. I have already cited the examples of the Saint Lawrence Seaway, the Alaskan Highway, and the transportation of Canadian hydrocarbons across the United States. Our decision to work together on the Alcan Pipeline furthers and strengthens this tradition of cooperation. In our view the pipeline arrangement exemplifies the type of project where bilateral cooperation is most clearly called for—projects which would not be obtained by either country were we to address separately the energy supply problems concerned.

The pipeline will be one of the largest construction projects ever undertaken in North America. Its successful completion will engage the skills and productive capacity of both countries and will provide important economic benefits to both countries. It will enable our two countries to provide substantially more gas to consumers at a lower cost than if either of us were to act independently. At the same time, agreement on the Alcan pipeline enlarges the opportunities for further cooperation with Canada in the energy field, and strengthens possibilities for continued expansion of mutually beneficial collaboration between the two countries on a broader range of issues of common concern.

In conclusion, I want to emphasize again that the Alcan project provides substantial benefits for U.S. consumers. In addition, the agreement we have reached with the Government of Canada and the Transit Pipeline Treaty provide satisfactory protection for American interests. I urge the Congress to approve the President's choice of the Alcan project to transport Alaskan natural gas to the lower 48 States.

Mr. DINGELL. The committee thanks you for a helpful statement. In order to get some of the questions that may be bothersome before the two subcommittees, with the concurrence of my good friend and colleague from Wyoming, our cochairman, Mr. Roncalio, we will recognize Mr. Braun at this time for the purpose of asking certain questions relative to the agreements.

Mr. BRAUN. Referring to section 6 of the agreement.

Mr. BOSWORTH. Are you speaking of the treaty or the articles of agreement on principles?

Mr. DINGELL. It is at page 14.

Mr. BRAUN. What protection does the United States-Canadian Agreement provide against exposure or vulnerability of U.S. customers to future actions by the Canadian pipeline companies or the Canadian NEB which have the effect of placing all or most of the financial risks of the Canadian pipeline on its U.S. customers?

Mr. Bosworth, section 6 refers to tariffs and cost allocation and the question I am directing to you refers to the kind of tariff that is possible in Canada. We would like to know what protection this agreement affords U.S. customers against a tariff being implemented in Canada which would require U.S. customers to pay for all costs incurred in Canada, regardless of the amount of gas delivered by the Canadian pipeline?

Mr. BOSWORTH. The concept of tariff applies primarily to the cost of transportation or the cost of service on the Canadian portion of the line. Under the agreement on principles, we have specified that that cost of service with regard to most of the sections of the line will be borne on a proportionate basis reflecting the quantities of gas flowing respectively to the United States and to Canada, coming through the system.

Now, if the Canadian Government does not decide in effect to build the Dempster Lateral to bring on gas from the Mackenzie Delta, the cost of service will be borne primarily by the U.S. consumer, except for minimal portions of gas which may be taken off in the Yukon Territories for small communities, as specified in the agreement.

However, if the Canadian Government does decide to build the Dempster portion of the line, then the cost of service is allocated on a volumetric basis so that we are each paying our respective shares of that cost of service.

Mr. RONCALIO. Is there assurance that Canada cannot levy tariffs that would be an unjust burden upon the U.S. consumers?

Mr. BOSWORTH. Yes, sir, that would fall under the concept of taxation and, as I specified in my statement, the Transit Pipeline Treaty provides protection against discriminatory taxation on this pipeline. It provides, as it now exists, full protection in the three Provinces outside the Yukon Territory because there are similar pipelines, which is the standard of comparison set forth in the treaty. There are similar pipelines in those three Provinces.

Mr. BROWN. Taxation is not the only cost that goes into the setting of a tariff on a pipeline and I think the question is more properly asked in this way: What assurance do we have that the tariffs set on the pipeline—that is, the charges for the use of the pipeline—will be maintained at reasonable or cost reflective rates? The Canadians, as I understand, have the right to set those tariffs, is that not correct?

Mr. BOSWORTH. Yes, sir. That protection is provided for in Article IV of the Transit Pipeline Treaty which specifies that rates, tolls, tariffs, and financial regulations relating to pipelines must be of a nondiscriminatory nature.

Mr. BROWN. Being not discriminatory, does not necessarily speak to whether or not the costs can escalate and the impact of those costs be borne by American consumers. Even if the lateral is built, I understand—correct me if I am wrong—that two-thirds of the cost, at minimum, would be borne by American consumers and without the lateral, very close to 100 percent of the cost of the pipeline tariffs will be borne by the consumers in the United States.

My question is, Can you cite in the treaty the assurances that those rates which can be set by the Canadians will protect the interests of American consumers?

Mr. BOSWORTH. In paragraph 2, article IV of the treaty, it specifies that these rates, tariffs, tolls, et cetera, shall be "just and reasonable."

That is a standard against which we would then have recourse if in our view the tariffs set by the pipeline authorities in Canada—

Mr. BROWN. Is the question of their justness and reasonableness, if it should be raised by an American consumer, under the procedure by which the American law usually progresses, the consumer, or consumer group could take that to court, for determination? Is that protection provided American consumers under this treaty or not?

Mr. BOSWORTH. The equivalent of that protection is provided, Mr. Congressman, in that the treaty also provides an arbitration clause for disputes which are not resolved directly between the two authorities.

Mr. BROWN. The two countries.

Mr. BOSWORTH. Between the two countries, yes.

Mr. DINGELL. Understanding of treaties and tariffs and agreements is a fine art.

I read under article IV, which is the article to which you allude—this is at page 3 of the agreement—that the matter of rates, tolls, tariffs, and financial regulations relating to pipelines is covered within a subparagraph of paragraph 1. But as I read the requirements of "just and reasonable," it appears under paragraph 2 wherein the language says as follows: "All regulations, requirements, terms, and conditions imposed under paragraph (1) shall be just and reasonable."

Now, that deals with regulations, requirements, terms and conditions. It does not deal, as I read it with rates, tolls, and tariffs.

I am reading from the treaty. How do I get to the point you say we are at under the treaty?

Mr. BOSWORTH. Well, paragraph 2 of that article includes those subparagraphs set forth in paragraph 4, including rates, tolls, tariffs. Those would be among the terms and conditions imposed under paragraph 1.

Mr. DINGELL. Say that again, please.

Mr. BOSWORTH. Well, the terms and conditions specified in paragraph 2 would include—

Mr. BROWN. Paragraph 2 of what?

Mr. BOSWORTH. Of article IV of the Transit Pipeline Treaty, Congressman. It would include rates, tolls, tariffs, and financial regulations.

Mr. DINGELL. Let me yield to counsel at this point again so that he can address this question.

Mr. BRAUN. Mr. Bosworth, if that were so, then the language further on in paragraph 2 that the terms and conditions apply equally to all persons in the same manner would require an identical tariff throughout Canada. That cannot be the case.

Mr. BOSWORTH. I think here, Mr. Braun, I would apply the phrase in that paragraph saying, "under substantially similar cir-

cumstances" would have to be interpreted to mean deviations in capital costs, but it is designed to protect us against discriminatory treatment in terms of rates, tolls, tariffs, and financial obligations, but clearly if one pipeline's capital cost is substantially higher than another pipeline's capital cost, one could not maintain that the two rates or the two tariffs should be equal.

Mr. BRAUN. Pipeline tariffs in Canada are not now identical, are they?

Mr. BOSWORTH. They are not because they reflect variations in the capital cost of constructing those pipelines.

Mr. BRAUN. They also reflect variations in the placement of risks on consumers and on pipeline companies, is that not correct?

There are some pipelines in Canada that are allowed to charge pursuant to an all-events, full cost-of-service tariff. There are other pipelines in Canada that are not.

Mr. BOSWORTH. If your question is whether or not an all-events, full cost-of-service tariff is envisioned for this pipeline, I can assure you that it is not. To be more specific, I would have to, I think, ask if I could submit a written response to your question after some research with the Office of the Legal Adviser.

Mr. BRAUN. Where does it tell us in the agreement that an "all-events, full cost-of-service tariff" is not contemplated by Canada? Can you point to a paragraph and a page in the agreement that says that?

Mr. BOSWORTH. I think that question will be addressed very fully in the full report which is coming up to the Congress. I think this is a question which might be better directed to the financial panel.

Mr. RONCALIO. Question, if I may, Mr. Chairman. Doesn't the treaty beginning on page 9 say specifically what the Yukon property tax will be and what it won't be, and in no event does it exceed \$30 million a year? Isn't that set out specifically?

Mr. BOSWORTH. Well, specifically, Mr. Chairman, the Yukon property tax during the first 5 years of operation of the pipeline, from 1983 through 1987, cannot exceed \$30 million a year, plus an escalator, which would be the Canadian GNP deflator, but that is a quantified ceiling.

Mr. RONCALIO. Do you know of the International Joint Commission, United States and Canada?

Mr. BOSWORTH. I have some familiarity with it, yes, sir.

Mr. RONCALIO. It has been in existence since 1911 and it consists of three Canadians and three U. S. citizens, to govern and arbitrate problems dealing with international waters, and I know of no problem that hasn't been solved by that machinery that exists for the solution of those problems.

Does not Canada move more natural gas through pipelines owned by the United States of America? Has the United States ever jacked the tariffs on Canada on this gas?

Mr. BOSWORTH. No.

Mr. RONCALIO. Any reason for suspicion that these two countries that have gotten along for 200 years would in any way not pursue the same policy in resolving the differences here as they have been under the similar instances over the last 200 years?

Mr. BOSWORTH. I think that is an excellent point, Mr. Chairman.

Mr. RONCALIO. I take exception to the observation about OPEC countries. I have a lot of pride in the Canadians. I have fought beside them with a uniform on in North Africa when the OPEC countries were on the other side.

Mr. DINGELL. The Chair certainly does not equate our Canadian friends and neighbors with the OPEC countries under any circumstances. The Canadians are good friends. Curiously enough, my district is to the north of some parts of Canada. But the question that is directed by counsel—I want to be clear—is designed to provide the subcommittees with a full understanding of the issues which relate to the agreement.

Now, I think that your testimony, Mr. Bosworth, is very interesting, but the President's statement is not going to be signed by the Canadians. So I am curious just how the President's statement submitted to the Congress is going to in any way, fact or manner bind our good friends, our Canadian neighbors?

Can you explain that with regard to the question of tariffs?

Mr. BOSWORTH. Clearly, Mr. Chairman, the commitments made by Canada which are applicable to this project are contained essentially for purposes of this matter in two documents.

Mr. DINGELL. That is right.

Mr. BOSWORTH. The Transit Pipeline Treaty—

Mr. DINGELL. One is the treaty.

Mr. BOSWORTH. And the other is the agreement on principles. We are confident through a combination of those two undertakings by the Canadian Government and by the U.S. Government that we have fully protected the Alcan pipeline against discriminatory treatment with regard to tariffs, taxes, et cetera.

Mr. DINGELL. That is a very helpful statement and I am delighted to hear that.

Mr. Braun has asked you to identify those places where the tariff protection can be clearly identified in either of the two documents under discussion.

The Chair would appreciate it if you would direct your attention now to that matter.

Mr. BOSWORTH. Certainly, Mr. Chairman.

The first is in article IV of the Pipeline Treaty. The second of those two is the agreement on principles in the section relating to taxation in the Yukon and in the section relating to tariffs and cost allocation.

I think it might be helpful if I could suggest we would be more than happy to submit what might be described as a rather detailed memorandum of law addressing this particular point which perhaps could figure as part of the committees' record.

Mr. DINGELL. I think that would be helpful and we ask you to do so. Without objection, that will appear in the appropriate place in the record.

[The following material was received for the record:]

The Agreement on Principles Applicable to a Northern Natural Gas Pipeline ("the Agreement") and the Agreement Concerning Transit Pipelines ("the Treaty") do not establish the tariffs for the transportation of natural gas across Canada through the proposed natural gas pipeline. These must be determined in the future by the National Energy Board in consultation with U.S. regulatory authorities. However, the Agreement and the Treaty create a framework of guarantees and

procedures which should ensure that tariffs are reasonable and are consistent with both U.S. and Canadian interests.

Both Article IV of the Treaty and the Agreement recognize that national authorities, including the N.E.B. in the case of Canada, retain jurisdiction to set tariffs. However, Article IV of the Treaty provides that all such measures "shall be just and reasonable" and shall be applied equally under substantially similar circumstances.

Further, several provisions in the Agreement provide specific guidance with respect to the formulation of tariffs by the N.E.B. The Agreement commits the N.E.B. to apply a principle of "variable rate of return" in determining tariffs, and specifies the capital costs to be used in applying this principle. The Agreement also defines the permissible types of direct charges by public authorities and of other costs having an effect on the cost of service.

The Agreement establishes procedures for consultations between U.S. and Canadian regulatory authorities with respect to the application of these principles and other tariff matters. Such consultations will be essential prior to construction of the pipeline, since the F.E.R.C. must approve the passthrough of Canadian transportation charges to U.S. interstate customers. In practice, the conclusion of transportation contracts and the financing and construction of the pipeline will be contingent upon F.E.R.C. acceptance of the initial Canadian tariff.

The N.E.B. might subsequently raise the applicable tariff after construction of the pipeline, but we believe that the guarantees established by the Agreement and the Treaty would prevent any unreasonable increases. Moreover, the F.E.R.C. might prohibit the pass-through to U.S. consumers of increases in Canadian transportation costs, although this would not be a realistic long-term solution should tariffs be substantially increased. We believe it more likely that any future proposals to significantly increase Canadian tariffs would be considered between the U.S. and Canadian Governments in the context of our long tradition of cooperation and of the dependence of each side on the continued use of pipelines transiting the territory of the other to meet its energy needs.

Mr. DINGELL. I still would appreciate it if you would give a very clear answer to Mr. Braun's question. This is a matter of rather substantial concern to me, and I would like to have as clear a statement as possible on your part with regard to these matters because, like my Dad used to say, we should trust everybody but we should cut the cards.

Mr. SANTINI. Mr. Chairman?

Mr. DINGELL. For what purpose does the gentleman seek recognition?

Mr. SANTINI. In pursuit of this line of inquiry that the chairman has initiated, I would like to examine in this same area of concern in the context of some disturbing precedents in the past that suggest where economic necessity dictates, the interest of the American consumers can take a backseat to the economic realities or dictates within the country of Canada.

Mr. DINGELL. The Chair will certainly recognize my good friend at the earliest moment to do that.

The Chair, however, wants counsel to ask his questions. I do this respectfully, understanding the concern of my colleague. Counsel may be using time that my good friends and colleagues on this subcommittee would like to be using, and I will recognize the gentleman for questions just as quickly as possible.

Mr. SANTINI. I will defer to the Chairman's profound kindness.

Mr. BROWN. Mr. Chairman, could I ask either the Chair or the staff or the witness a profound question?

In article IV, to what does the phrase "by the appropriate governmental authorities" refer? Are those the authorities of both the United States and Canada? Are they merely the authorities of Canada? I think if we can get a couple of those deep points clarified, some of us will understand it a little better.

Mr. BOSWORTH. If I may just take that last question briefly, in this case it applies to authorities on both sides of the border depending on where the pipeline is actually located. I think it is important to remember that the treaty is separate from the Agreement on Principles.

The treaty is designed to cover all pipelines, not just the Alcan pipeline.

Mr. BROWN. If the pipeline is on the Canadian side, where it applies to the Canadian authorities, the phrase "such governmental authorities" if it applies only to Canadian authorities, infers that such governmental authority, the Canadian authority, will make the determination with reference to rates, tolls, tariffs, financial regulations, and so forth.

Mr. BOSWORTH. Right.

Mr. DINGELL. I think the gentleman raises a very good question.

Mr. Bosworth, can you give us an answer to that point?

Mr. RONCALIO. He did. He said yes.

Mr. BROWN. That is both Provincial and Canadian National Governments; is that correct?

Mr. BOSWORTH. Yes, sir.

Mr. DINGELL. It could also deal with bureaus and private lands, and things of that sort where those were the governing bodies, could it not, or could it?

Mr. BOSWORTH. No, sir; I think that would be limited to governmental authorities in this particular case.

Mr. DINGELL. I would like to have you do a little research on that because I am not comfortable on that last point.

[The following material was received for the record:]

Article IV of the Agreement Between the Government of the United States of America and the Government of Canada Concerning Transit Pipelines ("the Pipeline Treaty") provides that "the appropriate governmental authorities" shall retain jurisdiction to issue regulations affecting transit pipelines on a non-discriminatory basis, subject to the further limitations contained in that Article.

The question of which governmental authorities may be competent to act under this provision is for determination by each of the Parties in accordance with its national law. In both the United States and in Canada, the authorities primarily responsible for the regulation of pipelines are federal agencies.

The Chair recognizes Mr. Braun.

Mr. BRAUN. Mr. Bosworth, the tariff sets forth the terms and conditions of service by the pipeline, does it not?

Mr. BOSWORTH. Yes.

Mr. BRAUN. That includes the charges rendered by the pipeline for the service it performs; correct?

Mr. BOSWORTH. That is correct.

Mr. BRAUN. Now, there is a heading called "Tariffs and Cost Allocation" in your agreement between the United States and Canada. Wherein under the heading "Tariffs" is there any statement that relates to the terms and conditions under which the Canadian pipeline will charge U.S. customers? It seems to me the only thing covered by that entire section is cost allocation rather than the form of tariff that will be utilized.

Is there anything in this section that refers to the kind of tariff that is allowed or not allowed?

Mr. BOSWORTH. Well, the question of the tariff or the rate that will be charged to the consumer is a question which is yet to be

addressed by the ratemaking authorities in the respective countries, in our case the FPC; in their case the National Energy Board. That is a determination which it is really not possible to make in the abstract until one has knowledge of the actual capital cost and the actual volumes of Canadian and U.S. gas, respectively, which would be flowing through the system.

What the agreement on principles does is set forth the general guidelines within which that tariffmaking calculation will have to take place.

Mr. BRAUN. Do you understand what an "all-events, full cost-of-service tariff" is?

Mr. BOSWORTH. Yes, I do.

Mr. BRAUN. That means regardless of whether or not any gas is delivered from the Canadian pipeline, U.S. customers would pay the total cost of service for the Canadian pipeline.

Mr. BOSWORTH. An all-events, full cost-of-service tariff means substantially more than that, Mr. Braun, because it covers such questions as noncompletion, liability for capital cost in the event of noncompletion, et cetera.

Mr. BRAUN. This is once the gas is flowing; right?

Mr. BOSWORTH. Yes, sir.

Mr. BRAUN. We want to know where in the two agreements—the treaty and the agreement, between the United States and Canada—there is a prohibition against that form of tariff being implemented in Canada?

Mr. BOSWORTH. Well, that form of tariff would not be implemented by Canada on U.S. customers. That is a subject over which the U.S. regulatory authorities retain control.

Mr. DINGELL. Isn't that a rather novel statement since that is going to be done inside Canada and not done inside the United States?

Mr. RONCALIO. Let me ask a question along the same reasoning, if I may.

Mr. DINGELL. Surely.

Mr. RONCALIO. Is there anything there where we assert that the Government of Canada cannot expropriate this pipeline in 10 years? Answer yes or no.

Mr. BOSWORTH. Yes, sir. There is nothing that gives up the Canadian sovereignty to expropriate in their country, but if they attempt to expropriate the pipeline, then it is subject to international law.

Mr. RONCALIO. We are not planning a Panama Canal?

Mr. BOSWORTH. No, we are not planning a Panama Canal.

Mr. BRAUN. Mr. Bosworth, I would like to move on to the taxation question.

The agreement between the United States and Canada provides for a maximum tax of \$30 million commencing in 1983. That \$30 million figure can be escalated in three ways. It can be escalated by the (1) GNP deflator, (2) the level of property taxes in the Yukon and grants to municipalities in the Yukon, and (3) taxes levied in the State of Alaska.

First I would like to focus on the level of taxation in the Yukon. Does the agreement between the United States and Canada allow

the Yukon government to raise its property tax, thereby increasing the property tax on the pipeline in the Yukon?

Mr. BOSWORTH. Let me give a somewhat detailed response to that question, Mr. Braun.

First of all, the Agreement on Principles provides that the amount of property tax levied by the Yukon Territory on the pipeline during the first 5 years of its operation, 1983 to 1988, will be no more than \$30 million per year plus the amount of the Canadian GNP deflator; in other words, the approximate level of inflation in Canada. At the end of that 5-year period, that level of property taxation is then subject to review against the three criteria which I specified. That is an undertaking by the Canadian Federal Government, which they assure us they have the ability and the authority to make, vis-a-vis the Territory of the Yukon.

Now, if, as the Canadians anticipate, they construct the Dempster Lateral to bring gas from the Mackenzie Delta down to Whitehorse to hook into the Alcan project, that line will then constitute under the terms of the Transit Pipeline Agreement a similar pipeline which will provide a basis for comparison of taxation. That would then supersede this alternative tax regime which we have negotiated in the agreement on principles, and under the Transit Pipeline Treaty the Canadians would not be able to impose a level of taxation on the Alcan project in the Yukon at a discriminatory rate above the level of taxation imposed on their own line from the Mackenzie Delta to Whitehorse.

Mr. BRAUN. Mr. Bosworth, the escalator, being attached to the level of taxes and grants in the Yukon creates a built-in system of incentives for the Yukon Territorial government to increase spending; the more the Yukon spends, the more money it will be able to receive from the pipeline. In other words, for every \$3 of tax that the Yukon collects, it can spend \$4, the other dollar being provided by the pipeline.

Don't you think that this kind of subsidy mechanism invites imaginative new spending programs in the Yukon to the detriment of U.S. customers?

Mr. BOSWORTH. No, sir, I don't, because I don't think that in any way the level of taxation on the pipeline in the Yukon is tied to an escalator which would be interpreted as being the level of spending by the Yukon territorial government. It is not.

Could I ask Mr. Crook, please, to supplement my reply on that question?

Mr. CROOK. Mr. Braun, the point that you raise, of course, is one that was considered during the course of the negotiations. The concern, as I understand it, is that the Yukon will somehow go out and increase the levels of taxation on property other than the pipeline in order to raise the level of taxation on the pipeline, thereby creating some kind of perpetual motion money machine.

There are two points that it seems to us are quite persuasive in response to this. The first is that those taxes imposed on property other than the pipeline are, of course, going to come out of the hides of Yukon taxpayers, so there is a built-in political incentive for the government of the Yukon not to raise taxes in a fashion that is unrelated to its legitimate governmental requirement.

Mr. BRAUN. Couldn't that be rebated right back to the taxpayer?

Mr. CROOK. Let me finish my answer, and then perhaps we can deal with that second point.

Now, we have raised with the Canadians specifically the point that the taxes raised by the Yukon must be those that are indeed directly related to the governmental needs of the Yukon Territory and the Canadians have so assured us.

They have further assured us that in calculating the amount of Yukon property taxes and income from sources other than taxation on the pipeline, account would, of course, have to be taken of any unusual benefits returned to the property taxpayer.

The Government of Canada, I think, has thereby assured us that they do not understand the agreement to permit the Yukon to, for example, go out and raise property taxes in order to directly rebate these funds to the Yukon property taxpayer. We would maintain that is not permitted under the agreement.

The Government of Canada has assured us that they agree with our interpretation. Indeed, I think today, if not yesterday, there will be completed an exchange of letters between Secretary Schlesinger and the Canadian Ambassador confirming our agreement on this point.

In short, Mr. Braun, we do not believe that there is any realistic possibility that the Yukon is going to go out and arbitrarily raise its taxes, rebate the taxes to the Yukon taxpayer, in order to raise the rates of taxation on the pipeline. We don't think this is a realistic possibility. We think it would be contrary to the intention and purpose of the agreement, and the Canadians have agreed with us on this point.

Mr. BRAUN. Can a letter from the Canadian Ambassador bind the Canadian Government on this issue?

Mr. BOSWORTH. Yes, sir.

Mr. BRAUN. Can it bind the Yukon government on this issue?

Mr. BOSWORTH. Yes, sir. This is an obligation running from the Government of Canada. Under international law, it is binding upon them, and, of course, as you are aware, the Yukon is a territory, it is not a province having separate rights and status under the British North American Act.

Mr. BRAUN. How would you distinguish between a flagrant spending program in the Yukon and a meritorious one? What standards will apply?

Mr. Roncalio [presiding]. I am going to take the duty to pass judgment on that question as being highly irrelevant. We ought to be paying a little attention as to how wasteful we are in our country and not in Canada.

I want to call on a Member of Congress. I would like to call on Mr. Wirth for recognition.

Mr. WIRTH. Thank you, Mr. Chairman.

To go back to the Yukon situation, let me see if I understand this.

The revenue for the Yukon Territory is currently \$90 million a year, and the pipeline is going to provide another \$30 million a year, 25 percent of the total revenue of the Yukon Territory; isn't that correct?

Mr. BOSWORTH. Roughly, yes, sir.

Mr. WIRTH. The escalator that is built in relates to effort in the Yukon Territory, correct? It relates to that \$90 million and if, as you were suggesting earlier, that \$90 million legitimately goes up to \$120 million, then the \$30 million goes up to \$40 million, correct?

Mr. BOSWORTH. Proportionately, yes.

Mr. WIRTH. It goes up proportionately. There are now 20,000 people living in the Yukon Territory, right?

Mr. BOSWORTH. Yes, sir.

Mr. WIRTH. And there were approximately 50 percent of that number 10 years ago, correct?

Mr. BOSWORTH. Yes, sir.

Mr. WIRTH. So you have 20,000 people on a revenue base of some \$90 million. If just in a legitimate way, not to say something is legitimate or illegitimate, people legitimately move into the Yukon Territory, and consequently the budget of the Yukon Territory goes up, this has nothing to do with our pipeline whatsoever. But if the budget goes up, say, to \$180 million, suddenly the American consumer is paying \$60 million for that section of the pipeline that goes through the Yukon Territory.

I am just trying to put this in terms of figures. I think this is what counsel is getting at, that we have built into this in the Yukon Territory this kind of an escalator in which the American consumer can pay a tremendous amount of money for the development of the Yukon Territory.

Now, I am all for the Yukon Territory and everybody moving in there. I just wonder who ought to pay for it.

Mr. BOSWORTH. This is a concern which we identified to the Canadians during the negotiation of the Agreement on Principles and for that reason we specified that this percentage increase is measured in an aggregate per capita basis, not on a total population basis.

Mr. BROWN. Will the gentleman yield?

You have a comparable situation in New York.

Mr. WIRTH. I would be happy to yield.

Mr. BROWN. If New York is the territory in the country that pays the highest welfare payments, people tend to move to New York to get the benefit of those higher payments. If they develop that kind of a situation in the Yukon and Canada, the funding of that, at least to some extent, is going to repose on the backs of the American taxpayer, on the consumer.

Mr. WIRTH. The question is, Is that the kind of escalator we want to build in? And I think the question we have is, Is that contingency covered in the language? I don't have anything. I wasn't provided with anything. You say it is, that the Canadian Ambassador could do that, and it seems to me what we ought to have is very specific reference to the language in the agreement between the United States and Canada that really puts a cap on what can be paid in the Yukon Territory.

I think that is the concern of various members of this committee.

Mr. BOSWORTH. Yes, sir, Mr. Congressman. We have put that cap on, in effect, as I said, by limiting this to an aggregate per capita concept. It is not total population; it is a per capita concept.

Mr. RONCALIO. Is the figure to be all 10 Provinces, not just the Northwest Territories and the Yukon?

Mr. CROOK. Mr. Chairman, if I may, perhaps I could try to lay out the rationale for what we have done here.

The Canadian Government made very clear its agreement to commit itself to particular levels of taxation in the Yukon, but they also made very clear that they did not wish to commit themselves for all time to a particular level of taxation if revenues from sources of funds for Government expenditure from other sources, taxation on other property, for example, were to rise disproportionately to any increase in the pipeline tax resulting from inflation. In short, they were not prepared to agree that the pipeline should be locked in with the protection of a better rate of taxation that might be applicable to other taxpayers in the Yukon on a per capita basis; and so, from our point of view, sir, this seemed to be a pretty realistic point.

They simply wanted an assurance that if their revenues from other sources were to rise per capita to a degree disproportionate to the increase in taxation on the pipeline, that you could increase the taxes on the pipeline to reflect what was happening in the rest of the Yukon. That is the purpose of what we have done.

Mr. BOSWORTH. In specific reply to your question, Mr. Congressman, in this language, by tying this to the per capita rate of taxation on nonpipeline revenues, we have guarded against the contingency which you outline some concern about, and that is, if there is a major increase in population in the Yukon, obviously the level of revenues and spending and taxation would increase to reflect that increase in population, so we have tied it to a per capita concept, not to a total concept.

Mr. DINGELL. The Chair announces that it will recognize members at this time.

The Chair recognizes first my good friend from Wyoming, Mr. Roncalio. The Chair then will recognize the gentleman from Nevada, Mr. Santini.

Mr. RONCALIO. No questions.

Mr. SANTINI. I thank both chairmen.

I am concerned about this tariff issue because I am not encouraged by recent past examples of business relationships involving pipelines in our country and the Canadian Government or Provinces.

We have the dramatic example that in 1932 the price of imported Canadian gas, upon which the northern part of my State at least is 70-percent dependent. The price at the United States-Canadian border for natural gas was 32 cents. The price is now \$2.16. It does demonstrate to me that there is little evidence of concern about the impact on the cost to the American consumer in that rapidly escalated or accelerated natural gas price.

The tariff offers the same kind of prospect potentially for rapidly accelerating cost increases.

We have a contractual relationship existent between the pipeline company and the supplier that could very well represent a potential, contrary to the wishes of the pipeline company perhaps, but could very well represent a potential for rapidly accelerated cost

increases imposed upon us because of the cost increase imposed on the pipeline company.

The Northwest Pipeline is not ecstatic about the process of that radically increasing price that they had to transmit to my consumers in Nevada, to the Northwest consumers of this country, but they had no alternative.

I am advised that in instances contractual clauses were ignored or violated, if not specifically, in spirit, in that instance of an increase of 32 cents to \$2.16 at the border, and I am disturbed in light of that prospect; I am disturbed in light of that past example, that the prospects for us to receive fair, equitable, nonabusive, whatever the encompassing words of good will that are transcribed today, may translate tomorrow into one Government employee's or one Province employee's interpretation of those words, and I am not sure, I am not sure in my own mind that we are adequately protected against economic blackmail in one extreme to simply economic expediency in the other extreme by the terms of that treaty.

I would appreciate any comment in light of the past or recent experience with natural gas pricing and the prospective treatment that we will receive in terms of Alcan and the gas pricing in the immediate future.

Mr. BOSWORTH. Mr. Congressman, you have introduced another dimension to this discussion which is an important one and a very complex one.

As you know, the U.S. Government has engaged in very substantial discussions with the Canadians on the question of the price of the existing exports of Canadian natural gas to this country. I think it should be pointed out, to complete the background of that picture, that that increase in the price has taken place against the background of the very substantial increase in the price of energy worldwide; and we have made some progress, I think, with the Canadian Government in ensuring that—

Mr. SANTINI. Could we pause at that moment though?

Mr. BOSWORTH, was it not done—at least I am informed and have read—was that not done in violation of specific contractual commitments that were existent between the transmitter and the gas company?

Mr. BOSWORTH. But those were contracts, first of all, Mr. Congressman, between private parties. They were not formal undertakings by the Canadian Government as in the case of these agreements that we have before us.

Mr. SANTINI. But don't we have private party contract problems contemplated by this treaty and this agreement as well?

Mr. BOSWORTH. This provides a framework under which private party contractual arrangement can take place, and we believe that we have provided in that framework full protection against the sort of discriminatory treatment that you seem to be indicating is your concern.

I would also point out, as has been brought out here in the hearings this morning, that there is another very important element in this, and that is that the Canadians have substantial pipelines running through the United States.

Mr. SANTINI. I think that is a valid point. We as a government and legal entity seem much less disposed to exercise discriminating economic judgments in retaliation to other nations' attitudes about us than perhaps other nations in some instances are willing to do in our case.

Canada demonstrated no reluctance to leap in and participate in the uranium cartel of 1973, the cartel that was designed to sort of control and regulate the price of uranium, and concern about impact on the U.S. market hardly was a manifest concern of theirs in that participation.

On nickel market pricing, Canada, as you may appreciate, is the principal exporter to this Nation of nickel. I find no demonstrations of international largesse implicit in how the nickel pricing has been handled on the international scene. It has simply been a marketplace demand-supply concept, and they are a substantial friend and ally of ours, but they are also very actively engaged in the world and realities of commerce.

In that context the affable words of agreement or treaties diminish when faced with the dictates and the demands of the dollars or the pounds, as the case may be.

I think Mr. Braun probed a legitimate concern when he said, Can you be confident that the Canadian assurance of nonabuse of the pipeline tax can be totally effective?

How can the Canadian Federal Government distinguish programs that are reasonable and those that are contrived to increase pipeline tax revenue? For example, what if the Yukon government sets up a housing allowance program, a food stamp program, minimum income, direct cash assistance program? All these programs could drastically raise the level of Yukon pipeline tax revenues if financed by Yukon property taxes or Territorial loans. Yet all are reasonable if judged against existing and proposed programs in the United States.

Mr. BOSWORTH. The point, I think, Mr. Congressman, is that those spending programs have to be paid by the Canadian taxpayers and what we have obtained in this is an agreement that there will not be a discriminatory element in this taxation policy as applied to the pipeline.

You have raised a number of complex questions, including such things as uranium pricing, and nickel, et cetera. I think it is important though to maintain some context here, in that we are not in this proposal talking about the price at which we are going to buy anything from Canada, whether it be natural gas or whatever. We are talking about an arrangement that we have negotiated with the Government of Canada under which we have established the terms and conditions under which U.S. gas from Alaska will transit Canada and how, if Canadian gas also flows through that pipeline, the cost of service will be allocated.

But we are not here establishing a contractual arrangement with the Canadian Government to purchase gas from the Canadians.

Mr. SANTINI. The mighty mallet is raised and I accept the subtle intimidation. I hope I may be able to probe this further with you.

Thank you, Mr. Chairman.

Mr. DINGELL. The Chair thanks the gentleman.

The Chair has one question.

When I was called out of the room, counsel asked a question in which I have an interest. I would like to have you tell us how the letter from the Canadian Government, that they aren't going to let the Yukon assert unwise taxes, is going to work? I have always understood that the Provinces had wide latitude in taxes. I am curious what the effect would be of a letter of that kind on the Province and what would constitute the kind of unwise taxes that the Canadian Government would not allow the Provinces to levy and what would be the sanctions which the Canadian Government would apply?

Mr. BOSWORTH. I think there is an important distinction in that the Yukon Territory is not a Province and does not have the same degree of autonomy as do the Provinces under the British North American Act.

Mr. DINGELL. That is somewhat comforting, but it is liable to become a province.

Mr. BOSWORTH. I really am not able to comment.

Mr. DINGELL. It is not an unlikely happening?

Mr. BOSWORTH. Well, I would have to say that we would, of course, be confident in the event that it did become a Province the obligations of the Canadian Government, Federal Government, that it had undertaken vis-a-vis the United States, would be fully protected in any new status that might be given to the Yukon Territory.

Mr. DINGELL. We would pray that would be so, but assurance of firm character is somewhat lacking this morning, is it not?

Mr. BOSWORTH. We have an undertaking from the Canadian Government which is based upon the situation which exists at this time, and I would think that—

Mr. DINGELL. I don't want to distress our good friends from the north, but how would the Canadian Government act and what would be the effect of this letter?

Mr. BOSWORTH. Well, the Canadian Government has through this letter given us its assurance that it does not interpret the arrangements that we have negotiated governing taxation in the Yukon as to permit them to engage in the sort of activity which Mr. Braun indicated was a source of concern.

Mr. DINGELL. And Mr. Santini also?

Mr. BOSWORTH. Yes, sir.

Mr. DINGELL. Do you have a copy of this letter?

Mr. BOSWORTH. I have here a draft. We would be prepared to make this letter available to the committee as soon as it is formally transmitted.

Mr. DINGELL. A draft would not be appropriate for inclusion in the record, but we would like to have that letter if and when it does come. The Chair will recognize the gentleman from Ohio.

Mr. BROWN. Mr. Chairman, I don't ask to be recognized on my own time.

Mr. DINGELL. The Chair recognizes the gentleman on his own time.

Mr. BROWN. That is the bell, Mr. Chairman. That is the observation I wanted to make.

Mr. DINGELL. The gentleman doesn't want to make that observation on his own time?

Mr. BROWN. No; I would like to ask questions on my own time.

Mr. DINGELL. The Chair observes we do have a quorum call on the floor and that is the second set of bells, which means we have about 8 or 9 minutes remaining. The Chair intends to sit here and pursue this because of the importance of the question.

The Chair observes that Mr. Gudger has been seeking recognition and the Chair will recognize him on his own time, if he desires, or will recognize the gentleman from Ohio, whoever wishes recognition.

Mr. BROWN. Mr. Chairman, I choose to answer the quorum call.

Mr. DINGELL. The Chair recognizes Mr. Gudger.

Mr. GUDGER. I have two very brief questions. I would like a clear definition of this term on what is page 4 in subsection iv, "Aggregate per capita revenue derived from all property tax * * * (excluding the Yukon Property Tax * * *)."

What is aggregate per capita revenue and what do you distinguish? Does per capita mean the individual property owner who is paying an ad valorem tax to some unit of government, and is this the aggregate of such taxes?

Mr. BOSWORTH. It, Mr. Congressman, is the total of the revenue raised by property tax plus grants from the Federal Government of Canada divided by the total number of people in the Yukon Territory.

Mr. GUDGER. And from that there is nothing in here that uses a divider. It says, "the aggregate per capita" and "the percentage increase of the aggregate per capita". Would not that mean the total, as was indicated by Mr. Wirth's earlier questions?

Mr. BOSWORTH. No, sir. The aggregate here refers to the aggregate of the property tax plus grants from the Federal Government. It does not refer to the aggregate of the people.

Mr. GUDGER. You said then you would take the average of that divided by the total property tax?

Mr. BOSWORTH. Yes, sir.

Mr. GUDGER. But wherein does that subparagraph say that you take the average of that?

Mr. BOSWORTH. That is the mutual understanding of what that phrase "aggregate per capita revenue" means.

Mr. GUDGER. You say excluding the Yukon property tax, and yet you have just said that this is the ad valorem property tax. Would you explain what you mean by that exclusion?

Mr. CROOK. Yes, sir. That was done as a technical drafting matter. In the copy you have, the term "Yukon Property Tax" should have initial capitals in each case. That is the term of art we used in this agreement to describe the total taxes on the pipeline itself. It is the term defined in subsection (b)(i) of paragraph 5.

Mr. GUDGER. So that refers to the exclusion of the taxes on this line itself?

Mr. CROOK. Yes, sir.

Mr. GUDGER. Preceding the date of this determination?

Mr. CROOK. Yes, sir.

Mr. GUDGER. You have indicated here certain cost determinants relative to the charges to be made for the transportation on the line. Would you recapitulate those? There would, of course, be a

capital recap and there would, of course, be the cost of the service on the line itself.

What are these factors that are commonly considered by the accepted regulatory practice, being the term that is used in paragraph 11 on page 8? Are there any variances from accepted regulatory practice between this country and Canada?

Mr. BOSWORTH. Mr. Congressman, without trying to evade that question, I would only like to say that this takes us into an area of expertise which I must confess I do not have. It gets into the very guts of the ratemaking structure and the regulatory practice, and I would suggest that this might well be a question which Dr. Schlesinger in his testimony tomorrow, might be more appropriately prepared to address than I.

Mr. GUDGER. In subsection 12 you state, "It is understood that there will be no charges on the pipeline having an effect on the cost of service other than those." And then you list three. Is it our understanding that this is clearly not all-inclusive? These are exceptions to the general costs that are determinative of tariff. Isn't that correct?

Mr. BOSWORTH. This was an attempt, Mr. Congressman, to offer the United States the assurance that there would not be unusual charges imposed upon the pipeline, and one of those, as I indicated earlier in the testimony in the hearing, was the question of the cost of settlement of native claims.

This clearly specifies that that sort of charge is not applicable to the pipeline.

Mr. GUDGER. Thank you, Mr. Chairman. I have concluded and yield back the balance of my time.

Mr. JOHNSON. Mr. Chairman?

Mr. DINGELL. For what purpose does the gentleman from Colorado seek recognition?

Mr. JOHNSON. I want to pursue some of the questions which have been raised.

Mr. DINGELL. The Chair observes that the time of the gentleman from North Carolina has expired.

The Chair recognizes the gentleman from Colorado, Mr. Johnson.

Mr. JOHNSON. Thank you, Mr. Chairman.

Mr. Bosworth, would you clarify for me the relationship between paragraphs (b)(i), (ii) and (iii) in the agreement and then paragraph (iv). Paragraph (iv) is subject to the limitations in paragraph (b)(i), (ii), (iii)?

Mr. BOSWORTH. Could you repeat your question, please?

Mr. JOHNSON. Everybody keeps telling me that paragraph (iv) provides for taxes in addition to paragraphs (i), (ii) and (iii) but it says, the start of paragraph (iv), "Subject to paragraph (b)(iii)"—as I read that it is not clear to me as to the relationship between the cap that is evidently there in the first three paragraphs and paragraph (iv).

Mr. CROOK. Sir, I think it is a technical drafting matter. We may have done something a little less elegantly here than we could have.

Mr. JOHNSON. You said what?

Mr. CROOK. I think we might have done this a little more elegantly. The point of the reference to paragraph (b)(iii) is that at

such time as the Canadians build a gas line of their own connecting with this proposed line, the whole tax regime laid out in this article is no longer applicable. At that point you fall under the regime of the Transit Pipeline Treaty, that is to say, you have a regime of nondiscrimination. What we are saying there is that at such point as the tax termination date described in (b)(iii) takes place, none of the rest of this will any longer have application. At that point you go into a straight regime of nondiscriminatory taxation as between the line carrying Canadian gas and the line carrying U.S. gas.

Mr. JOHNSON. The cap applies prior to that time, does it not?

Mr. CROOK. Yes, sir.

Mr. JOHNSON. So what you are saying is, these provisions of the Yukon in paragraph (iv) apply after the cap has expired in paragraph (iii)?

Mr. BOSWORTH. No, sir. I think it is important to point out, Mr. Congressman, that when, assuming that it happens, the Dempster Lateral is built, then all of the alternative tax regime which we have negotiated with regard to the tax treatment in Yukon Province falls away. That is no longer applicable or relevant because then—

Mr. JOHNSON. That is treated just like a Province where you have another pipeline?

Mr. BOSWORTH. Yes, because that gives us another pipeline.

Now, the cap will apply until the Dempster Lateral is built, and if the Dempster Lateral is not built—

Mr. JOHNSON. Then it will not? That is the way I read it. I thought all this other language put on here ignored that. The cap does apply until 2008 or until the Dempster Lateral is built?

Mr. BOSWORTH. Although the definition of the cap could be subject to change in 1988.

Mr. JOHNSON. This will be one that you talk about prices later and those things?

Mr. BOSWORTH. Right. From 1983 to 1988 it is \$30 million plus the amount of deflator GNP of Canada. From 1988 on, assuming the Dempster Lateral has not been built, then these other criteria come into play.

Mr. JOHNSON. OK. We are not talking about the same things I have been reading here, I don't think. I thank you for that clarification.

In article IV 1.c. relating to the regulations that the appropriate governmental authorities have with respect to rates, tolls, and tariffs—we are in the treaty now rather than the agreement.

Mr. BOSWORTH. Yes, sir.

Mr. JOHNSON. What is the situation with respect to Canadian law that provides the Canadian Government the authority to bind the Provinces in that respect?

Mr. BOSWORTH. With regard to the three Provinces involved in this, the Canadian Federal Government has signed undertakings from each of the Provincial governments as those will become part of the record of the overall agreement.

Mr. JOHNSON. Good. Thank you.

Now, counsel asked a question which I wasn't aware of, that there are evidently different pipelines given different treatment in their Provinces?

Mr. BOSWORTH. I think that was regarding the rate paid for the cost of service, to different pipelines.

Mr. DINGELL. If the gentleman from Colorado will permit, are these agreements between the Canadian Government and the Provinces in place at this particular time?

Mr. CROOK. Mr. Chairman, what is in place are statements of undertakings by the Provinces which are contained as Annex V of the agreement. It is our understanding that the Canadians contemplate the negotiation of detailed Provincial-Federal undertakings relating to these matters and to other matters as well.

It is our understanding that those have not yet been concluded, but the Provinces have given their assurances of intention to fully comply with the agreements.

Mr. DINGELL. If the gentleman would permit, can you give us any appreciation when these are going to be completed?

Mr. BOSWORTH. It is our understanding that this is a subject which the Canadian Federal Government is now actively pursuing with the Provincial governments. At the moment, all we have in hand are statements from three Provincial governments.

Mr. JOHNSON. You do have statements?

Mr. BOSWORTH. They are in Annex V of the agreement.

Mr. JOHNSON. I have to admit I haven't read these, so I think we ought to see whether or not they will be satisfactory. There are obviously no reasons for us to ratify something that the Canadians, or somebody else, require further action on.

I would like to get into this business about the different pipelines.

Mr. BOSWORTH. Different treatment being given different pipelines.

Mr. JOHNSON. Does that create any problem? Counsel has raised that question, that evidently someplace up there different pipelines are given different treatment. Is that not correct?

Mr. BOSWORTH. There may be differences in treatment as to the way in which capital costs are recovered on the basis of rates or from rates paid, but what we are protected against in the treaty and again in the agreement, is that there will be no substantial difference in treatment given us, as opposed to the treatment given similar pipelines in Canada.

Mr. JOHNSON. How do you handle that if some dispute occurs? How do you resolve a dispute that occurs?

Mr. BOSWORTH. Under the Transit Pipeline Treaty, there is a provision for international arbitration. Each government appoints one member of the arbitrating panel. Those two, if they are able to agree on the third, appoint the third. If they are not able to agree on the third, he is appointed by the International Court of Justice.

Mr. JOHNSON. Thank you.

Thank you, Mr. Chairman.

Mr. DINGELL. The Chair thanks the gentleman.

The Chair recognizes the gentleman from Washington, Mr. Meeds.

Mr. MEEDS. Thank you, Mr. Chairman. I am sorry that I wasn't hear to hear the formal testimony. I have gotten through the written testimony.

I only have one question, or two questions, I think, to bring out one thing: The fact that we have entered into agreements and would enter into further agreements with the Government of Canada and the individual Provinces involved is certainly no precedent, is it? We have done this kind of thing before. The Canadians have many pipelines in the United States. We are not really plowing any new ground here, are we?

Mr. BOSWORTH. No, sir, we are not, not in terms of the legalities of this.

Mr. MEEDS. And in terms of practicality, isn't a good share of the Canadian crude on the East Coast fed through a pipeline that starts in Portland, Maine, for those people who are afraid that somehow we are entering and breaking brand new ground and the Canadians are going to cut off the gas, we have all kinds of—in addition to the agreements we signed and will be signing—all kinds of countervailing leverage in the event that would happen, do we not, not that we would ever expect to utilize it, but it exists?

Mr. BOSWORTH. I am not trying to describe it as "countervailing." I think the way I would prefer to describe it is that clearly in the existing situation and future situations there is such a degree of shared interest between the two countries that that in itself provides, in my mind, from a practical point of view, the best assurance that we have that this pipeline will be able to deliver gas to the lower 48 in the manner in which we would like it to be delivered.

But what we have also tried to do is, in the Transit Pipeline Treaty and in the Agreement on Principles we have tried to address very specific concerns about the ways in which this pipeline, particularly because of its importance and size, will be treated. But I think your point is extremely well taken. It is that mutuality of interest which is our best protection.

Mr. MEEDS. You have put it much better than I, much more diplomatically than I would put it, but the fact is, because of the agreement and because of the longstanding tradition of friendly relationships with the country of Canada, no one should fear that there is going to be any problem of the supply of gas through that line would be cut off. Am I not correct?

Mr. BOSWORTH. I think, yes, Mr. Congressman, that relationship offers us very substantial protection of our interests.

Mr. MEEDS. Thank you.

Thank you, Mr. Chairman. I have taken all the time I need.

Mr. DINGELL. The Chair thanks the gentleman.

The Chair observes Mr. Young's request for recognition, and the gentleman from Alaska is recognized for 5 minutes at this time.

Mr. YOUNG. Mr. Chairman, I think the areas discussed have been beneficial in terms of, again, a lot of unknowns, new documents we are dealing with today. I have a question that may sound incidental, but I am curious.

Section 3(b)(i) of the agreement with Canada refers to providing gas to remote communities in the Yukon. This question may sound

a little strange. Of course, in Alaska, but will the gas be North Slope gas?

Mr. BOSWORTH. Yes, sir, it would be.

Mr. YOUNG. Now in the agreement, do you know if anybody has committed that gas at this time?

Mr. BOSWORTH. You mean the producers?

Mr. YOUNG. That is right.

Mr. BOSWORTH. I am not aware of that, sir. What this is designed to provide is that when the gas begins flowing under the authority of the pipeline, that that would—

Mr. YOUNG. If I understand, the owner of the pipeline can transmit the gas and cannot commit the gas?

Mr. BOSWORTH. The article states that the owner of the pipeline in the Yukon will make arrangements to provide gas.

Mr. YOUNG. Arrangement to provide gas. We can use semantics all we want. If you are telling me, all right, they are going to commit the \$2.5 billion pipeline to Beaver Creek, Burwash Landing, Destruction Bay, Haines Junction, Whitehorse, Tetsin, Upper Liard, and Watson Lake at a cost to the owner of the pipeline not to exceed Canadian \$2.5 million, there has to be an indication, to me, that maybe there are some unknown factors. Maybe there has been gas committed already.

Mr. BOSWORTH. I think that is a commitment which would apply to the owner of the pipeline to make what arrangements would be necessary with the producers of that gas, so that it could be supplied to those communities.

Mr. YOUNG. I commend the Yukon Territory and, of course, the Alcan authority, on their negotiating ability. I hope that there is some wisdom and sense that there is delivery capability to areas like Tok, Delta, and Northway Border, and these other areas. I know that is out of your purview, but I am sure this brings to light there has been a great deal of negotiation.

One other question: Section 14, first, that all legislation that must be passed to implement the agreement—what legislation? Is there any other legislation than just the agreement or resolution or recommendation by the President? Do we have to pass any other legislation?

Mr. BOSWORTH. No; we would not. As I understand it, Mr. Congressman, the joint resolution contemplated under the existing legislation would serve that purpose. However, in the case of Canada, to the extent that some portions of the agreement that we have negotiated with them change the recommendations laid down by the National Energy Board, those recommendations must be changed by legislative action in the country of Canada.

Mr. YOUNG. Now what you are telling me is that Parliament has to pass on the recommendations, not the National Energy Board?

Mr. BOSWORTH. No; the National Energy Board—and here I am treading on an area in which my knowledge is not complete, but as I understand it, the National Energy Board's recommendations have legal force. Where those recommendations have been changed as they have been changed to some degree on some point in the negotiation, as reflected in the Agreement on Principles, those changes must be legislated by the Canadian Parliament, and the Canadian executive has undertaken to do that.

Mr. YOUNG. That is the legislation referred to in this section. Is it an up and down vote on the recommendation, or can they change it through this legislative process, which would make it a different package for this Congress to look at?

Mr. BOSWORTH. First, I think I should point out that the Canadian governmental system is somewhat different than ours, in that it is a parliamentary system.

Mr. YOUNG. I am aware of that. I am asking you, what is the process?

Mr. BOSWORTH. The Canadian Government will propose a legislative package to the Canadian Parliament and if that legislative package as approved by the Canadian Parliament is not fully compatible with the obligations that the Canadian Government has taken on in this agreement, clearly we would have to take another look at it.

Mr. YOUNG. We would have to take another look at it. Under the act which I am referring to, the Alaska Gas Transportation Act, we, the Congress, have 60 days from today, I believe, or whenever we get the recommendation of the President, to have a vote on this legislation, and in the case of the Canadian Parliament if they change that or modify it, when you say we would have to take another look at it, does that mean the State Department or the Congress?

Mr. BOSWORTH. First, we have no reason to anticipate on the basis of our discussions with the Canadians that they will have any difficulty in obtaining the legislative authority needed. If they were not able to obtain those legislative authorities and that had a significant impact on the terms of the President's decision and recommendation and the joint resolution of the Congress thereon, then clearly both the Executive and the Congress would have to take another look at the situation.

Mr. YOUNG. What about the provisional legislation possibly to be passed from Alberta and the Yukon Territory? They have their problems with legislative units, too.

As I understand the makeup of the Canadian Government, they have a great deal more autonomy than our States do. They really have States' rights. Thank God for that. Would that change the makeup of this agreement?

Mr. BOSWORTH. Again, this is an agreement we have negotiated with the Federal Government of Canada. They have undertaken certain obligations vis-a-vis the Provinces. One of those is that which we indicated earlier concerning the taxation treatment. We have no reason to anticipate there will be any problem in that regard and no reason to anticipate the Canadians will not act fully in compliance with the agreement we negotiated with them.

Mr. YOUNG. What if the Yukon Parliament or one of the parliaments decided they saw a golden goose and they did not reach an agreement with the big parliament, then it would have to come back to you?

Mr. BOSWORTH. The Canadian authorities have made it clear to us, Mr. Young, that if for any reason Provincial government action makes it impossible for the Canadians to comply with this agreement, then the Canadian Government is in fact liable.

Mr. DINGELL. Would you make that available?

The gentleman's time is up.

Mr. YOUNG. I realize my time is up.

Mr. DINGELL. The Chair would like a copy of that undertaking by the Canadian Government.

Mr. CROOK. Which agreement is this?

Mr. DINGELL. That undertaken with the Canadian Government.

Mr. CROOK. Sir, that flows as a matter of international law from the fact that they have entered into a treaty with us. That is what international agreements are all about.

Mr. DINGELL. If the gentleman from Alaska would permit, the gentleman from Ohio has a question here.

Mr. BROWN. I think there is some confusion here in the 3-way discussion. The question the gentleman from Alaska asked was about the autonomy of the Provinces and what happens if any of the Provinces decide not to be bound by the agreement of the Canadian Government.

The Chair asked if there was anything to assure us in the treaty or otherwise that the Canadian National Government agreement with the United States does in fact bind the Provinces or do the Provinces have laws that they have to pass or can they abrogate any parts of the agreement? I think that is the thrust of what we are trying to find out.

Mr. DINGELL. He then indicated there was an agreement that assured the United States will be held free of adverse effects here. I am trying to see what that agreement is or from where the reasons flow that there is such an agreement.

Now is there such an agreement or is there not? If not, where do you infer it?

Mr. BOSWORTH. We have an agreement with the Federal Government of Canada. They feel confident enough to comply with that agreement that they have entered into it with us. If for one reason or another they are not able to comply, then under international law the Canadian Government would be liable for that.

Mr. DINGELL. There is no express agreement on that point? I think it would be useful if you would give us a memorandum on the international law on those points.

Mr. BOSWORTH. We will be happy to.

[The memorandum referred to follows:]

Both the Agreement between the United States of America and Canada on Principles Applicable to a Northern Natural Gas Pipeline ("the Agreement") and the Agreement between the Government of the United States of America and the Government of Canada Concerning Transit Pipelines ("the Treaty") are legally binding international engagements. Their form and language reflect the intention of the Parties that these arrangements be binding under international law.

Most of the governing principles of international law applicable to international agreements are stated in the Vienna Convention of the Law of Treaties. Although the United States has not yet ratified that Convention, the U.S. regards it as declaratory of customary international law in most respects. The Convention makes clear that international agreements such as the Agreement and the Treaty are "binding upon the parties . . . and must be performed by them in good faith."

International law recognizes a variety of consequences should a State fail to abide by its obligations under an international agreement. Under the Vienna Convention, one party may invoke a material breach by the other as a ground for termination of the agreement or suspending its operation in whole or in part, Article 60. In addition to the rights recognized under the Vienna Convention, international law also recognizes that a breach may give rise to the rights to receive damages. See M. Whiteman, *Digest of International Law*, Volume 14, pp. 285-6, and sources there cited. The Treaty also provides for binding arbitrations.

During negotiation of both the Treaty and the Agreement, the Canadian negotiator repeatedly expressed their intention to be legally bound by all of the provisions of both instruments, and stated their recognition that failure by Canada to perform its obligations under them would give rise to a right on the part of the United States for compensation for injuries sustained as a result of the breach.

Mr. DINGELL. The Chair recognizes the gentleman from Ohio for 5 minutes.

Mr. BROWN. Thank you, Mr. Chairman.

We have all agreed, I think, that the Canadian Provinces enjoy a certain amount of autonomy that does not exist among the States of the United States. I think this bears also on the question of the Yukon Territory becoming a Province. I am not sure under Canadian law whether a territory is more or less autonomous than a Province. I assume it would be less autonomous and that if the Yukon did become a Province, it might present more problems than now exist in the treaty with reference to the Yukon we have already identified.

I would like to make an observation for the record and if it is not correct, have you correct it.

That is, that under Canadian law and precedent and tradition, individual citizens in Canada have less standing at law in administrative procedures involving governmental decisions than U.S. citizens have in Federal administrative procedures or governmental administrative procedures in this country.

In other words, the precedent for unilateral government decisions is greater in Canada than it is in the United States. Is that not correct, or do you know?

Mr. BOSWORTH. I am not in a position to answer that question.

Mr. BROWN. The reason I tried to establish the point is that it seems to me that it bears on such things as the Indian claims. The Canadian Government may be in a position to speak more clearly about potential environmental controversies or Indian land claims controversies than the United States could because individual citizens can bring suits that throw things into court for some time such as we had in the Alaskan pipeline issue.

However, that same situation, it seems to me, has a double-edged, negative impact in that the Canadian Government and Provincial governments may in fact be in a position to fiddle around with the rates and so forth on the pipeline and there is no way to get at that in terms of a suit against the Canadian Government either by a Canadian party or an interested party in the United States.

The only way, as you indicated, was negotiation between the U.S. Government if it feels its consumers are being wronged, and the Canadian Government which in fact has a freer hand; is that correct?

Mr. BOSWORTH. I would like to ask Mr. Crook to reply to your question.

Mr. CROOK. Briefly, our understanding is that your basic point is quite correct. Judicial review of governmental action does play a less significant role in the Canadian scheme of things than it does in the United States. I am sure there may be a dozen exceptions to that in minor cases, but as a general rule, sir, our understanding is the same as yours.

As to your second point, there are certain grounds, I suppose, on which the relevant Canadian statutes will permit review of administrative action. They are more limited than may be the case in the United States.

In the last analysis, what we have here is an agreement in which the regulatory authorities of the two sides, and the governments as well, have entered into standing commitments to consult and seek to resolve questions of mutual interest. This is part of the structure set out by the agreement.

Mr. BROWN. Let's talk about the agreement. Is there any requirement in the agreement that bears on whether Canadian nationals are owners of the pipeline as opposed to joint ownership by American nationals and Canadian nationals or international combines or companies?

Mr. BOSWORTH. Annex 2 of the Agreement on Principles does identify who in each case will be the corporate owners of the pipeline passing through the various sections.

In answer to what I think I understood to be your question, there was no distinction made between treatment of pipelines according to who the actual owner is of those pipelines.

Mr. BROWN. That is not the question. The question is: Who owns the Canadian portion of the pipeline? Is there not a limitation that says it must be owned primarily by Canadian nationals?

Mr. BOSWORTH. Yes, sir, there is.

Mr. BROWN. Will the tariff charged on the Canadian portion of the pipeline be solely within the purview of the Canadian Government?

Mr. CROOK. Sir, in the last analysis, the tariff charged in Canada is subject to the regulatory approval of the National Energy Board in Canada. It was clear throughout the negotiations that on many questions there were issues where the two respective regulatory authorities, United States and Canadian, would have to be in constant communication and consultation in order to assure that the end result was something that was acceptable and beneficial to both countries.

This is recognized by paragraph 9 of the agreement. It sets out procedures and consultation between the two authorities.

Mr. BROWN. But it is with the Canadian Government?

Mr. CROOK. Yes, sir, subject to the parameters set down in the treaty.

Mr. BROWN. They would have nothing to do with the FEC in the United States except for advanced discussions?

Mr. CROOK. Yes.

Mr. BROWN. With reference to the materials which will be used in the construction of the pipeline and the labor which will do the work on the pipeline, is there anything in the agreement that speaks to that?

Mr. BOSWORTH. Yes, sir, there is in paragraph 7 of the agreement. It states that each government will endeavor to insure that the supply of goods and services to the pipeline project will be on generally competitive terms.

Mr. BROWN. Which means what, Canadian labor and Japanese steel?

Mr. BOSWORTH. That depends upon what is competitive.

Mr. BROWN. Paying for that, however, wherever that labor comes from, wherever those materials come from, will be borne by the consumers who use the gas that flows through the pipeline because I assume that would be a fundamental part of the rate.

Now in the United States when a pipeline is constructed, that consumer cost or price goes back to American laborers and steel producers.

The reason for my concern about all this, you see, is that the consumers in this country will pay for the construction of the pipeline and the funds will go back to the Canadian pipeline owners, whoever's steel and labor that is, et cetera.

So there is a considerable dollar impact on American consumers, not to mention the balance of payments situation. In addition, jobs might better have been negotiated in such a way that we could have assured perhaps the use of American productive capacity and American labor to some extent to build this pipeline.

Mr. BOSWORTH. I think we have assured that American materials specifically will have access to inputs into this pipeline on a competitive basis. But the benefit to consumers really stems from the lowest possible cost of construction because the consumer must pay the cost of service of the pipeline. It is true that from the balance of payments point of view—

Mr. BROWN. As determined by the Canadians?

Mr. BOSWORTH. Yes, under the parameters set forth in the Pipeline Treaty and in the agreement on principles.

Mr. DINGELL. The time of the gentleman from Ohio has expired.

The Chair recognizes the gentleman from Massachusetts, Mr. Markey.

Mr. MARKEY. Thank you, Mr. Chairman.

Can you explain for us the legal differences between a Territory and a Province as far as the Yukon is concerned? Is there a legal negotiation due to the fact that they are not a Province but only a Territory? Has that made a difference in how we have negotiated?

Mr. BOSWORTH. We don't negotiate with either provinces or Territories.

Mr. MARKEY. If the Yukon should, in a number of years, become a Province, would that make a change in the legal status of our contract?

Mr. BOSWORTH. No, it would not because we have a legal contract with the Canadian Federal Government. If the Canadian Federal Government thereafter gives Provincial status to the Yukon which is now a Territory, they would not be relieved of their obligations to us under international law which were based on the situation where the Yukon was a Territory and not a Province.

Mr. MARKEY. One thing that concerns me is the so-called Dawson diversion from the Mackenzie Delta down to Whitehorse. I am under the impression that none of the gas which would be in that line will ever reach the United States so that it totally is for purposes other than for servicing people in the United States.

Yet we have made an agreement in our negotiations with the Canadians whereby we will assume a portion of the cost of constructing that line even though we receive absolutely no benefit from the gas which will go through that line.

I am wondering whether the cost that we negotiated on that line is a fixed cost or whether it is subject to the vagaries of the Canadian Government in their ongoing discussions and negotiations and the process of constructing that particular pipeline. Which is it, fixed cost or open end?

Mr. BOSWORTH. It is not fixed cost. In fact, there is an incentive formula built into the agreement under which the amount of U.S. liability for that cost of construction increases as the cost of construction effectively decreases.

Now the effect of that is that if the Canadians come in with a cost of final construction for that portion of the pipeline which is at a certain level lower than the level we anticipated, we would pick up more than two-thirds of the cost, depending upon the sliding scale.

But the cost of service to the American consumer would be lower in that case because the Canadians had saved money on the construction cost.

Mr. MARKEY. Didn't the administration earlier indicate, though, that the cost would be a fixed cost and weren't we led to believe that the ultimate arrangements would not leave us with this kind of discretion? Wasn't that an earlier indication?

Mr. BOSWORTH. I am not aware of any earlier indications. We may be wrong and we will have to check the record. But as part of this negotiation we negotiated a cap or ceiling on the dollar liability of the United States.

Mr. MARKEY. What is that ceiling?

Mr. BOSWORTH. It is not a simple formula, Mr. Congressman. What we have done in effect is agree that as the cost of construction of that portion of the line is held to a lower rate than we anticipated in our initial calculations—

Mr. MARKEY. Or a higher one?

Mr. BOSWORTH. Well, let me use the lower rate first—then the percentage of liability for the United States on that portion of the line would increase. But the net savings in terms of actual cost of construction as reflected in cost of service to the American consumer would be lower.

Mr. MARKEY. So there is no absolute dollar ceiling. What it is is a percentage. So actually there is no dollar limit on it. It is an open ended thing which the Canadian Government would be able to decide what ultimately would be the cost to the American Government?

Mr. CROOK. Sir, I think this might be a point where we could undertake to provide for the record a somewhat clearer explanation of the two calculations that are involved in determining the portion of the cost of service that the United States will pick up on the Dempster spur. It is a complicated system.

Mr. BOSWORTH. It is held to a percentage of the filed cost which provides a fixed measurement against which to make that determination.

Mr. MARKEY. It is disconcerting, though, that the American element in this loses total control essentially over the ultimate cost of this particular pipeline. We have absolutely no control over that.

Mr. BOSWORTH. We have not lost total control over the actual amount of our liability because it is held to a given percentage of

the filed cost of construction of that portion of the pipeline. This is a subject which I think might be more usefully addressed with Dr. Schlesinger tomorrow because it is more in his bailiwick.

[The following material was received for the record:]

The Agreement Between the United States of America and Canada on Principles Applicable to a Northern Natural Gas Pipeline ("the Agreement") establishes a Complex two-step calculation for determining the proportion of the cost of service on the Dempster-Whitehorse lateral which will be borne by United States consumers

Initially, Article 6 and Annex III of the Agreement provide that U.S. shippers shall pay a sliding proportion of that cost of service between 100 percent and 66 $\frac{2}{3}$ percent. U.S. shippers will pay 100 percent of the cost of service (as adjusted by the second calculation) if the actual costs of construction or the Canadian portions of the line carrying U.S. gas equal or are below 135 percent of the filed capital costs specified in Annex III. If the actual costs increase between 135 percent and 145 percent, the proportion paid decreases in direct proportion to the increase. If actual costs equal or exceed 145 percent, the U.S. proportion shall be two-thirds. However, the proportion of cost of service borne by U.S. shippers under this formula cannot drop below the proportion of contracted Alaskan gas in relation to the total of all contracted gas carried in the Pipeline.

The cost basis for the Dempster-Whitehorse lateral to which this first formula is applied is determined by a second calculation. Two amounts are subtracted from actual capital costs of the lateral: The amount by which actual capital costs in the Canadian portions of the Pipeline carrying only U.S. gas are less than 135 percent of the specified capital costs, and an amount equal to the amount by which costs in the remaining Canadian zones are less than 135 percent of the specified capital costs, multiplied by the proportion that U.S. contracted volumes of gas bear to the total amount of gas carried in those zones. If after making this adjustment, capital costs for the Dempster-Whitehorse lateral are equal to or less than 135 percent of the specified costs for the lateral, there is no further adjustment to the proportion determined by the first calculation. However, if the adjusted capital costs are greater than 135 percent of the costs specified in the Agreement, the percentage of cost of service determined with the first calculation is further reduced. This percentage is multiplied by a fraction equal to 135 percent of the filed capital costs specified in the Agreement divided by the capital costs as adjusted. However, this amount shall be no less than the greater of 66 $\frac{2}{3}$ percent or the proportion of Alaskan gas at the Alaskan-Yukon border to the total volume of Alaskan and Northern Canadian gas.

Mr. MARKEY. Was the Canadian Government invited to appear before us here today? Are you aware today? Do you have any idea why they are not here to testify to us?

Mr. BOSWORTH. You would have to address that question to the Chair. We do not issue the invitations.

Mr. MARKEY. Thank you.

Mr. DINGELL. The Chair recognizes the gentleman from Texas.

Mr. COLLINS. Thank you very much, Mr. Chairman. I appreciate very much the opportunity to visit with the gentlemen from the State Department because an international development of this type causes me to have serious apprehensions and considerable doubt about its effect.

You are in favor of the State Department's position on the Panama Canal. Have you kept up with that?

Mr. BOSWORTH. Mr. Congressman, I am forced to admit for the record, because it is easily verifiable from my own personnel file, that I have spent a certain amount of my career, at a much earlier date, working on that problem and have followed the evolution of the system. I am not currently involved in the work on the Panama Canal question.

Mr. COLLINS. From what I read in the newspapers it seems to me that for over 10 years the State Department has advocated that we

give the Panama Canal to the nation of Panama. Yet the record, as I understand it, shows that we own this canal, we have a permanent and complete title. What worries me in this situation is—would you have any hesitancy to give them this pipeline completely?

Mr. BOSWORTH. Yes, sir, we have negotiated terms and conditions under which this pipeline will operate.

Mr. COLLINS. How are these terms any more binding than the terms we had with Panama? Yet the State Department is advocating we give that canal to the country because it asks for it.

Mr. BOSWORTH. I think there are two quite different situations, Mr. Congressman. I am not in a position at this point to go back to the history of the negotiation of 1903 and who actually negotiated on behalf of the Panamanian Government and the status of the Panamanian Government at the time that treaty was negotiated, et cetera. I am really reluctant to get into this.

Mr. COLLINS. It is right before us today. The Senate is talking about it right now. The President has recommended that we give it away. The reason the President has recommended it is because the State Department said they thought we should give it to the Panamanians because they have asked for it.

Canada is going more and more toward nationalization. We would have every reason to expect that once that pipeline was built, that either the Government or State would soon ask for it to be a complete property of Canada.

Can you see any reason now for any kind of a binding or arbitrary agreement that gives us full ownership of it in perpetuity?

Mr. BOSWORTH. I think, Mr. Congressman, one of the essential differences here is that we are talking about a pipeline which will be owned by private companies. In this case the sections in Canada will be owned primarily or at least a majority by Canadian enterprises. We have negotiated with the Canadians an agreement which will govern the way in which American gas from Alaska will transit that area to the lower 48. Countries around the world asked the U.S. Government and the U.S. State Department for things on a daily basis.

Our particular response in the case of the Panama Canal was based upon a whole series of related factors and political understandings. I don't think there is a connection between these two events.

Mr. COLLINS. All I see here is American bankers. I didn't know Canada was going to finance this. I didn't think Canada could raise \$9 billion. It was my understanding that Canada was going to be the prime financier of this. If this was Canadian money and a Canada pipeline, that would be one thing. But don't you anticipate this will be American money?

Mr. BOSWORTH. The Canadians believe they will be able to finance a significant portion of this in Canada's capital market. One of the constructive parts of our relationship with them is the free movement of capital across our borders. The New York market in this country finances projects all over the world.

Mr. COLLINS. Has the State Department asked for a treaty that would be definite, that could be an irrevocable type of ownership of

that where it would be removed from any opportunity for them to nationalize it?

Mr. BOSWORTH. No, sir. We have negotiated successfully with Canada a treaty which covers the manner in which respectively we treat each other's pipelines when they go through their territories, but this is not a pipeline that will be owned by the United States in that section going through Canada.

Mr. COLLINS. It will be owned by whom?

Mr. BOSWORTH. By a consortium of private companies, including Canadian companies and American companies in some instances.

Mr. COLLINS. And it will be Canadian property as you see it?

Mr. BOSWORTH. Yes, sir.

Mr. COLLINS. Completely under Canadian control?

Mr. BOSWORTH. Yes, sir, but subject to the terms and conditions which govern that control as set forth in the Transit Pipeline Treaty and in this Agreement on Principles.

Mr. COLLINS. Thank you, Mr. Chairman.

Mr. DINGELL. The time of the gentleman has expired.

The Chair recognizes the gentleman from Indiana.

Mr. SHARP. I have no questions.

Mr. DINGELL. The Chair recognizes the gentleman from California, Mr. Moorhead.

Mr. MOORHEAD. I notice under the agreement that has been entered into it is contemplated that it will end in 35 years. Is that correct, unless there was an extension?

Mr. BOSWORTH. Yes, sir, that is correct.

Mr. MOORHEAD. Would that be an adequate period of time to get the oil and gas out of the area that we are contemplating for the use of Americans?

Mr. BOSWORTH. I think that question really depends upon what eventually will prove to be the gas reserves in the State of Alaska and the recovery which is possible from those reserves. Thirty-five years seems to be a reasonable period of time to protect American interests in this regard.

I would note that the treaty does not automatically assume or the agreement does not automatically assume that it will terminate after 35 years. It can terminate.

Mr. MOORHEAD. I noted there was a clause that said it could be extended on a 1-year basis.

Mr. YOUNG. Would you yield?

Mr. MOORHEAD. Yes.

Mr. YOUNG. Did I hear you say for the reserves in the State of Alaska or the reserves in Prudhoe Bay?

Mr. BOSWORTH. I meant to say the reserves coming into this pipeline.

Mr. YOUNG. We are talking about one large area. At a later date there may be some additions.

Mr. BOSWORTH. Yes, sir.

Mr. MOORHEAD. It would probably be contemplated that when 35 years have expired, the rate of taxes and other things will go up considerably over the agreement.

Mr. BOSWORTH. I am not sure that would automatically be contemplated, Mr. Congressman, because, again, we have substantial protection and assurance from the fact that presumably 35 years

from now there will still be Canadian pipelines transiting the United States.

Mr. MOORHEAD. One thing that I did not get quite clear is the property taxes that the Territory of the Yukon would levy, the only kind of taxes the American public would be subjected to in the price and product they were purchasing as a result of the pipeline.

Mr. BOSWORTH. In addition to the property taxes levied in the other provinces of Canada, the basic protection that we have under the transit pipeline agreement is that there will be no taxes, levies or other charges placed on this pipeline which are not also placed on similar Canadian pipelines. We have an assurance of nondiscriminatory treatment.

Mr. MOORHEAD. But there is no tax whatsoever on the gas that is passing through the pipeline.

Mr. BOSWORTH. That is correct, sir. We have in bond treatment for hydrocarbons flowing through our two countries.

Mr. MOORHEAD. Under the terms of the agreement it seems there is every possibility of a changing condition to raise the amount of taxes that would be charged. In other words, if the price of running the government in Yukon should go up, the taxes could go up. Also, at the same time the taxes in Alaska go up, they could raise the taxes on the pipeline proportionately as may be necessary in the State of Alaska even though the conditions were not the same.

Mr. BOSWORTH. When we negotiated with the Canadians, they made the point that if the State of Alaska decided it would obtain more revenues through the property tax on this pipeline, that the Yukon Territory should not be precluded from maintaining a proportionate relationship from the portion of revenue they earn. That seemed to us to be a fairly reasonable point.

Mr. SANTINI. Would you yield?

Mr. MOORHEAD. Yes.

Mr. SANTINI. Thank you.

Concerning the previous question and the controller condition of this contained in both the agreement and treaty, it is that a similar Canadian pipeline standard, the only difficulty I see with that is in the Yukon Territory you don't have a 48- or 54-inch pipeline there. I think that limitation probably forecloses arbitrary taxation standards in the other Provinces, but it does not in the Territory of the Yukon or so it would seem.

Mr. BOSWORTH. That is quite correct. That is why we negotiated this very specific tax regime for the Yukon Territory which as I indicated earlier would be superseded, assuming that the Dempster Lateral line is constructed, because that would constitute a similar pipeline for the purpose of the Pipeline Treaty.

The fact that there was not a similar pipeline caused us to feel we should negotiate a similar tax situation for the protection of the American consumer.

Mr. SANTINI. The weakness may be characterized as such in the provisions with regard to the Yukon Territory which seem to be that an imaginative finance minister within the territory could devise a mechanism within your structure whereby he appears to jack up local taxes \$3 for our \$1 contribution, but then feeds back that so-called tax imposition to the 21,800 or whatever residents of the territory in the form of tax rebates or something like that.

The potential certainly is there. We practice some of that mechanism in this country ourselves. It seems to me to be an affirmative that would continue to disturb us.

Mr. BOSWORTH. That was a question that concerned us as well. That is why, as I indicated earlier, we have begun an exchange of correspondence with the Canadian Government which we hope to conclude in the very near future and which we want to make a part of the record which assures us that it is not the Canadian Government's intention to engage in that sort of practice.

Mr. SANTINI. But that is coming from the Canadian Government and not the Territory of the Yukon. As I understand their political operation, that thing could happen despite admonishment or resistance from the Canadian Government; could it not?

Mr. BOSWORTH. Not given the present relationship between Yukon which is a Territory and the Canadian Government which is different from the relationship of the central government and the Provinces.

Mr. SANTINI. If it were to become a Province that might happen?

Mr. BOSWORTH. If it did, that would not relieve the Canadian Government from the obligations it entered into with us. They would have to provide for compliance with those obligations in whatever terms and conditions were specified with the Yukon becoming a Province rather than a territory.

Mr. SANTINI. I thank the gentleman for yielding. I request unanimous consent for 2½ minutes of the gentleman's time I consumed.

Mr. DINGELL. You have heard the unanimous consent that the gentleman from California be given an additional 2½ minutes. Without objection he is given 2½ additional minutes.

Mr. MOORHEAD. Conversely, the point I was making, if the Alaskan taxes were to be made low, there would be no limitation on the Yukon tax as well. So they have the best of two worlds. They go to the highest level either allowed by Alaskan tax rate or by their own?

Mr. BOSWORTH. That is right. There are three standards of measurement. They are free to elect the most favorable of those.

Mr. MOORHEAD. Is it contemplated that they would go to that maximum or that would just be a limitation within which they would live?

Mr. BOSWORTH. That is a cap or a maximum ceiling. They have not committed to go to that ceiling in all instances. As a practical matter, I think the ceiling is in fact a ceiling.

Mr. MOORHEAD. If there are other restrictions on Canadian pipelines in the same area and we have an agreement here, as you said, that taxes must be reasonable and also they must be equitable down the line, would those restrictions on the Canadian pipeline be beneficial to this pipeline in that they would not be able to raise the rates beyond those levels?

Mr. BOSWORTH. That is right, Mr. Congressman. If they build the Dempster lateral line or a similar line, the taxation regime for the Alaskan line in the Yukon would be governed by whatever taxation regime they imposed upon their own pipeline.

Mr. MOORHEAD. I had a question I don't think has been answered. That is concerned with delays brought by citizens' suits

against the construction of the pipeline which happens many times in this country.

Are you familiar enough with the law and the way it works in Canada to assure us that there is not a likelihood of that kind of a thing up there as a result of the construction of the pipeline?

Mr. BOSWORTH. Well, we had a discussion a short time ago about the comparative legal systems of the two countries. Clearly, there is always the prospect of that happening, but it was for that reason that we specified a precise timetable whereby both governments undertook to insure that all certificates, licenses, permits, et cetera, would be expedited in order to permit compliance with that timetable which relates to the date of commencement of construction in Alaska and the date of commencement of construction in the Yukon and the other Canadian Provinces.

Mr. MOORHEAD. It is my understanding from what you said earlier that the use of the pipeline would be passed equally for all consumers, whether Canadian or American, so there would not be any variation?

Mr. BOSWORTH. That is right. The allocation of the cost of service would be done on a volumetric basis proportionate to the amount of gas flowing through the pipeline subject to the conditions set forth in the Agreement on Principles.

Mr. DINGELL. The time of the gentleman has expired.

The Chair recognizes the gentleman from Louisiana, Mr. Moore.

Mr. MOORE. Thank you, Mr. Chairman.

Can you express an opinion on anything in your treaty which would lead us to the conclusion that it would be permissible for the U.S. Government to pay for building this pipeline should the private financing not be available to the constructors of the pipeline?

Mr. BOSWORTH. That point will be addressed in some detail in the President's report and recommendation to the Congress. I understand you will be having testimony later in your hearings on the financing questions. In the Agreement on Principles there is a statement to the effect that it is understood that construction of the pipeline will be privately financed.

Mr. MOORE. So it is fair to say that it is the contemplation of the State Department that this is a private pipeline, privately owned by Canadian nationals and been paid for by private dollars and there was not contemplation that the United States would pay for or own this pipeline?

Mr. BOSWORTH. That is right. It was the determination of the executive branch and the State Department that this pipeline would be privately financed.

Mr. MOORE. I have been asked to yield. I yield to my good friend from Alaska.

Mr. DINGELL. Go ahead.

Mr. YOUNG. Mr. Secretary, we have heard a lot today about the great relationship between the United States and Canada and the role the State Department has played in drawing up treaties.

In recent years the increase in rates from gas that was delivered to the Northwest has been in my mind exorbitant and picked up by the consumer. Was the State Department ever asked to negotiate or talk with the Canadian Government on the imposition of giving this to the Northwest investors?

Mr. BOSWORTH. Yes, sir, we have had very extensive consultations with the Canadian Government.

Mr. YOUNG. What was the result of those consultations?

Mr. BOSWORTH. I think it is difficult to quantify the results. Clearly, the price of that gas has gone up very substantially over the past 4 years.

Mr. YOUNG. Is it not true, Mr. Secretary, that the price has gone up to where they wanted it and as far as the State Department's involvement, as far as the Canadian lines, was there any leverage, as you call it, exerted and, if so, was the end result not frankly what they said they wanted?

Mr. BOSWORTH. I think there is reason to believe that through the process of consultations, we have to some degree attenuated the increase in those prices. I cannot say prices are 10 percent per Mcf lower than they otherwise would have been. But we have evidence through our discussions with the Canadians that they have taken account of our expressions in two counts.

One is the economic impact on the Canadians of the rapid increase in cost and the proportionate rate of increase in the gas prices paid by Canadian consumers, so there is less discrimination between those two markets.

Mr. YOUNG. According to my recollection, when this started they got exactly what they were asking for. Did we increase the consumer price to the Canadian consumer for American gas? Was there any quid pro quo?

Mr. BOSWORTH. I am not aware that we export any gas to Canada.

Mr. YOUNG. We transport it, don't we?

Mr. BOSWORTH. That is Canadian gas we transport across the United States.

Mr. YOUNG. They raised the price and it caused consumer discomfort in the Northwest area. Yet you say the State Department through consultation has somehow reciprocated against the consumer in Canada. I don't see it. We are talking about this pipeline. We have these great agreements. Previous experience has shown us that the State Department's activity in deterring that type of increase has not been very successful.

Mr. Chairman, I don't have any more time.

Mr. DINGELL. I thank the gentleman.

Gentlemen, I am curious about the interrelationship between the Canadian situation and the Alaska tax situation. What is the amount of the tax revenue per mile for the trans-Alaska pipeline?

Mr. BOSWORTH. I don't have that figure before me, no. I am sorry, Mr. Chairman.

Mr. Dingell Well, the Lysyk report states that if the pipeline were taxed at \$11 million in the Yukon, these tax revenues are less than three-quarters of the revenue that would accrue to the Alaskan government. This suggests to me that a comparable tax in the Yukon would be \$15 million, not \$30 million a year.

Can you tell me what the basis is for your statement that \$30 million is essentially the same tax rate as that in Alaska?

Mr. BOSWORTH. I don't believe I said in my statement that \$30 million is essentially the same tax rate as in the State of Alaska. The tax rate in the State of Alaska becomes operable after 1988

when it becomes one of the possible standards of measurement for possible restrictions on the rate of taxation in the Yukon.

Mr. DINGELL. Let me read from your testimony at page 4. It says, "Yukon Territory property taxes on the Alcan pipeline are to be substantially equivalent to the property tax that would be paid by the pipeline were its Yukon facilities located in Alaska." In one instance it is \$30 million and in the other it is \$15 million.

Am I to assume that 15 is equivalent to 30 and if that be so, by what extraordinary mathematics do you arrive at that conclusion?

Mr. BOSWORTH. Two points, Mr. Chairman.

First of all, I think this is a subject which Dr. Schlesinger would be able to engage in tomorrow.

Second, the \$30 million, of course, they are in 1983 dollars. They are not 1975 dollars which are presumably those used by Dr. Schlesinger in his report.

Mr. DINGELL. You sat in on these discussions. Where in the statement does it say 1983 dollars as opposed to 1975 dollars? This anticipates that in a period of 6 years you are going to have 100-percent inflation. That is rather high inflation even for the United States and Canada.

Mr. BOSWORTH. It does not assume 100-percent inflation. I use that figure to indicate there is a difference.

Mr. DINGELL. Maybe my arithmetic is a little different than yours. I want to be corrected if I am wrong.

Mr. BOSWORTH. I don't think your arithmetic is incorrect at all. But there is a distinction between 1975 dollars as used in the Lysyk report and 1983 dollars as used in the context of this—

Mr. DINGELL. Is it 100 percent?

Mr. BOSWORTH. That will depend upon what happens to the rates of inflation. It will hopefully not be 100 percent.

Mr. DINGELL. Where does this \$30 million come from? Did it come out of the air? It must have been equated to something, wasn't it?

Mr. BOSWORTH. I think in the final analysis it was a negotiated figure which has relevance to the rate of taxation as applied in the State of Alaska.

Mr. DINGELL. Is it relative to the rate of taxation in Alaska?

Mr. BOSWORTH. As I said in my statement, it is substantially equivalent to.

Mr. DINGELL. You are telling me 15 is substantially equivalent to 30?

Mr. BOSWORTH. No, not precisely.

Mr. DINGELL. This is a new rule of equivalency.

Mr. BOSWORTH. No, but the 15 as I indicated for 1975 dollars and the 30 was 1983 dollars. That does not account for 100 percent of the difference.

Mr. DINGELL. What are the interest and carrying charges on a 25-year loan of \$200 million?

Mr. BOSWORTH. About \$25 million a year or a bit less than that.

Mr. DINGELL. Well, Mr. Lysyk said funding for the pipeline companies should not only enable Yukon communities to react to stresses and strains associated with the pipeline, but that it should provide cash for purposes that may not be directly related to these impacts.

Do you disagree with that statement?

Mr. BOSWORTH. No. As I indicated in my statement, in the case of the construction of the Alyeska oil pipeline in Alaska, it was found there was impact from construction on social and economic areas. However, those costs should be funded from property tax revenues.

Mr. DINGELL. I get the figure of \$25 million a year for interest and carrying charge on a \$200 million loan. If you take Mr. Lysyk's assumption that it will provide cash for purposes that may or may not be directly related to the social and economic effects and stresses and strains of the pipeline, you figure you add about \$5 million more on that.

Is that where you get the \$30 million figure?

Mr. BOSWORTH. I don't think that is the sole source of the \$30 million figure, no, sir, but clearly the \$30 million figure was arrived at in an attempt to estimate what sort of revenues, all other things being reasonable and equal, the Territory of the Yukon would need to meet these extraordinary economic and social impacts.

Mr. DINGELL. How much is that?

Mr. BOSWORTH. I would have to calculate that. Someone estimated 20,000 people in the Yukon Territory.

Mr. DINGELL. The population is 21,800. What this \$30 million figure amounts to is \$1,308 per year per person or \$5,000 a year, or thereabouts, for a family of four.

Mr. BOSWORTH. Yes, sir.

Mr. DINGELL. I am still trying to figure out how we got from 15, which is the level in Alaska for the same distance and the same pipeline, to 30 in the Yukon.

Mr. BOSWORTH. It was through the process of negotiation with the Canadian authorities.

Mr. DINGELL. They certainly had good negotiators.

The Chair observes that the time of the Chair has expired. We will be sending you a letter asking additional questions. We hope that you will respond in a timely and expeditious fashion.

Mr. BOSWORTH. We will be happy to, Mr. Chairman.

Mr. DINGELL. We thank you all.

Mr. BROWN. Could I ask one question before they go?

Mr. DINGELL. Certainly. The gentleman from Ohio is recognized.

Mr. BROWN. Is there anything in the agreement which establishes the way the tariffs will be determined? What I am getting at is that the number of years in which you amortize something makes a difference as to the cost of it. We don't have the same inflation rate, for instance, that the Canadians now are experiencing. At some times our rate of inflation has been higher than theirs. I think currently their rate of inflation is higher than ours. What I am asking is: Is there any understanding either in the treaty, in the agreement or through these nonwritten statements of Canadian officials or U.S. officials that presumes the method for the considerations which go into the setting of the tariff on the pipeline?

Suppose there are various cost overruns, for instance, not an unusual possibility on a government project and not an uncommon possibility as we know in the Alaskan pipeline oil project. How are

those matters covered? Is there anything that we have which address that? Maybe this is a better question for Mr. Schlesinger, but I thought I would ask you because it relates to the treaty also.

Mr. BOSWORTH. The treaty and Agreement on Principles set forth the parameters relating to such things as nondiscrimination, et cetera.

Mr. BROWN. You mentioned nondiscrimination before. I am not sure what that means. It is popular as a word, but what does it mean?

Mr. BOSWORTH. It means in this case that the Canadian authorities will not impose changes on this pipeline which are discriminatory relative to similar pipelines passing through Canada.

Mr. BROWN. I understand that. But you are talking about unusual size pipelines. Some of those Provinces don't have comparable pipelines so I am not sure if they know what would be discriminatory.

But that is not my question. My question is: Such things as percentage of return that would be normal on this kind of an investment project will have to be determined. There are no comparable projects in the history of the world, in terms of cost. Would you respond on that basis?

Mr. BOSWORTH. What you are talking about is the tariff that will be charged. Those questions as we specify in the agreement are to be resolved in consultation between the two regulatory authorities.

Now as we said earlier, in the end the determination as to the rate charged is the responsibility of the respective ratemaking authorities. They have not decided that.

Mr. BROWN. That is right. The conclusion we come to from the previous question, and with this I will conclude, is that the Canadians for that portion of the pipeline which is Canadian will consult with the U.S. Federal Power Commission and then determine appropriate rates. In the United States, if it were all determined by the U.S. Government authorities, somebody could take the matter into court and see if there had been a misjudgment made?

In Canada that is not done with the degree of ease that it is done in the United States because of the differences in our approaches historically, constitutionally, and so forth in law.

So literally what we are faced with here is the possibility that the Canadians set their tariff after consultation and there is no way to get at that.

I guess what you are telling me is that there is nothing in the treaty now that sets up any guidelines for that, that it will be merely by consultation with the U.S. authorities that have that responsibility.

Mr. BOSWORTH. If the Canadian gas from Mackenzie does flow through the system, then the Agreement on Principles specify the manner in which the cost of service is to be allocated between American and Canadian gas.

Mr. BROWN. I understand that, but it may never be. It may be that 100 percent of that gas is American gas going through a pipeline that goes through Canada to 100 percent American consumers. To put it in context, if the gas was going through an American pipeline—and I am not taking sides on this issue because I have tried to avoid that throughout the consideration of the three

choices that existed—but if the line was solely within the United States, the Federal Power Commission would have authority to set rates and they could be sued and the issue would be resolved in court.

But with it being American gas through a Canadian pipeline to be consumed by Americans, those pipeline charges are not likely to be resolved by Canadians suing individually and they cannot be resolved by Americans suing individually.

In this country, the pipeline cost will be considerably more than the cost of the gas going through the pipeline. So this gas is going to come in based on the pipeline cost, not so much on the cost of getting that gas out of the ground.

Do you want to comment on my concern?

Mr. BOSWORTH. A brief answer to your concern, Congressman, is that the FPC or the replacement agency will still be in a position of having to pass upon the shipper contracts in effect for the application of American buyers of this gas as it comes into the U.S. system.

Now the rate that is paid for transportation through the system will be an integral part of those contracts.

Mr. BROWN. And a major part of the cost of the gas?

Mr. BOSWORTH. Yes, it will. But the U.S. regulatory authorities will, therefore, have a capability to pass on, to approve or disapprove of those contractual arrangements.

Mr. BROWN. I do not see how they do, other than to influence by discussion.

Mr. BOSWORTH. They can disapprove the contract.

Mr. BROWN. What the Canadians charge. What you are telling me, I guess, is that has not been covered by the treaty, and I must say I worry a bit about that.

Mr. BOSWORTH. It has not been specifically covered in the treaty. But clearly the FPC or its replacement agency would have to approve the contracts before the gas could flow.

Mr. BROWN. Then the gas could not come in.

Mr. BOSWORTH. Yes.

Mr. BROWN. Right. We helped build the pipeline and cannot get the gas because we have no control.

Mr. BOSWORTH. I think the ability to finance will depend on the existence of valid approved contracts.

Mr. DINGELL. It is a fact that rarely, on importations of gas, has the Federal Power Commission gone behind the price which was fixed at the border for the sale of the gas in the United States. Am I correct on that?

Mr. BOSWORTH. I am not able to answer that question, Mr. Chairman.

Mr. DINGELL. In fact, I am unaware of any instance when the Federal Power Commission has said that the price of gas to be purchased at the border of the United States was excessive.

Mr. BROWN. We have had such hearings. I participated in one. I agree with the gentleman. I do not know when they ever said the price was excessive. What the FPC did say when the contracts were negotiated last winter, was that some of that gas ought to be sent someplace else.

One other point, if I could have it as a matter of courtesy, it was I who said, as an aside, when Mr. Roncalio was asking a question, there was no more likelihood that the Canadians would do certain things than would the OPEC nations, and he took some offense at it.

I would like the record to show that I also served in the military alongside the Canadians and even spent my vacation, during what is euphemistically called the district work period, in Canada. I enjoyed it immensely, love the Canadians, have been on a number of interparliamentary sessions with them; I have a great deal of respect and an affection for them, and I wish them well in terms of their economic progress.

The problem that I have, however, is in deciding whether or not the State Department, in this instance the American Government, has negotiated successfully in the interest of the American consumer, some of whom I, at least for the moment, have the pleasure of representing.

Mr. DINGELL. The time of the gentleman has expired.

Gentlemen, you have been here a long time and you have experienced some rather vigorous questioning by the committee and the staff. We thank you for your assistance to us. We appreciate your presence.

The committee will stand in recess until 2 o'clock.

[Whereupon, at 1:05 p.m., the subcommittee recessed, to reconvene at 2 p.m., the same day.]

AFTER RECESS

The subcommittees reconvened, at, 2 p.m., Hon. John D. Dingell, Chairman, Subcommittee on Energy and Power, presiding.

Mr. DINGELL. The subcommittees will come to order for the continuation of inquiry into matters relating to the Alcan pipeline.

The Chair notes that we have the Alcan panel before us. We are very happy to welcome Mr. John G. McMillian, chairman, Alcan Pipeline Co.; Mr. Edwin Phillips, president, Westcoast Transmission Co., Ltd., Vancouver, British Columbia; Mr. S. Robert Blair, president, Alberta Gas Trunk Line Co., Ltd., Calgary, Alberta, and Kelly H. Gibson, chairman, Foothills Pipelines, Ltd., Calgary, Alberta.

Gentlemen, we are thankful to you for being with us. We note that some of you have traveled great distances to assist the committee. We want you to know that we are most grateful to you for your kindness to us.

If you would come forward to the witness table and identify yourselves to our reporter, we will then recognize you for such statements as you choose to give.

Let me ask, gentlemen, if there are any of you who are in haste to depart? Some of you have come a considerable distance, so those of you whose travel arrangement require that you leave, please make it known.

Well, gentlemen, we will recognize you from your left to your right. If you would identify yourselves for our reporter, we will proceed with your testimony.

I am advised by counsel that three of you will give one statement. We will recognize any of you for that statement, if that be

your wish; then the others may make comments or additional statements as you wish.

Does that meet with your approval?

STATEMENTS OF JOHN G. McMILLIAN, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, ALCAN PIPELINE CO.; S. ROBERT BLAIR, PRESIDENT, ALBERTA GAS TRUNK LINE CO., LTD., CALGARY, ALBERTA; EDWIN C. PHILLIPS, PRESIDENT, WEST-COAST TRANSMISSION CO., LTD., VANCOUVER, BRITISH COLUMBIA; AND KELLY H. GIBSON, CHAIRMAN, FOOTHILLS PIPE LINES (YUKON) LTD., CALGARY, ALBERTA

Mr. McMILLIAN. Yes, sir. If it meets the chairman's approval, I prepared a written statement that I will file, and rather than read the statement, I would just like to make a few comments and then be open for questioning, and then Mr. Blair, I think, would like to make a statement.

Mr. DINGELL. That would be fine. If that comports with the wishes of the panel, without objection your full statement will be inserted in the record and we will hear your additional comments.

Mr. McMILLIAN. Thank you, Mr. Chairman.

We are pleased to be here today to support the President's decision for the Alcan project. We believe that the Alcan project is the right decision; it gives an overland route for the movement of Prudhoe Bay gas. It also gives Canada the availability and resource to move their frontier gas to their markets when needed.

We believe that this decision is in the best interest of both countries. It gives the United States and Canada an overland system, it gives you the economics of an overland form of gas transportation system. It also gives Canada the right and privilege to transport their frontier gas when needed.

This will help insure to the United States the current rate of exports of Canadian gas to United States markets of approximately 2.7 billion cubic feet a day and, as the NEB has stated by their recent decision, it will also—our project will also allow them to make early free delivery of surplus Alberta gas.

We would like to compliment Secretary Schlesinger and his staff on an excellent job of negotiating the very difficult agreement between two countries. A lot of things were—items were discussed today I think Secretary Schlesinger will clear up tomorrow. We think some of the important things that were negotiated by Dr. Schlesinger was the elimination of the Dawson diversion, which amounted to some \$640 million of capital expenditure to the system and, by establishing a basis for the Yukon taxes, eliminated a \$200 million socioeconomic direct payment from the United States.

We hope that the Congress will approve this project as soon as possible. Any delays will approximately cost us \$3 billion per year in bringing Alaska gas to American markets. We were pleased, and our project was pleased, to have the environmental support. Our route was not an original idea. It was an obvious solution to a very difficult problem that was brought about by the NEPA review.

The FPC, the Department of the Interior, recommended our route as the most environmentally suited route. We were proud to sponsor this route and we were prouder when it was selected.

The basic concept behind our route is that we follow common rights-of-way and corridors through Alaska and mainly through Canada. We feel by using the existing rights-of-way and common corridors and the Alyeska experience in their construction under very difficult conditions, the Alyeska oil line, that we will be able to stay reasonably within budget. With the help of our Canadian partners, who have had great experience in northern construction and have constructed many gas pipelines in their areas, staying within the budget, we look forward to and believe that we will be able to stay within the estimates that we have given to all regulatory agencies.

To do this, we will need a good working relationship with and help from the State-Federal regulatory agencies. We need this help from the initial planning stage until the final completion stage.

We discussed this with most of the agencies. We expect to have this cooperation and are looking forward to cooperating with these agencies.

We think a very important factor to our project is that we have an eastern and western leg that gives equitable gas distribution both to the western and eastern parts of the United States.

There were a lot of questions brought forth today about the financibility of this project. Mr. Mark Millard, our financial expert, will answer these questions.

We have devised and brought forth a plan that we believe is very workable, that brings a minimum impact to the consumer and requires no governmental guarantees.

In conclusion, I would like to thank you for this hearing and to assure you that we will do everything possible for a timely completion of the project with the appropriate considerations for the quality, cost control, safety and environmental problems.

I will answer any questions at your convenience, Mr. Chairman.
[Mr. McMillian's prepared statement follows:]

TESTIMONY OF JOHN G. MCMILLIAN
CHAIRMAN AND CHIEF EXECUTIVE OFFICER OF
ALCAN PIPELINE COMPANY BEFORE THE
SUBCOMMITTEE ON PUBLIC LANDS AND INDIAN AFFAIRS
OF THE HOUSE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
AND THE SUBCOMMITTEE ON ENERGY AND POWER OF THE
HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

SEPTEMBER 22, 1977

Mr. Chairmen:

I am John G. McMillian, Chairman and Chief Executive Officer of Alcan Pipeline Company. With me today are the chief executive officers of three of the Canadian companies who will be our partners in the construction and operation of the Alcan project: Kelly Gibson of Foothills (Yukon) Pipeline Limited, S. Robert Blair of Alberta Gas Trunk Line Limited, and Edwin Phillips of Westcoast Transmission Company Limited.

We are very pleased to appear here today to support the President's decision selecting Alcan as the system for transporting natural gas from Alaska's North Slope to the lower 48 states. The Alaska Natural Gas Transportation Act of 1976, which both of your Subcommittees considered last year established a carefully structured selection procedure. The mandated process resulted in one of the most extensive and detailed inquiries that ever preceded a major decision, and clearly led, we think, to the right decision.

The correctness of the President's selection is evidenced by the findings of the federal agencies which

studied the issue as well as by the strong support for Alcan from concerned and informed groups such as shippers, environmentalists, and state regulatory agencies. All of these agencies and groups have concluded that our overland pipeline system across Canada was preferable to a liquefied natural gas system and that an LNG system should only be selected if no acceptable overland transit was obtainable from Canada. The all around superiority of an overland pipeline to a pipeline/tanker system was well established in the lengthy hearing process with compelling proof that a complex multi-mode LNG system would be significantly less efficient, utilize technology untested on the scale required, create substantially greater environmental dangers and impacts as well as require the delivery of unprecedented volumes of energy to the far edge of our country's natural gas distribution network rather than directly to the markets where the gas is needed.

It thus became of critical importance to the selection of a system best suited to our country's needs to work out a mutually beneficial agreement with Canada for a pipeline to transport Alaska gas. Fortunately, Canada's own need for a pipeline from the Far North, described in the Canadian National Energy Board's decision of July 4, 1977, and the long history of cooperation between the United States and Canada made it possible for our two governments to reach an agreement on the Alcan project. The negotiators for each

country had the long and close inter-relationship of the two countries in oil and gas matters as a firm foundation on which to build. For example, all oil shipped from western Canada to eastern Canada and large volumes of Canadian oil imports cross the United States by pipeline. Similarly, 40 percent of the gas shipped from Canada's western provinces to its eastern provinces cross the United States by pipeline. Another important aspect of the energy interdependence of our two countries is the Canadian natural gas exports to the United States. Currently, 2.7 billion cubic feet per day -- 5 percent of total United States' gas consumption -- is imported into this country from Canada.

Alcan strongly supports the Agreement in Principle that has been carefully negotiated between the two countries. It exemplifies the historic tradition of cooperation between Canada and the United States wherein each country maintains its independence, but both recognize their interdependence. The Administration has described the details of this Agreement so I will not go over it but will merely reiterate that it very significantly benefits the interests of both countries and represents an unusual negotiating success resulting in improvements over the National Energy Board decision for both parties. This is extremely important since such a mutually beneficial agreement will encourage everyone involved

to enthusiastically carry out its terms and expeditiously accomplish its objectives.

The 1976 Act found that the "expeditious construction of the Alaska natural gas transportation system is in the national interest." In view of this need for accelerated action, it is now appropriate for Congress to approve the Presidential decision promptly for the project decided upon has been proven to be in the best interest of our country. If congressional action is put off, construction of the system will be materially delayed and the short-term Alberta supplies which Canada will make available cannot be delivered as now planned for the 1979-80 heating season.

The Alcan project, which will use the Alyeska right-of-way, the Alaska Highway and other existing corridors to minimize environmental damage and to facilitate more predictable and reliable construction and operation, is superior to the alternative LNG system in almost every respect. Let me briefly state some of Alcan's important advantages:

1. Economics -- Alcan has a clear advantage in cost of service, which is the measure of the cost of transporting gas. The Administration has estimated that Alcan will have a twenty-year average cost of service of \$1.03 to \$1.05 per million Btu's in 1975 dollars compared to \$1.19 to \$1.21 per million Btu's for the LNG option. These estimates include substantial allowances for cost overruns.

Alcan's own estimates of its cost of service excluding such theoretical cost overruns are significantly lower, at \$.90 per MMBtu.

The Administration's cost overrun estimates appear to be of the same magnitude as the percentage difference between the final preconstruction cost estimates for Alyeska and Alyeska's actual total costs. We do not believe that we will confront cost overruns of the magnitude experienced by Alyeska since our situation differs significantly from that which Alyeska had to confront.

The oil line is located entirely in Alaska and was built almost entirely across virgin terrain. In contrast, the Alcan system can be divided into five segments: Alaska, the Yukon, the rest of Canadian construction, and the eastern and western legs in the lower 48. The Canadian construction and the construction in the lower 48 will be built under fixed price contracts. Construction in British Columbia, Alberta and Saskatchewan will be carried out by experienced pipeline companies, which will be building in their own "back yard." Thus, substantial cost overruns on these three segments are unlikely.

Although overruns are a greater possibility in Alaska and the Yukon, our Canadian partners have construction experience in the Yukon and, both there and in Alaska, we will be able to utilize existing highways and utility corridors,

such as the Alyeska corridor. Furthermore, the cost estimates for the Alaska section have been based on Alyeska experience and were not questioned during the Federal Power Commission proceeding. Thus, we believe that careful examination of our project shows that significant cost overruns can be avoided. Alcan also has a higher Net National Economic Benefit (NNEB), which is a method of measuring the economic benefits and costs to the country from a given project. The Administration has calculated that Alcan will have an NNEB of \$5.76 billion, over \$1. billion greater than the alternative project. We believe that our NNEB will be even greater, but by any standard, Alcan provides the United States a significant net economic advantage.

2. Early Deliverability -- This factor is important in view of the existing natural gas shortage. We estimate that the Alcan system can begin to deliver Alaska gas by January 1, 1983 if it is expeditiously approved, over a year before an LNG system could be operational. With prompt regulatory action and expeditious construction of the southern end of the Alcan system we should be able to begin deliveries of additional volumes of Canadian gas during the winter of 1979-80 which could be as much as 800 million cubic feet per day.

3. Continued Canadian Gas Exports -- The Canadian

gas export of 2.7 billion cubic feet per day is approximately 5 percent of United States gas consumption. If Canada is to supply its own domestic markets from presently accessible reserves, it will be required to cut back or eliminate these exports to the United States in the 1980's unless Canada can then transport its frontier reserves. The most effective way for the United States to avoid such cutbacks is to facilitate Canadian access to these presently inaccessible frontier reserves. Alcan will provide economic transportation for Canada's frontier reserves but an LNG system obviously would not. As a consequence, the 2.0 to 2.5 billion cubic feet per day of Alaska gas delivered by LNG tankers could be more than offset by the loss of 2.7 billion cubic feet per day of Canadian gas.

4. Gas Distribution and Delivery -- The Alcan system will deliver gas directly by pipeline to both the western and eastern United States. The President's decision provides for a western leg for the Alcan system to transport Alaska gas directly to the states in the Far West and an eastern leg for delivery of gas directly to the Midwest; from there it can be transhipped to the eastern part of the country. Thus, Alcan will permit equitable and efficient distribution of Alaska gas to all regions of the country.

An LNG system would deliver all of the Alaska gas to the Southern California area. From there it would have

to be moved to the rest of the country by displacement, which is the exchange of gas at one location for an equivalent amount of gas at another location. Displacement on such a massive scale is not a satisfactory basis for long-term delivery of Alaska gas reserves.

5. Environmental Factors -- The Alcan project was determined to be environmentally preferable to all alternative projects. It assures minimal adverse environmental impacts by utilizing an all-pipeline system which largely follows existing utility and transportation corridors.

All agencies and disinterested parties in the United States and Canada which have reviewed the Alaska gas transportation proposals have recognized Alcan's environmental superiority. The Council on Environmental Quality, in its report to the President, found that Alcan "is the most environmentally acceptable proposal."

We will exert our best efforts to build Alcan as the most environmentally sound project possible. We have met on numerous occasions with the interested environmental groups and have informed them that we will involve them in the pipeline planning and design process at the earliest possible time. In this way, we hope to flag potential environmental problems so that they can be avoided to the fullest extent possible. We believe that this effort together with close cooperation with involved governmental

agencies will materially assist our efforts to build a system that minimizes environmental disruption.

It should be noted that the Alcan system developed as a direct result of the National Environmental Policy Act and is testimony to its value. The Council on Environmental Quality stated in their July 1 report to the President:

The Alcan proposal and the FPC Supplement (environmental impact statement) were direct outgrowths of this federal agency analysis of reasonable alternatives. This development is a tribute to NEPA and illustrates the value of the environmental impact statement process to federal decision-making.

6. Fuel Efficiency -- The Alcan system will utilize 7.9 percent of the Alaska gas for transportation purposes while an LNG system would require at least 10.9 percent of the Alaska gas for fuel in its pipeline and LNG systems plus fuel for its tankers. This improved fuel efficiency of Alcan on an annual basis is 30 billion cubic feet, sufficient to heat over 245,000 homes. Alcan's effective fuel use can be further substantially reduced by utilizing gas from Alberta for compressor fuel in Canada, a possibility we will be pursuing.

7. Safety and Reliability -- An all pipeline system is inherently more reliable than an LNG system, which is subject to a substantial probability of service interruption. The Council on Environmental Quality concluded that the "analyses of LNG public safety risks on the record are inconclusive." By contrast, natural gas pipelines have a long

and well established record of being extremely safe.

8. Financability -- The President's decision requires the Alcan project to be privately financed in its entirety. The United States and Canadian governments will not be called upon for financial guarantees. Nor will the consumer have to bear the hypothetical burden of the non-completion of the project. Instead, other primary beneficiaries of the project will be called upon to provide the necessary financial backing. We believe that Alcan can obtain the necessary project financing from Canadian and United States sources. This pipeline will have a reserve life of at least 25 years which is greater than any other pipeline in this country. With these large proven volumes, the manageability of the technological and engineering requirements of our project and the great need for the energy supplies, there is little doubt that the pipeline will be successfully financed and built.

These are some of the major advantages which make Alcan the best choice for an Alaska natural gas transportation system and which merit prompt approval by the Congress of the President's decision.

In closing, I would like to briefly mention some issues connected with the actual building of the project. We are concerned that the system be built in the most efficient, expeditious and cost conscious manner that is possible.

To accomplish this goal, we have reached several conclusions which I would like to share with you. First, we intend to profit from the Alyeska experience. Rational planning and careful sequencing of work can greatly reduce the risk of cost overruns and schedule delays. Further, as I mentioned earlier, we hope to work closely with environmental groups, in order to develop environmentally sound designs and plans at the outset. We will, of course, work closely with the numerous government agencies which will be involved in the authorizing and approval process and cooperate with the Federal inspector of construction, whose role of assuring the building of a sound system was established by the 1976 Act. We are also preparing to institute and diligently pursue a positive program of assuring minority business enterprises participation in provision of material and construction.

Alcan welcomes the coordinated federal oversight of project management and construction that has been proposed to avoid needless construction delays and cost increases for we strongly believe that this coordinated regulatory approach recommended in the Presidential decision is essential to minimize cost overruns and insure the lowest possible cost of service price to United States consumers. We point out that as experienced members of the regulated gas industry, we are comfortable working with close regulatory supervision

and that the United States - Canadian agreement provides us with powerful incentives for effective project cost control.

Furthermore, we believe that this required close government-industry cooperation will materially assist us in obtaining project financing.

In conclusion, let me assure you that Alcan will do everything reasonably possible to insure the timely completion of the project with appropriate construction quality, cost control and safety and environmental protection.

I will be happy to answer any questions you may have.

Mr. McMILLIAN. Would you like Mr. Blair to go ahead?

Mr. DINGELL. I think that would be just fine.

We thank you. The Chair observes that the full statement is in the record.

We will hear now from Mr. Blair and your associates, Mr. Phillips and Mr. Gibson, may make such comments as they deem appropriate.

Mr. Blair.

**JOINT STATEMENT OF S. ROBERT BLAIR, KELLY H. GIBSON,
AND EDWIN C. PHILLIPS.**

Mr. BLAIR. Thank you, Mr. Chairman.

I would like to read a brief prepared statement of about four pages that has been drawn up.

Mr. DINGELL. Consider yourself recognized for that purpose.

Mr. BLAIR. I do this on behalf also of Mr. Gibson and Mr. Phillips.

My name is Robert Blair, and I am president of the Alberta Gas Trunk Line Co., Ltd. (AGTL) and Foothills Pipe Lines (Yukon) Ltd. (Foothills).

Associated with me in the statement are Kelly Gibson, chairman of Foothills, and Edwin Phillips, president of Westcoast Transmission Co., Ltd. (Westcoast). On behalf of each of our three companies, I do express our appreciation for the opportunity to appear before you today and provide our views on the pipeline system which has been recommended by President Carter and by Prime Minister Trudeau for the transportation of gas reserves from Alaska, and also Canada's Mackenzie Delta.

As the Canadian sponsors of the Alaska Highway project, we are obviously delighted with the President's decision, as well as the principles of agreement which are negotiated between our two countries. After years of study and intense hearings, it is rewarding to be on the threshold of a solution which will provide substantial benefits to both Canada and the United States, and continue

our long tradition of cooperation in matters of mutual economic interest.

John McMillian and others have described, or we will describe, the basic advantages of our project to the United States, and we will not reiterate these points. Instead, we will provide you with our companies' views as to what Canada has to offer in this project and what it has to gain, and be happy to respond to your questions.

Let me begin by briefly describing the role which each of our Canadian companies will play in the Alaska Highway project. In addition, I would like to tell you something of our background and experience. As you will see, our companies are not newcomers when it comes to the construction and operation of gas pipeline in the Far North.

The Canadian portions of the project will be under the control of a single corporate entity, Foothills Pipe Lines (Yukon) Ltd. Foothills (Yukon) is presently owned equally by two of Canada's largest gas transmission companies, AGTL and Westcoast. An agreement has been announced that the third major Canadian gas transmission company, TransCanada Pipelines, Ltd., will take a 20-percent position in the company at a future date.

One of the strong features of our project is that in each main area of western Canada, the pipeline will be constructed by the gas transmission company which has already performed major construction responsibilities locally. Thereby, the section in northern British Columbia, to be owned by Foothills Pipe Lines (North B.C.) Ltd., will be constructed by Westcoast; and similarly, the pipeline across Alberta, to be owned by Foothills Pipe Lines (Alberta) Ltd., will be constructed by AGTL and so on.

This arrangement provides the ideal combination of ownership and regulatory control being integrated under the single parent company, while for physical construction the management resources and field experience of the local operator will be applied in entirety. For the one area in which there is no established operator yet, the 500 miles through the southwestern Yukon, we are establishing a complete construction management team.

These arrangements should have substantial advantage toward the most efficient project management and cost control.

Together, Westcoast and AGTL have constructed approximately 7,500 miles of gathering lines and large diameter mainlines in western Canada. This construction has been accomplished in all types of weather and all types of terrain, including some discontinuous permafrost. Through it all, however, we have established a consistent record of completing project on schedule and typically within 5 percent of budget.

In terms of size, AGTL now ranks among the top two or three when North American pipelines are rated according to the volumes of gas they transport. Together, Westcoast and AGTL transport nearly 90 percent of the gas produced in Canada, and handle virtually all of that gas which is exported to the United States. At the present time we are responsible for transporting approximately 2.5 billion cubic feet of gas per day, which gas is eventually consumed in markets across the United States. That is to say that the U.S. direct portion of our service totals approximately 2.5 billion

cubic feet per day. This volume exceeds the amount of gas expected from Prudhoe Bay.

Both of our companies are actively involved in gas pipeline construction. In some years we have added as much as 750 miles of pipeline to our system in western Canada. As a result, rather than rely upon outside consultants, we have built up our own engineering and construction management organizations so that we now have a most competent and experienced engineering unit, actually the largest such in Canada.

Also, of course, the addition of TransCanada Pipelines, the largest gas transmission operation in Canada, and Alberta Natural Gas Co. will add further strength.

I emphasize the size and experience of these Canadian companies because, in my judgment, this will provide strength to the project. Our project construction will simply be an extension, albeit a large one, for the planning, financing, and installation work which we accomplish year after year with the present infrastructure. This is part of the base for our confidence that we can meet the schedules and capital cost budgets which have been published.

Inside Canada this particular project is seen, both by our industry and our government, as rather special in that it results in commercial benefits to industries and companies in both the United States and Canada, and also in political benefits in both countries. This combination does not exist often and there is a really strong enthusiasm now inside Canada for securing those benefits in the Canadian interest.

The National Energy Board in Canada has defined this particular project as in the Canadian national interest; and, as has been well-publicized, the Prime Minister of Canada has declared expressly that the Government finds that it will serve our national interest.

One of the benefits to Canada is that the project will provide for a manageable and economical connection of gas reserves which have already been identified in the Mackenzie Delta and of the potential additional gas resources in the Beaufort Basin. Recognition of this should encourage continuing, gradual development of the gas discoveries already made in those areas.

Another area of substantial benefit in Canada is derived from the employment and manufacture that will go into the construction of the project.

Also, this project will produce a substantial flow of revenue through our companies to the public of Canada as taxes and also eventually as capital for reinvestments and dividends to our shareholders. Most importantly, all of these benefits can be achieved with acceptable effects on environmental and social interests in Canada.

The Canadian Government agencies, judicial inquiries and independent societies and panels have concluded generally that the Alaska Highway route is preferable to any alternative and is environmentally acceptable. Also, our government has concluded, after public inquiries, that our project is acceptable in terms of social and economic impacts, both locally and nationally.

At the present time, there are approximately 20 trillion cubic feet of proven but unconnected gas reserves in the conventional

producing areas of Alberta. The National Energy Board, with our government's approval, has suggested that some of this gas could be made available to U.S. consumers in the near term and ultimately repaid when Alaska gas comes onstream.

Our companies fully endorse this exchange arrangement. In fact, one of AGTL's subsidiaries, Pan Alberta Gas Ltd., has already entered into a 5-year contract with Northwest Pipeline Corp. for the sale of up to 800 million cubic feet per day. By prebuilding certain facilities, this gas could be in full flow by the end of 1979, at least 3 years prior to the advent of Alaskan gas. Prebuilding the downstream project would also be positive in terms of overall project management and procurement.

That concludes our prepared opening statement, Mr. Chairman.

Mr. DINGELL. Mr. Blair, you have given us a very helpful and succinct statement. We are grateful to all of you, Mr. Blair, Mr. Phillips, and Mr. Gibson, for your presence here; we know you have come a considerable distance.

Mr. PHILLIPS. Thank you for the opportunity. I will wait to see if there are any questions.

Mr. DINGELL. Very well.

Mr. Gibson.

Mr. GIBSON. No statement.

Mr. DINGELL. We thank you.

We will recognize members of the committee for the purpose of questions.

My good friend and colleague from Wyoming, Mr. Roncalio.

Mr. RONCALIO. I just have a couple.

Mr. Blair, you said that the Energy Board has of course approved the project. Are they still as firmly in favor of the course which you are doing after you made the model changes in the line that are different from what they had first originally recommended in the route, changes in route?

Mr. BLAIR. Yes, Mr. Roncalio. I am sure the proper answer is yes. Of course, I am not officially in a position to speak for that Board at all, but I know I am all you have to address the question to, and I have had consultation with them and I am confident that the answer that they would give you would be affirmative.

Mr. RONCALIO. On page 3 of your statement:

Rather than rely on outside consultants, we have built up our own engineering and construction management organizations so that we now have a most competent and experienced engineering unit.

Will you then in fact be constructing your own pipeline in that area where you have jurisdiction, or will you be putting that out for bids, or do you know?

Mr. BLAIR. I know we will put it out for bids as to the construction contract, but we do have in place design engineering, field engineering, field inspection, and construction management, and the whole organization that is needed to prepare the job for the letting of competitive contracts to the established pipeline contractors as we know them in Canada.

Mr. RONCALIO. Assuming this evolved into reality one of these days or weeks, and you begin this momentous task, I would like to think you could crank into your work the benefit, the experience,

and the mistakes that have been made on the oil pipeline from Prudhoe to Valdez.

I like to think you might be finding out ways to save money and save on mistakes that were so costly and that we find in the rate base of that carrier.

Mr. BLAIR. We will certainly do that in Canada, Mr. Roncalio.

Mr. RONCALIO. Thank you.

Mr. DINGELL. The Chair thanks the gentleman.

The Chair recognizes the gentleman from Ohio.

Mr. BROWN. Gentlemen, thank you very much for your appearance and also your testimony.

This morning we had a good deal of concern expressed about the potential price, rate, tariff, whatever term you choose to use, at which the natural gas would be transported to consumers in the United States through the Canadian pipeline.

Are any of you prepared at this point to either spell out the methods by which that cost or price will be determined or to give us any kind of real dollar assurance as to what it would be.

Mr. McMILLIAN. Mr. Brown, this has been under examination by the Federal Power Commission and the National Energy Board for many years, in both countries, the factors that make up this cost of service. They have examined these costs very carefully. The cost as presented in the President's report to you reflect—

Mr. BROWN. I am sorry; the cost is what?

Mr. McMILLIAN. The cost in the report to you from the President—

Mr. BROWN. I have not seen that report.

Mr. McMILLIAN. We have seen portions of it. We supplied a lot of the data to it, especially in the cost data. So we do have a cost of—a preliminary cost of service that has been calculated for the movement of this gas.

Mr. DINGELL. Can you identify this a little more fully, because I have a feeling our staff will be questioning you on it—

Mr. McMILLIAN. Yes, sir, I will give you some of the figures that we have here. They are in the statement here.

Mr. BROWN. What statement are you referring to?

Mr. McMILLIAN. My written statement, sir, that you should have before you.

Mr. DINGELL. I have read your statement, but I am referring to the document that you alluded to as opposed to the statement, Mr. McMillian.

Mr. McMILLIAN. This is, most of the figures and data that are in the White House report, we assume that they were correct when they came out in the White House release, the preliminary release—

Mr. BROWN. You are losing me because I have not seen the preliminary White House release. That is understandable. It has happened before.

I do not know whether that was released to the press. I am merely a Member of Congress and the minority side at that. But what are you referring to?

Mr. DINGELL. Mr. McMillian, what we are trying to do is to get identification of the document to which you alluded so we can get it for the purposes of having our staff review it.

Mr. BROWN. I understand you are talking about something other than your statement to us. I gather you are talking about something that was submitted by the White House.

Mr. McMILLIAN. It is a fact sheet released by the White House, a week ago or 7 days ago. I am sure you have a copy of it. We have one.

Mr. BROWN. What I have here, the staff has had, is the September 9 press release from the office of the White House press secretary, briefing by James R. Schlesinger, Secretary of Energy, briefing room, at 9:04 a.m. Is that what it is?

Mr. McMILLIAN. Yes, sir.

A lot of those costs, there is a fact sheet that was attached to that, where a lot of the transportation costs are brought forth in that report.

Mr. BROWN. What I am trying to determine is to what extent you stand behind those. Is that a before-the-sale cost of operation of the product or is that an after-the-sale guarantee of the service to be rendered?

Mr. McMILLIAN. These figures that I am going to refer to, and I will give you right now—they have taken our preliminary costs and they have made adjustments to their costs.

Mr. BROWN. "Their" being?

Mr. McMILLIAN. The White House staff, and their economists have inflated some factors more than what—than our statements.

So the administration has estimated Alcan will have a 20-year average cost of service of \$1.03 to \$1.04 per million Btu's. That is in 1975 dollars.

Now you have I hope that fact sheet before you. Now we in our cost analysis which we prepared, our cost of service numbers are somewhat slighter, lower, around 90 cents per million Btu's for a 20-year average.

Mr. BROWN. Is that a total figure?

Mr. McMILLIAN. That is a transportation cost.

Now that is not the total figure that includes the cost of gas, processing the gas, but that is the total transportation cost to the end point of the eastern leg, western leg, U.S.A.

Mr. BROWN. What amortization does that anticipate?

Mr. McMILLIAN. It is a complex formula. It is a 25-year amortization period.

Mr. BROWN. A 25-year amortization of the original cost of the pipeline?

Mr. McMILLIAN. Yes, sir.

Mr. BROWN. What is that anticipated, in terms of payment for the use of the money, interest rate?

Mr. McMILLIAN. We used 10 percent on the debt, 15 percent on the equity.

Mr. BROWN. Have you assurance of financing for the whole project on those financing terms?

Mr. McMILLIAN. Yes, sir. With our financial experts, Mr. Milard, with Loeb Rhoades—

Mr. BROWN. Are those in-company experts or is that an outside financing house?

Mr. McMILLIAN. No, sir. They are outside. Loeb Rhoades is a financial investment banking house in New York, and we have Mr.

Miller with First Boston, and they will follow us shortly and give the financial testimony in detail.

Mr. BROWN. What do you anticipate in terms of cost overrun?

Mr. McMILLIAN. In all our estimates we estimated a 20-percent-cost overrun.

Mr. BROWN. Is that consistent with the administration estimate?

Mr. McMILLIAN. No, sir. I think the administration did apply a higher cost overrun factor to certain portions of the system.

Mr. BROWN. Have you asked for any assurances out of the administration of assistance with the financing, should there be any problem with financing the project?

Mr. McMILLIAN. No, sir, we have not. We believe with the proper coordination with government and cooperation with government that we can finance this project privately and at a lower risk to the consumer and all parties.

Mr. BROWN. Who would be party to that financing? Or does that include the companies that are participants in producing contracts?

Mr. McMILLIAN. Yes, sir. It really helps if we could explain the system from day 1; we thought the administration would go through step by step the construction of the project. Now like—

Mr. RONCALIO. Would you put the mike closer to your mouth so we can hear you?

Mr. McMILLIAN. All right.

Is that better?

Alcan, Northwest Pipeline, several other transmission companies will build the system through Alaska. The system through Canada will be built by Foothills. These are Canadian parties here.

Now we will finance, we will put our equity into the Alaskan portion and raise debt in the conventional way and manner that our financial advisers will describe. Our Canadian partners are going to put their equity money out of their own pocket into the system to be built through Canada and raise debt money conventionally like they have in the past.

Mr. BROWN. Could I ask the Canadian partners at that point are you satisfied that this can all be financed privately in Canada in a satisfactory way?

Mr. BLAIR. Yes, we are.

Mr. BROWN. And have you asked—have you sought or received any guarantees from the Canadian Government that they will help the project should it get into financial difficulty?

Mr. BLAIR. We have not sought any such guarantees.

Mr. BROWN. Have you been offered any?

Mr. BLAIR. No.

Mr. BROWN. Are the producers involved in any way in the financing, either in the Canadian project or the American project?

Mr. McMILLIAN. We would like them to be involved, they are going to be involved in several ways. You can best address those questions to our financial advisers who have developed a very complete financial plan and can give you those details of the plan better than I.

Mr. BROWN. I am sorry, I misunderstood your position.

What is your position?

Mr. McMILLIAN. Sir?

Mr. BROWN. Do you have any agreements or understandings with the producers that they will be involved in the financing?

Mr. McMILLIAN. No, sir, not today.

Mr. BROWN. But what you are suggesting to me is that your financial advisers have encouraged, in their projection of the financing methods, that the producers be involved; is that what you are saying?

Mr. McMILLIAN. They will bring this forth in their testimony. There are several ways that this financing plan can work and that is one of them.

Mr. BROWN. Let me assume for a minute that the producers say "Thanks very much, but we have our hands full producing the gas; it is up to you to transport it"; is your company or the group which you represent prepared to handle it financially if the total burden fell upon you?

Mr. McMILLIAN. Yes, we believe we can do this. I think you have to look at it this way: We will have about the same amount of investment in this system as they have in their transportation system in the field. We will be making \$300 million a year out of our project, they will be making some \$2 billion or \$3 billion per year out of theirs. I think to sell this gas, if you look at it, you can look at it on a lot of different bases—

Mr. BROWN. You are losing me. They are making 10 times as much as you are making.

Mr. McMILLIAN. Roughly.

Mr. BROWN. In transportation.

Mr. McMILLIAN. No, in total profits. I am talking about their investment in their field and their oil production, they are making manyfold what we would be making as regulated companies. We are a regulated company, they are not regulated. So we are just regulated to make so much profit. And so what we are looking at here—

Mr. BROWN. Is this on the same dollar? What you are telling me is that they are going to make 10 times on the same dollar invested as what you are making; is that correct?

Mr. McMILLIAN. Well, we have a different business.

Mr. BROWN. I understand that.

Mr. McMILLIAN. We are regulated.

Mr. BROWN. Is that what you are saying to me, that relative to what they will have invested and what you will have invested, they will make 10 times the return; is that correct?

Mr. McMILLIAN. It is possible.

Mr. RONCALIO. Would the gentleman let me observe something here if it is appropriate?

Are the companies you are referring to—Exxon, Arco, and others—the owners of the oil and gas? Naturally they will make a greater return on their investment, they gamble much more than a regulated carrier. We assume they will be selling oil and gas and making 10 times more. I hope he is correct on that.

Mr. BROWN. I first understood him to say that they will be making 10 times more on the transportation of gas.

Mr. McMILLIAN. No.

Mr. BROWN. Then he said they are making 10 times more on the gas. Are you suggesting it is 10 times more on the gas and oil?

Mr. McMILLIAN. The gas and oil both.

Mr. BROWN. I am not sure how that relates to the transportation just of the gas; I am also not sure where that figure comes from.

Mr. McMILLIAN. Let me try to explain.

They have the oil in the ground, they built the transportation system, and they are going to sell that oil to a market, Alyeska Oil Pipeline. We are all familiar with it. And they receive a value for that oil. They have associated gas with that oil that they also should want to market because it could be a very—depending on the price they receive for that gas—it could be very profitable to them. The price could range, depending upon how the regulatory agencies look at it, from 24 cents, the vintage price, up to \$1.45, how the regulatory agencies look at it before or after the gas processing plant.

So you are talking about immense dollars for the gas sales and oil sales that go to the oil companies that had the risk of developing and finding this field originally. So they had a risk factor involved.

Now we are in a regulated industry where we don't have—

Mr. BROWN. But the risk factor is considerably reduced I might say. I am still confused about what you are assuming as their investment. If you are assuming nothing for finding the Prudhoe Bay gas and oil find, I can understand. If you are washing all that off as part of the risk factor, they might be making that much. But if that is the case then I think we are playing with figures here. But I am still unsure what you meant.

Mr. McMILLIAN. Well, what I mean, what I am trying to say is that the oil and gas producing companies that own the gas in Prudhoe have the opportunity to gain a lot of additional revenue through a good contract to the transmission company and this should be incentive for them to help with the project and to be sure it is a feasible, workable project.

Mr. BROWN. I have one other question, Mr. Chairman, that maybe I should wait and ask later because it goes to a different line of concern.

Mr. DINGELL. The Chair thanks the gentleman. We will return to him.

The Chair recognize now the gentleman from Alaska, Mr. Young.

Mr. YOUNG. Thank you, Mr. Chairman.

First, let me, Mr. McMillian, say that your name should be changed to David instead of John. I congratulate you on your efforts in slaying two great giants. Also the work you have done in Alaska is to be commended. I say that to you as one who supported the all-American Alaska route very strongly and vigorously.

I have had reports from Alaska that the general feeling is that the conduct of your company, of your consortium, was fine, outstanding and straightforward and the feeling now is that Alaskans are pretty much not necessarily in agreement with the route chosen by the President, they disagree with the President, but they do commend you on the way they work with you.

I have one question, Mr. Chairman, that bothers me a little bit.

Mr. McMillian, you said that you wanted the support, involvement, and financing of the line from the parent or producers. Who builds the compressors or the units that are needed in the area to

get the gas into the line? Is that part of your consortium or is that the producers' responsibility?

Mr. McMILLIAN. All of our costs and all of our estimates are based on transportation from the tailgate of the processing plant. So we have all assumed that the producers would build the processing plant and would build—would have the necessary compressors and so on at that point.

Mr. YOUNG. Your cost estimates then are based purely on the pipeline and the in-line compressor units and the delivery lines along that unit. They do not include the Prudhoe Bay on-site compressor units at all.

Mr. McMILLIAN. Or gas processing plant, that is right.

Mr. YOUNG. Or gas processing plant.

Mr. DINGELL. Will the gentleman yield?

When you refer to gas processing, you are talking about taking out sulfur, moisture, stripping out the petroleum and other liquids, impurities, things of that kind, making the gas suitable to be moved through the pipeline without contamination to the line and without slowing down the movement of gas through the pipeline; is that correct?

Mr. McMILLIAN. That is right, making it pipeline standard and remove all impurities.

Mr. DINGELL. If the gentleman will yield further, what does that process involve and what is the cost of that process?

Mr. McMILLIAN. There are several cost estimates placed in the record before the FPC. The range of figures would be a \$1.8 billion to \$2 billion.

Mr. DINGELL. For the cost of the——

Mr. McMILLIAN. Of the gas processing plant, conditioning plant, to prepare the separator gas, field gas for pipeline standards.

Mr. DINGELL. Am I correct in assuming that runs about 75 cents to 80 cents per Mcf?

Mr. McMILLIAN. It could run from 60 to 70, depending on several factors.

Mr. YOUNG. Mr. Chairman, if I might, before you ask all the questions, I was going to ask——

Mr. DINGELL. I just wanted to get that question.

The gentleman may continue. He is recognized.

Mr. YOUNG. What I was trying to get across, Mr. Chairman, is regardless of which route was to be constructed, the same units would have to be built at the same cost, this is your estimate?

Mr. McMILLIAN. Yes, sir.

Mr. YOUNG. Do you have any idea of the timeframe of the construction of those units?

Mr. McMILLIAN. In our preliminary talks with some of the producers we believe that the gas processing plant could be completed by 1-1-83 and construction time would be approximately 3 1/2, about 4 years.

Mr. YOUNG. So really we are looking at two projects here, of great interest. One is the transmission line and the other is the delivery system to the line. Hopefully at a later time we will have a discussion with the producers to find out what their plans are because it gets back to my opening statement, my basic interest is to make sure this gas gets to the market. It is well and good to say

you have a line, but if you don't have the ability to put it in the line, it might be very difficult for everyone.

Mr. McMILLIAN. The longer you reinject that gas, the more it costs the producers and the more fuel loss you have for the energy to reinject that gas. So it certainly is a benefit to the State, to the producers, to sell that gas without damage to the reservoir.

Mr. YOUNG. Thank you.

I have no further questions.

Mr. DINGELL. The Chair thanks the gentleman.

The Chair recognizes counsel for questions at this time.

Mr. BRAUN. Thank you, Mr. Chairman.

Mr. Blair, I would like to explore with you the kind of tariff that the Foothills-Yukon pipeline will seek to implement on its system.

Can you describe to me the kinds of mechanisms that you perceive will be implemented by which you would recover your costs?

Mr. BLAIR. I will certainly try, Mr. Braun, and see if my answer follows the direction that you wish to pursue.

The pipeline, the gas pipeline systems in Canada in their 20-odd years of operation have followed tariff practices which have evolved through regulatory procedures to a pattern which would be very familiar in the United States of tariffs being established which provide for payment at cost of the operating and maintenance expenses of the system and of return to total capital sufficient to cover the interest costs on debt, the actual interest costs on debt, from year to year to cover the payment of dividends on preferred shares and, finally, to produce an after-tax return to common equity, as that return to common equity may be established or as guidelines may be provided by regulatory decisions in the Canadian jurisdictions. And I am sure that the process that we all follow there is one that would be entirely familiar to the industry and to regulatory agencies in the United States. And we have basically taken the same procedures and applied them to the drawing up of tariffs and the estimating of service charges for the Canadian portions of this pipeline.

Now is that—have I taken correctly the direction of your questioning? Is that the kind of answer that you expected?

Mr. BRAUN. Will your tariff be a fixed rate tariff that you would have to go to the NEB to increase or would that be a tariff that would vary the unit costs according to throughput?

Mr. BLAIR. Of the two choices that you give me, I would say it is the former. It will be a tariff established with the approval of the National Energy Board and varied thereafter only with the consent of the National Energy Board.

Mr. BRAUN. Now, what rate do you now anticipate would be chargeable to the U.S. shippers?

Mr. BLAIR. Mr. Braun, would you like us to give you—to furnish you with a schedule of the annual cost of service in cents per Mcf that we have calculated? Of course, there is the full variation of those estimates from year to year in the future and a great deal of detail.

Mr. DINGELL. I think that would be most helpful and we would very much appreciate it for insertion into the record.

Without objection, that will be inserted at the appropriate place in the record.

[See letter dated Sept. 28, 1977, p. 110].

Mr. BRAUN. For purposes of our discussion, let's assume your transportation charge will be \$1 per Mcf, given a certain amount of volumes that you anticipate would be flowing through the pipeline.

Now if the volumes moving your pipeline decrease by half, would the unit rate stay the same or would the unit rate increase to cover all of your costs?

Mr. BLAIR. Well, in this hypothetical example that we are pursuing, under any pipeline whose tariff is established to provide a return of capital, if the throughput should decline very substantially, the unit cost would increase, not quite in proportion because of course as the throughput declined there would be certain economies in operating and maintenance expense. But the cost of use of capital, the return of capital would remain the same, basically, and therefore the unit cost of service would increase at something less than full proportion to the decline in throughput.

Mr. BRAUN. Now, when you are transporting American gas through your pipeline and delivering it to the lower 48 States, you will be rendering each shipper a bill based on the amount of volumes that he has moving through your pipeline and also based upon your unit cost for transporting each unit.

Mr. BLAIR. Are you referring, Mr. Braun, to that 2½ billion cubic feet a day of gas which we presently and historically have transported to the United States?

Mr. BRAUN. I am referring now to the anticipated volumes through the Foothills line.

Mr. BLAIR. We would render each shipper or group of shippers, if for this purpose they become grouped—

Mr. BRAUN. You have not yet signed transportation contracts with the U.S. shippers yet; isn't that right?

Mr. BLAIR. We will be pleased to do so as soon as they are identified as to the companies and quantities of gas that they will purchase. But of course since that transaction has not yet occurred from Prudhoe Bay, we are standing ready to do business as soon as they have bought the gas. So there are no contracts, of course. The other side of that bargain isn't ready yet.

Mr. BRAUN. Let us assume that you are transporting gas through your pipeline for U.S. shippers, the Foothills pipeline is in operation and you are serving the U.S. shippers at a rate of \$1 an Mcf, and the throughput on the line, for whatever reason, is reduced by half; will you have to go to the National Energy Board to get authorization to increase the rate?

Mr. BLAIR. I understand your question. I think where we have gone past each other a bit is in your expressing this cost in terms of dollars an Mcf. I expect what the National Energy Board will authorize as the tariff for this pipeline will be a tariff expressed in terms of return of capital plus reimbursement of maintenance and operating expenses, all of which then in its annual payments divided by the throughput would produce an average cost of dollar per Mcf, but that would be the result of a calculation rather than the tariff, itself. I expect that the tariff on the Canadian portion of this line, like the tariff structure for the other pipelines in Canada, will be keyed to a return of capital. And since a decline in throughput does not affect the capital that has already been invested it will

not be necessary to go back to the regulatory agency to adjust for a decline in throughput.

Mr. BRAUN. Will the cost of the gas processing plant will be allocated in your rates or someone else's rates?

Mr. BLAIR. The gas processing plant in Alaska would not be included in our rate-charging structure, it would be situated in the United States and within a separate jurisdiction.

Mr. BRAUN. Mr. McMillian, do you have an answer for that?

Mr. McMILLIAN. No, I don't. I think it depends on whether the gas is sold at the wellhead or field separator, or at the tailgate of the plant. Those factors have yet to be defined by the FPC or the DOE.

Mr. BRAUN. Is it the traditional practice in the industry that the pipeline provides the processing and conditioning facilities?

Mr. McMILLIAN. No; it is not. It happens both ways, but if you will look at the world statistics on who owns the major portions of the gas processing plants, they are owned by the oil and gas companies, themselves, rather than the transmission companies.

Mr. BRAUN. Mr. Blair, you are familiar, are you not, with the term "all-events, full cost-of-service" tariff?

Mr. BLAIR. I am certainly familiar with cost-of-service tariffs because that is the system under which we have always operated in our own company, basically in the pipeline industry in Canada as in the States. I have heard this expression "all-events;" I think it was an expression coined by the Arctic Gas group in some of their original filings and submissions and I have heard some discussion about what that might be taken to mean, yes. It is not an expression that our company coined or put forward.

Mr. BRAUN. What is the rate of return on equity that your pipeline seeks in connection with its tariffs and its rates?

Mr. BLAIR. The applications as put forward have calculated a return to common equity for the Canadian portions of 16 percent and that has been our estimate. We have also so testified that, of course, attention would have to be given to the going rate of return at the time. If there were a higher rate considered applicable to such operations in Canada, then we would seek that rate.

Mr. BRAUN. How does Foothills suggest that the risk of service interruption be allocated? Would the entire risk of service interruption be allocated to the U.S. shippers or would the Foothills pipeline absorb some of the losses involved with a service interruption?

Mr. BLAIR. My basic answer to you is the latter of the two alternatives you have given me.

We have testimony that Foothills would accept certain categories of reduction—would accept a reduction in its cost-of-service return to equity in certain categories of future events.

That also, Mr. Braun, is a rather detailed matter in the testimony that has been given and we would be pleased to furnish a statement, with some detail in it, if that is useful to the committee.

Mr. DINGELL. I think that would be helpful.

Without objection, that will be inserted in the record at the appropriate place.

[See letter dated Sept. 28, 1977, p. 110].

Mr. BROWN. While there is a lull, may I ask a question?

I want to clarify something that you just said.

Mr. DINGELL. The gentleman is recognized for that purpose.

Mr. BROWN. You said that you would receive 16-percent return on equity.

Mr. BLAIR. On common equity, yes, sir.

Mr. BROWN. Is that before or after taxes?

Mr. BLAIR. After income taxes.

Mr. BROWN. And also covering all the financing costs?

Mr. BLAIR. I am not quite—

Mr. BROWN. The interest payments.

Mr. BLAIR. Yes, that is correct; that would be after reimbursement at cost for the interest paid on borrowed capital?

Mr. BROWN. Is that a conventional return in Canada for, let's say, the industries listed on the Canadian Stock Exchange?

Mr. BLAIR. I would say it is, Mr. Brown. Of course, there is a great detail of information published on this matter in Canada as there is in the United States, but the Canadian pipeline, gas pipeline companies, in their present operations for service mainly to Canadian users are accustomed to earning returns to common equity in that neighborhood.

Mr. BROWN. Out of that, what is the part which goes to pay dividends and what is the part retained for growth and depreciation, variations from what you are allowed by law for the company?

Mr. BLAIR. That ratio would vary from company to company, depending considerably on its maturity and whether it is a young system that is growing very fast or whether it is a system which has pretty well saturated its service responsibilities.

Mr. BROWN. What is your dividend return to investors anticipated in that 16-percent return?

Mr. BLAIR. I don't remember what we have forecast for this year by year, Mr. Brown. In the start of operation there would be quite a lot of variation in the early years, but I can perhaps help with this. In our own company the answer would be approximately 70 percent.

Mr. BROWN. Of the 16 percent?

Mr. BLAIR. Yes.

Mr. BROWN. What in that 16 percent is a cushion against, let's say nonreturn years, or no-return years? You are anticipating it will take how long to build the pipeline?

Mr. BLAIR. About 2½ to 3 years.

Mr. BROWN. Assume for a moment there are delays in being able to use the Canadian parts of that pipeline because of perhaps environmental suits in the United States or some suit over Indian claims or native claims in Canada. What cushion do you have in there for say a delay of 3 years in getting return on the pipeline?

Mr. BLAIR. I wouldn't relate those things in any direct mathematical way to dividend payouts. When I referred to the—

Mr. BROWN. I am talking about the 16-percent return because there will be certainly a fundamental alteration of your financing costs, the cost of borrowed money, if you must borrow that money for twice as long before you get a return—6 years as opposed, say, to 3 years. Do you follow what I am saying?

Mr. BLAIR. I follow what you are saying, but again it is not something that relates mathematically to setting rate of return.

Mr. BROWN. That comment loses me. If your financing cost is increased considerably by a lengthy period of delay from the anticipated time the return begins to when it really begins, it seems to me that that would make a difference in your calculations of what you need in the way of return to cover that extra cost. I am asking, really, whether your 16 percent is based on having that pipeline in operation in 3 years or whether it allows any prospect that the pipeline might be delayed in its completion and therefore the return would be delayed?

If it does not, my question is, what is the cushion, or who is the financier when the pipeline completion is delayed? Have you assurance from your financing people that that money will be forthcoming or that interest payments will be deferred or that the government will take up the slack, or what possibilities are there to deal with that problem?

Mr. BLAIR. First, let me define clearly that the calculations which are in our exhibits, as is usual in our pipeline projects, the project would be completed on the schedule shown.

The second part of your question is, would a delay in that schedule produce some predictable rate of return in common equity which we would ask because our common equity would be tied up for a longer period, say 6 years rather than 3, before a dividend flow can begin, I just can't answer that. I don't know that it particularly follows that we would seek a higher return on common equity. I think that is a matter which would have to be worked out with the regulatory agency according to what it considered just and reasonable under the circumstances.

There is still another reason. It is not possible to give you an absolute answer today on what rate of return will be. In the process of agreement between the Government of the United States and the Government of Canada, there was introduced a provision for alteration of rate of return on an incentive basis to add a further stimulus to the management responsibility of the company to construct economically.

In other words, an understanding was reached in that agreement that a higher rate of return would be allowed if we managed to meet our budgets and schedules on a reward basis to be matched with a lower rate of return if we were less effective in meeting the projections that we have provided that still has to be established and the company, itself, simply doesn't have the right to give you an absolute answer on what rate of return will be in each of the early years.

Mr. BRAUN. Mr. Blair, does the agreement between the United States and Canada prohibit the implementation of an all-events tariff following the commencement of service by Foothills?

Mr. BLAIR. I don't believe it does, Mr. Braun. I am aware from consultation with the Canadian negotiators that there was an understanding reached that such a provision would not be included and, to the best of my recollection, that is the way it occurs.

Mr. BRAUN. Is there a sense of concern on the part of your companies that you may have difficulty in financing your project in Canada without an all-events, full cost-of-service tariff?

Mr. BLAIR. No.

Mr. BRAUN. Under what circumstances would Foothills forfeit its return on equity?

Mr. BLAIR. I think the degree to which we would acquiesce in a lower return to common equity is exactly that subject that you and I were on a few minutes ago where I said since the answer is detailed, it might be better for us to provide that to you in writing than for me to try to describe it informally in this oral testimony.

Mr. BRAUN. If Foothills believes that an all-events, full cost-of-service tariff is not necessary to financing, will you commit yourself now not to use such a tariff, either at the initiation of the project or at any time thereafter?

Mr. BLAIR. No; I think in the circumstances, Mr. Braun, I am not in a position to commit in this oral testimony to a business transaction—to a business condition that would govern our transactions in the future. I am just not in that position today. I am simply saying to you we do not seek what I believe you would have in mind when you use the term of "all-events tariff" and we don't rely on one.

There are many others to be heard from. We have to hear from the lenders at the time we finance and hear what they are going to require as to security of revenue to the company and we are subservient to the regulatory agency in what the National Energy Board should establish as a tariff to which they will consent and the company simply isn't in a position to unilaterally give flat assertions as to what that tariff would be. It would be improper for me to try to do that.

Mr. BRAUN. If you did experience difficulty with financing, would an all-events, full cost-of-service tariff make it easier for you to raise money?

Mr. BLAIR. I just have no idea, Mr. Braun. It would depend on all the judgments and professional assessments that were made at the time.

Mr. RONCALIO [presiding]. Do you deliver natural gas to the gates of the United States at two or three various locations in Idaho, Washington, and Montana?

Mr. BLAIR. Since I am in the role of speaking for the three companies, Mr. Roncalio, the answer is yes. If you wish to pursue it more specifically—

Mr. RONCALIO. Did you say you are delivering 2.5 billion Mcf a year to the United States now?

Mr. BLAIR. Our two companies, the Westcoast Transmission and Alberta Gas Trunk are handling 2.5 billion cubic feet a day of Canadian gas which eventually passes mostly through their systems, but to some degree through connecting systems into markets in the United States.

Mr. RONCALIO. For how many years have you been so engaged in international commerce with the United States in that regard?

Mr. BLAIR. Mr. Phillips started this first.

Mr. PHILLIPS. About 20 years.

Mr. RONCALIO. Is it true that the Canadian distribution companies also have built pipelines in the United States of America which transmit Canadian natural gas from one point of Canada to the other, mostly by running through U.S. lines, like one from New York to California, virtually?

Mr. BLAIR. Yes, I believe I follow your question completely. There are such instances.

Mr. RONCALIO. In those instances have you known of any cases where the U.S. Government has imposed an all-events tariff upon Canada?

Mr. BLAIR. No.

Mr. RONCALIO. Isn't that a game two people can play?

Mr. BLAIR. I imagine it would be if anyone ever started that.

Mr. RONCALIO. Thank you very much.

Mr. McMILLIAN. I have some maps that will explain that gas distribution system through the United States of America.

Mr. RONCALIO. Without objection, they will be placed in our files.

Mr. BROWN. What is the rate of return figure common for U.S. pipelines?

Mr. McMILLIAN. It varies quite a bit by the company involved in debt/equity ratio and a lot of other factors. I think 13 percent is about an average.

Mr. BROWN. Thirteen percent rate of return on equity.

Mr. McMILLIAN. Some are down to 10½ and some up as high as 15 or 16, but 13, I would say, is an average.

Mr. BROWN. Mr. McMillian, when were you first advised that the Alcan pipeline would be the transportation method recommended by the administration to the Congress?

Mr. McMILLIAN. When I heard the President's announcement.

Mr. BROWN. When was that?

Mr. McMILLIAN. I don't remember the date.

Mr. BROWN. Could you give me some rough idea?

Mr. McMILLIAN. It was the 8th or 9th of September.

Mr. BROWN. The public announcement by the President? You were not otherwise advised?

Mr. McMILLIAN. We never knew officially until that date.

Mr. BROWN. Have you been advised officially since, in some way?

Mr. McMILLIAN. Not other than just public announcement. There has been no ceremony where somebody says something.

Mr. BROWN. When did you submit your figures for the preparation of the report by the President which we have not received yet, but which is anticipated, I guess, momentarily?

Mr. McMILLIAN. That has been a long process.

First, we went through each one of the regulatory agencies, NEB, FPC, and we had all that data and we presented testimony to DOR, QEC, and we gave testimony to the various agencies as part of the record they used.

Mr. BROWN. You mean previously when it was under consideration?

Mr. McMILLIAN. By those different agencies.

Mr. BROWN. You indicated you had submitted material for the record and some of the material in the report would be material that you or your company had written, isn't that right?

Mr. McMILLIAN. We were asked to make 18 different studies on 18 different variations of cases and proposals and economic considerations starting in July and August. Starting in July, giving them additional material when requested, or clarification material. The same material was given to the staff of these committees at that time too.

Mr. BROWN. I misunderstood you. I thought you said earlier that you had submitted material which would be in the report, or written material which would be in the report that we are to receive from the administration.

Mr. McMILLIAN. Not from what you have not received and what is on the public record before the FPC or the other agencies. We have had a lot of additional studies and a lot of clarifying questions that were put to us and we presented those answers.

Mr. BROWN. You have not seen the report we are to get from the President?

Mr. McMILLIAN. I haven't seen the finished—no, sir, I haven't seen that report in finished form.

Mr. BROWN. Have you seen a draft of it?

Mr. McMILLIAN. No, not the complete report; no, I haven't.

I have just seen some—like some of our cost figures or some things of that nature or a description of our route so it would be properly defined and there were no mistakes.

Mr. BROWN. They have been submitted to you for verification?

Mr. McMILLIAN. Verification.

Mr. BROWN. When was that done?

Mr. McMILLIAN. In the last 2 or 3 weeks, I guess, in that time-frame. Three weeks.

Mr. BROWN. You don't have the date though when it was submitted to you?

Mr. McMILLIAN. No, sir.

Mr. BROWN. When were the Canadian folks informed of the selection of the route?

Mr. McMILLIAN. That was July 4, when NEB made its decision.

Mr. BROWN. Maybe I ought to ask them.

Mr. BLAIR. May I get your question exactly, Mr. Brown?

Mr. BROWN. When was the group which you represent informed that it had been selected for this route?

Mr. BLAIR. Well, I would say the first hard decision on the route was that published by the National Energy Board on July 4 of this year. I said the first hard decision because there had been previously published a decision by the judicial inquiry of Mr. Justice Burger about a month earlier, in May, which had rejected the Mackenzie Valley route as unacceptable, in environmental and social impact effects and there gave a strong indication of what the final Canadian decision would probably be, but that was simply the report of a judicial inquiry and might have been overruled by the National Energy Board or by a government, but when the National Energy Board, pursuant to the National Energy Board Act, and within the normal procedures of the act, recommended to the Government that our project be authorized and denied the project of the rival Arctic Gas group and denied the sort of sister project that we had been keeping in some standing there in a separate Mackenzie Valley line, from that moment on, unless the Government of Canada had overruled its own main agency, I would say we have understood that our project was the one which would be approved by Canada.

Of course, there were very important processes that followed after that which led up to the announcement of the Prime Minister on about September 6, that the full Federal Government support in

Canada would go behind our project which was, of course, confirmed with a great deal of emphasis in the signing of the agreement with Dr. Schlesinger on Tuesday of this week, and perhaps while I am just on that for a moment, I might go back to something Mr. Braun said.

Had we ever been offered support—perhaps your question, Congressman—had we ever been offered support by the Canadian Government and I answered in the context of financial support. I think it was just a flat “No.” A more complete answer may have been no to financial support, but certainly support in the sense of encouragement, cooperation, and even very positive Government action to make sure that this program is in place. We have been offered great support by the Canadian Government in those respects.

Mr. BROWN. When were you first advised that the American Government had accepted the project? That is, the legislative branch of the American Government accepted the project?

Mr. BLAIR. Would you like a date?

Mr. BROWN. Yes.

Mr. BLAIR. May I ask for help to be sure?

Mr. BROWN. Yes. When and by whom?

Mr. BLAIR. The answer, sir, is on that date on which the President of the United States and the Prime Minister of Canada jointly announced their agreement on the project which I am told was September 8.

Mr. BROWN. Mr. McMillian, I want to ask you a couple more questions. What is your relationship with the Northwest Pipeline Company?

Mr. McMILLIAN. I am president and chairman.

Mr. BROWN. Currently president?

Mr. McMILLIAN. Yes. I am currently president and chairman of the board.

Mr. BROWN. What is Northwest currently paying U.S. producers for domestically produced natural gas?

Mr. McMILLIAN. It varies quite a bit.

Mr. BROWN. Do you have an average, or a range?

Mr. McMILLIAN. From \$1.40 down to I'd say the 50-cents level in our area in the Rockies and then, of course, we import some gas from Canada.

Mr. BROWN. What do you anticipate Alaskan natural gas will cost at the Canadian border in this project?

Mr. McMILLIAN. I can give you transportation costs.

Mr. BROWN. I am talking about the gas.

Mr. McMILLIAN. The gas depends upon what the wellhead price is as established by the FPC.

Mr. BROWN. What do you anticipate that to be?

Mr. McMILLIAN. You have to assume it would be somewhere in the \$1 to \$1.50 range, depending on a lot of factors. That is for the cost of gas. You are going to be looking at two and a half plus, probably, gas delivered to the market.

Mr. BROWN. I am not getting what you are saying. I am having a little difficulty hearing. What was the \$2.50?

Mr. McMILLIAN. I say I think you are looking at the range of \$1 to \$1.50 depending upon a lot of factors such as the wellhead price of gas, the 20-year average—

Mr. BROWN. This is coming out of Alaska?

Mr. McMILLIAN. Yes.

Mr. BROWN. And the transportation cost will be something over \$1?

Mr. McMILLIAN. That is correct.

Mr. BROWN. So you anticipate to come into the United States it will be at what price?

Mr. McMILLIAN. Around \$2.50-plus, probably.

Mr. BROWN. You anticipate the cost of U.S. natural gas will be the same price at that point?

Mr. McMILLIAN. The average—well, it depends on a lot of things that are happening here in Congress and whether President Carter's bill is approved and whether gas is deregulated.

Mr. BROWN. Let's assume we would be operating under President's Carter's bill. What would you anticipate the price to be at the time you are delivering Alaska natural gas through Canada at \$2.50 at the Canadian-United States border?

Mr. McMILLIAN. It would depend on how much U.S. domestic gas would be.

Our average domestic price today is about 65 cents for what we pay here. That is old gas. We have a considerable amount of old gas rolled in. It depends on the escalation factors. It could be possibly \$2 gas, probably \$1.75 to \$2 gas, depending on how the old contracts are handled and other factors. It is really hard to say. If you are trying to ask me if this gas will be competitive in the American market, my answer to that is, Yes, very definitely.

Mr. BROWN. I am trying to rationalize your position as I understand it with the deregulation of gas in the American market, and the price factors that will come into play when this gas is delivered from Alaska. I must say that I have had some difficulty understanding that and I was just trying to figure it out based on the price figures that consumers would have to pay. Do you want to comment on it?

Mr. McMILLIAN. It is another subject. I will be glad to talk to you about it sometime.

Mr. BROWN. You don't want to comment now?

Mr. McMILLIAN. It is not a part of this project.

Mr. BROWN. I am curious to know whether it is, whether there is some benefit for you as a distributor of natural gas from Alaska, and someone who will be moving it through your pipeline in control of domestic U.S. prices, and whether you make more money moving natural gas from Alaska than by moving lower 48 gas to market. I want to know how consumers are better served, depending upon the terms of the relationship of the Alaska gas project to the pricing of gas in the United States.

Mr. RONCALIO. I call on counsel for questioning.

Do you have any questions, Mr. Moore?

Mr. MOORE. Yes, Mr. Chairman.

Mr. RONCALIO. The gentleman from Louisiana is recognized for 5 minutes.

Mr. MOORE. I understand you have indicated there is no intention of the Federal Government of the United States financing in any way the construction and operation of this pipeline. Do you

have any sort of contingency plan if you are not able to get all of the necessary private financing to build the pipeline?

Mr. McMILLIAN. Our financial experts will speak to that and I think they can speak to it very ably and I would rather let them do that.

Mr. MOORE. Well, of course, they are working as brokers on your behalf. You are the fellows putting them to work.

I am asking what is in your mind if you cannot obtain the \$10 billion, all or part of it, that is necessary to build the pipeline. Where do you intend to go? You intend to go to producers for some of the money and what-have-you. Let's assume you can't get it all to build the pipeline. Where do you get the rest of it?

Mr. McMILLIAN. We haven't made that assumption. We believe this project can be financed in the private sector and we plan to do so.

Mr. MOORE. So your answer is, you have no contingency financing plan if you can't get it from private sources?

Mr. McMILLIAN. We have no contingency plan to bring forth, no, sir.

Mr. MOORE. Then it would be fair to say then, what happens if you cannot finance it from private sources? Do you intend not to build the pipeline or would you come to Congress asking for money to complete the pipeline?

Mr. McMILLIAN. We haven't faced that point and we don't think we are going to have to face that point.

Mr. MOORE. I am giving you a hypothetical situation and I am asking, would you?

Mr. McMILLIAN. You are giving me a hypothetical situation I don't think will exist, and you make it awfully difficult for us to go to the money market and get this money. You should be sensitive of that.

Mr. MOORE. I am sensitive to it. That is why I am asking the question. I don't want to see you back in Congress asking for the balance of the \$10 billion.

Mr. McMILLIAN. I don't think you are helping on that standpoint.

Mr. MOORE. I thank the chairman.

Mr. RONCALIO. Gentlemen, we believe this concludes the questioning by the combined subcommittees. We thank you very much for your contributions.

I must remind all four of you that a feeling prevails in the minds of many Congressmen that a tremendous bargain was driven by the negotiators and that the Secretary meant something when he said, "Gentlemen, you remind me that you are saying to us in effect we may not take our horses and go home and use them for spring plowing."

[The following letter was received for the record:]

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WASHINGTON, D. C. 20036

September 28, 1977

Congressman John D. Dingell
Chairman
Subcommittee on Energy and Power
of the
Committee on Interstate and Foreign Commerce
Washington, D. C. 20515

Dear Congressman Dingell:

During the course of testimony on September 22, 1977, before the Subcommittee on Energy and Power and the Subcommittee on Indian Affairs and Public Lands, you requested that Mr. Robert Blair, President of Foothills Pipe Lines (Yukon) Ltd., supplement the record with a description of the circumstances under which the cost of service for the Canadian segments would be reduced by an abatement of the return on equity. You also asked that Mr. Blair provide an estimate of the cost of transporting Alaskan gas through the Canadian segments of the Alcan system. This letter will respond to those requests.

With respect to the circumstances under which there would be an abatement in the return on equity, this will not be precisely known until the terms and conditions of the transportation agreements are finally negotiated with the U. S. shippers. We anticipate, however, that the Canadian tariff or tariffs will ultimately be similar to the pro forma tariffs which were submitted to the National Energy Board and the Federal Power Commission for approval in principle. For the record, I am enclosing the text of Section 10 of the pro forma tariff of Foothills Pipe Lines (Yukon) Ltd. which describes the circumstances under which there would be an abatement of the return on equity.

With respect to your second request, I have attached a table captioned "Alaska Highway Project - 48" Alternative". This table reflects the total cost of service from Prudhoe Bay to the 49th Parallel as filed with the Federal Power Commission and the National Energy Board. To obtain the cost of service for the Canadian portion only, you simply subtract the Alcan cost of service (line 17) from the total

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cost of service (line 23). I should point out, however, that these cost of service figures (a) are escalated, and (b) do not include the purchase cost of fuel, although they do reflect the shrinkage in delivered volumes resulting from fuel use.

In addition, because the above-mentioned costs do not reflect the project as finally agreed upon, I am attaching a table captioned "Alcan Project - Renegotiated Case", which has been prepared by Alcan to reflect the cost of service which would result from the agreement between the United States and Canada. This estimate is based upon the following assumptions:

1. The pipeline would be constructed on the original route.
2. Service would commence on January 1, 1983, at a volume of 2.4 Bcf per day of Alaskan gas.
3. The pipeline diameter would be primarily 48", with the section from Whitehorse to Caroline, Alberta operating at 1680 p.s.i.g., and the balance of the line operating at 1260 p.s.i.g.
4. Canadian Mackenzie Delta gas would be added by means of a Dempster lateral on January 1, 1985, at a volume of 1.2 Bcf per day.
5. The total pipeline system would be completed without cost overruns.
6. As a result of Assumption No. 5, the U. S. would pay 100% of the cost of service of the portion of the Dempster lateral between Whitehorse and Dawson.

It should also be pointed out that this cost of service estimate is based upon parameters established by the U. S. Task Force for purposes of comparison with El Paso. These parameters include use of:

1. 1975 dollars to estimate capital costs.
2. A return on equity of 15%.
3. A debt equity ratio of 75/25.
4. Cost of fuel at \$1.00 per MMBtu.

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Congressman John D. Dingell
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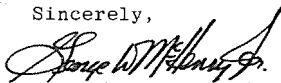
While this table reflects the total cost of service from Prudhoe Bay to the ultimate market in the lower 48 states for twenty years on a 1975 dollar basis, we have made some calculations to determine the Canadian portion for three typical years.

<u>Year</u>	<u>Total Cost of Service (\$ per MMBtu)</u>	<u>Canadian Portion (\$ per MMBtu)</u>	<u>Canadian Percentage</u>
1983	1.59	.689	43.4
1992	.83	.41	49.8
2002	.47	.25	53.8

The cost of service for the Canadian portion for the other years can be estimated by applying appropriate percentages, prorated from the three years shown, to the total costs.

I trust that this information will be of assistance to you. If you have further questions, feel free to contact me.

Sincerely,



GEORGE W. McHENRY, JR.

Counsel for
 Foothills Pipe Lines (Yukon) Ltd.
 The Alberta Gas Trunk Line
 Company Limited
 Westcoast Transmission Company
 Limited

GWM:sjh

Enclosures

FOOTHILLS PIPE LINES (YUKON) LTD.

Gas Service Tariff
Volume No. 1

Original Sheet No. 147-48

RATE SCHEDULE T-1 - FIRM SERVICE

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10. Adjustments

10.1 Billing Adjustment

If, in any Billing Month, Company is unable, due to any fault in the Company's Yukon Section Facilities or Saskatchewan Section Facilities to take receipt from Shipper of the quantity of Gas nominated by such Shipper to Company in accordance with Shipper's Service Agreement then Shipper's monthly charge for such Billing Month will be adjusted as herein described. When the quantity of Gas, in any Billing Month, received by Company from Shipper at the Alaska/Yukon Border is less than 80 percent of the quantity of Gas nominated by Shipper pursuant to the Shipper's Service Agreement, the Shipper will receive an adjustment to the monthly bill calculated by taking the sum of A and B:

A. The product of (a), (b) and (c) below;

- (a) Shipper's allocable share of Company's Yukon Section Cost of Service determined pursuant to 7.1 herein,
- (b) Total Canadian dollar amount of the return on Company's Yukon Section rate base attributable to return on common equity, and
- (c) A fraction, the numerator of which is the difference between the quantity of Gas nominated, up to the sum of the Daily Entitlement Quantities on each Day, by Shipper, in such Billing Month and the quantity of Gas actually taken by Company from Shipper during such Billing Month (such Gas hereinafter called "Adjustment Gas") and the denominator of which is the sum of Shipper's Daily Entitlement Quantity for all Days during such Billing Month;

B. The amount of current and deferred taxes included in calculating the Cost of Service for such Billing Month relating to the return on the amount of common equity as calculated in Section 10.1A.

2.0 OVERALL COST OF SERVICE

ALASKA HIGHWAY PROJECT - 48" ALTERNATIVE
OVERALL COST OF SERVICE SUMMARY
(\$MM)

LINE	SEGMENT	1981	1982	1983	1984	1985	1986	1987
<u>A. ALLOCATED TO DELIVERIES AT KINGSGATE</u>								
1	ALCAN PIPELINE COMPANY	57.6	226.0	218.3	209.7	198.9	187.3	176.3
2	FOOTHILLS (YUKON) YUKON SECTION	15.4	76.1	78.7	76.5	75.6	74.6	73.9
3	WESTCOAST - NORTHERN B.C.	16.7	64.9	67.8	67.4	66.4	65.6	64.6
4	AGT(CANADA)	10.6	57.4	58.8	55.9	54.1	52.5	50.9
5	WESTCOAST, SOUTHERN B.C.	7.6	29.6	28.9	28.6	28.2	27.7	27.2
6	TOTAL	107.9	454.0	452.5	438.1	423.2	407.7	392.9
7	ANNUAL DEL'D VOLS. (BCF @ 1000 Btu/cf)	46.3	183.6	273.6	273.6	273.6	273.6	273.6
8	UNIT COST OF SERVICE (\$/MMBtu)	2.33	2.47	1.65	1.60	1.55	1.49	1.44
<u>B. ALLOCATED TO DELIVERIES AT MONCHY</u>								
9	ALCAN PIPELINE COMPANY	140.7	546.5	525.5	504.7	478.9	450.7	424.4
10	FOOTHILLS (YUKON) YUKON SECTION	37.5	183.9	189.4	184.0	182.0	179.6	178.0
11	WESTCOAST - NORTHERN B.C.	40.7	157.1	163.3	162.3	159.9	158.0	155.4
12	AGT(CANADA)	25.8	139.0	141.5	134.5	130.2	126.4	122.6
13	FOOTHILLS (YUKON) SASKATCHEWAN SECTION	7.5	37.3	39.4	38.2	37.6	37.1	36.8
14	TOTAL	252.2	1,063.8	1,059.1	1,023.7	988.6	951.8	917.2
15	ANNUAL DEL'D VOLS (BCF @ 1000 Btu/cf)	112.4	440.7	651.6	651.6	651.6	651.6	651.6
16	UNIT COST OF SERVICE (\$/MMBtu)	2.24	2.41	1.63	1.57	1.52	1.46	1.41
<u>C. TOTAL COST OF SERVICE</u>								
17	ALCAN PIPELINE COMPANY	198.3	772.5	743.8	714.4	677.8	638.0	600.7
18	FOOTHILLS (YUKON) YUKON SECTION	52.9	260.0	268.1	260.5	257.6	254.2	251.9
19	WESTCOAST - NORTHERN B.C.	57.4	222.0	231.1	229.7	226.3	223.6	220.0
20	AGT(CANADA)	36.4	196.4	200.3	190.4	184.3	178.9	173.5
21	WESTCOAST - SOUTHERN B.C.	7.6	29.6	28.9	28.6	28.2	27.7	27.2
22	FOOTHILLS (YUKON) SASKATCHEWAN SECTION	7.5	37.3	39.4	38.2	37.6	37.1	36.8
23	TOTAL	360.1	1,517.8	1,511.6	1,461.8	1,411.8	1,359.5	1,310.1
24	ANNUAL DEL'D VOLS @ 49th PAR. (BCF@1000Btu/cf)	158.7	624.3	925.2	925.2	925.2	925.2	925.2
25	UNIT COST OF SERVICE @ 49th PAR. (\$/MMBtu)	2.27	2.43	1.63	1.58	1.53	1.47	1.42

ALCAN PROJECT
NEGOTIATED CASE

NATIONAL AVERAGE ANNUAL UNIT COST OF SERVICE
(Dollars Per MMBTU)

<u>Year</u>	<u>National Average in 1975 Dollars</u>
1983	\$ 1.59
1984	1.46
1985	1.41
1986	1.30
1987	1.20
1988	1.12
1989	1.03
1990	.96
1991	.89
1992	.83
1993	.78
1994	.73
1995	.68
1996	.64
1997	.61
1998	.58
1999	.55
2000	.52
2001	.51
2002	.47
20-Year Average	<u>\$.89</u>

STATEMENTS OF ROGER C. ALTMAN, ASSISTANT SECRETARY (DOMESTIC FINANCE), DEPARTMENT OF THE TREASURY; MARK J. MILLARD, VICE CHAIRMAN, LOEB RHOADES & CO., INC., ACCOMPANIED BY PAUL L. MILLER, PRESIDENT, THE FIRST BOSTON CORP.; AND JEREMIAH K. ROSS, JR., SENIOR VICE PRESIDENT, WHITE, WELD & CO.

Mr. RONCALIO. We will call on Mr. Altman first.

STATEMENT OF ROGER C. ALTMAN

Mr. ALTMAN. Mr. Chairman, I will briefly summarize my prepared statement and have the balance inserted into the record, with your permission.

I say at the outset, the Treasury has participated in the Alaskan gas decision process from its initial stages. Among other things, we led an interagency group which, on July 1, delivered a public report to the President on the financing issues involved in it.

Fundamentally, our conclusion was and is that this proposed Alcan pipeline can be financed privately, particularly assuming equitable participation of those parties who will benefit directly from its construction. That includes, of course, the producers of the gas in the State of Alaska as well as, naturally, the transmission companies themselves.

We have consistently argued this system could be privately financed, given a proper Federal regulatory climate. We think that the President's decision, with its accompanying terms and condi-

tions, eliminates much of the potential uncertainty of Federal regulations and ensures that such regulation will be conducive to both an efficient project, an economically viable project, and to a private financing of it.

Let me just tick off three or four points as to why we think that.

The President has recommended a modified form of incremental pricing for Alaskan gas to assure its marketability. As you know, he has recommended in addition the creation of an Alaskan Natural Gas Office directed by an appointed Federal inspector to coordinate the government's involvement in construction of the project and to insure that that proceeds officially.

I think that the agreement with the Government of Canada succeeds in largely eliminating at least the binational regulatory problem.

The President also has recommended establishing a rate of return on equity which discourages cost overrun. Also, he has discouraged the use of new and controversial tariff arrangements which would be subject to time-consuming litigation with uncertain results.

And finally, Mr. Chairman, the President has recommended that the field price to the producers of Alaskan gas be established in accordance with the national energy plan, thus eliminating a lengthy price proceeding before the Federal Energy Regulatory Commission, and possibly subsequent litigation.

By adopting these recommendations, the administration expects to resolve much of the uncertainty which earlier characterized the Federal regulatory environment for this project. This ought to eliminate what had been perceived to be a major risk of the project. In effect, Mr. Chairman, we think that the President's recommendations go far to encourage an economically viable Alaskan gas project which, of course, is the key to private financing.

Let me simply emphasize that we have studied this situation very carefully, sir, over the past several months. We have particularly done that because at earlier stages several different parties argued that such a project could not be privately financed, and that either a special form of consumer risk bearing—for example, the so-called all-events, cost-of-service tariff, or that fresh forms of government financing assistance itself would be required.

We have evaluated very carefully—and a lot of that is spelled out in the July 1 report and will be spelled out in the report that you receive shortly.

Mr. RONCALIO. Report from whom to whom?

Mr. ALTMAN. From an interagency task force led by the Treasury Department to the President. You have a copy of that, sir.

We evaluated very carefully the investment capacity of the transmission companies themselves—that is, their capacity to make the requisite equity investment, and finance any cost overrun. We evaluated very carefully the absorptive capacity of both the United States and Canadian capital markets to raise these large sums and we evaluated carefully the effects of the unusual risks of the pure magnitude of the project and the overrun and noncompletion possibilities on the private financing ability.

Mr. RONCALIO. Did you see the editorial in the Wall Street Journal of yesterday?

Mr. ALTMAN. I have read it.

Mr. RONCALIO. What did you think of it?

Mr. ALTMAN. I think, as I just said, that this project can be financed privately. Therefore, I guess I disagree with that editorial.

Mr. RONCALIO. How about the price of gas to American consumers? The assumption is you can drill a well anywhere and have \$2 gas. With the pipeline, you have \$3 gas. Isn't that the point of the article?

Mr. ALTMAN. As you know, this is a project whose size is unprecedented and where the complexity of putting together this kind of thing is unusually difficult. We have used our best judgment to conclude that it can be privately financed. I think, Mr. Chairman, it is obviously in the interests of the United States Government that it be privately financed.

Let me point out this in conclusion. No one can be certain, of course, as to whether this financing will be put together as smoothly and as successfully privately as we think that it will. It will take more than a year for us to know whether the amounts which are necessary to be raised and the related commitments from financial institutions on them can be successfully assembled, but I assure you that we have thought this through as carefully as we can. We believe it can be done privately. We certainly think it is in everyone's interest at the Federal level that it be done so, and that everything which is conducive to a private—all the steps which are conducive to a private financing should be taken by all of us in the administration and the Congress to maximize the prospects that it will be done on that basis. Thank you.

[Mr. Altman's prepared statement follows:]

FOR RELEASE ON DELIVERY
EXPECTED AT 3:00 P.M.
SEPTEMBER 22, 1977

STATEMENT OF THE HONORABLE ROGER C. ALTMAN
ASSISTANT SECRETARY OF TREASURY (DOMESTIC FINANCE)
BEFORE THE
SUBCOMMITTEE ON INDIAN AFFAIRS AND PUBLIC LANDS
AND THE
SUBCOMMITTEE ON ENERGY AND POWER

Mr. Chairmen and Members of the Committees:

I am pleased to have this opportunity to assist you in your consideration of the President's Decision on an Alaska Natural Gas Transportation System, and, in particular, the financing aspects of the Decision.

The Treasury Department has participated in the Alaskan gas decision process from its initial stages. Among other activities, the Department led an interagency task force, which on July 1, 1977, delivered a public Report to the President on financing a transportation system.

The President has designated the Alcan system to transport Alaskan gas across Canada for delivery to consumers in the lower forty-eight states. The President's Report discussing the reasons for that decision was forwarded to Congress. It included a detailed discussion of the financing issues. Let me begin, Mr. Chairmen, by summarizing the discussion of financing contained in that Report.

The President observes that "the Alcan project will be one of the largest -- if not the largest -- privately financed international business ventures of all time." Obviously, the amount of financing required for such an undertaking is enormous and raising it is a complex task. Indeed, certain financing issues still remain unresolved.

My central conclusion, however, is that the Alcan project can be privately financed, assuming equitable participation of those parties who will benefit directly from its construction.

Federal Regulation

The Treasury Department has consistently argued that an Alaska Natural Gas Transportation System could be privately financed given a proper Federal regulatory climate. The President's Decision, with the accompanying Terms and Conditions, would eliminate much of the potential uncertainty of Federal regulation and ensure that such regulation will be conducive to both an efficient project and a private financing.

To be specific, the President has recommended a modified form of incremental pricing for Alaskan Gas to assure marketability to consumers. He has recommended the creation of an Alaska Natural Gas Office directed by an appointed Federal Inspector to coordinate the government's involvement in construction of the project and to ensure the project proceeds efficiently. He has prepared an Agreement with the government of Canada which largely eliminates binational regulatory problems. The President has recommended establishing a rate of return on equity which discourages cost overruns. He has discouraged the use of new and controversial tariff arrangements that would be subject to time-consuming litigation with uncertain results. Finally, the President has recommended that the field price to the producers of Alaskan gas be established in accordance with his National Energy Plan, thus eliminating a lengthy price proceeding before the Federal Energy Regulatory Commission and subsequent litigation.

By adopting these recommendations, the Carter Administration expects to resolve much of the uncertainty which earlier characterized the Federal regulatory environment for this project. This should eliminate what had been perceived to be a major risk of the project. In effect, the President's recommendations go far to encourage an economically viable Alaskan gas project, which is the key to a private financing.

One of the issues mentioned above, the form of the tariff paid by gas consumers, is particularly central to financing the project privately. The project applicants originally requested a novel form of tariff referred to as the "all events, full cost of service" tariff. This tariff would have reimbursed the project company for its costs, including the return on and of equity, under any and all possible circumstances, including non-completion. It was argued such a tariff was necessary to induce sufficient private lending for this project.

Alcan's financial advisors have recently concluded that such a tariff will not be necessary. Alcan is prepared, instead, to finance its project with a more conventional tariff commencing only after the project has been completed. Such a tariff would assure that the project's debt would be serviced upon completion and should satisfy lenders that principal and interest payments on the project's debt will be met.

Essentially, our anticipation of an economically viable project coupled with this assurance of debt service leads me to believe that the Alcan project can be financed in the private sector.

Alcan Financing Plan

Alcan's financing plan, which is included in the President's Report, estimates the total capital requirements of the project at \$9.7 billion in escalated dollars, most of which is to be raised over a three year period beginning in 1980. Of this total, 22 percent will represent equity investments and 78 percent will be in the form of debt capital. Alcan expects approximately 82 percent of this \$9.7 billion total (\$7.9 billion) to be raised in the U.S., and the remaining 18 percent (\$1.8 billion) to be raised in Canada.

The U.S. and Canada private capital markets combined represent the largest and most resilient capital markets in the world and have the inherent capacity to supply these amounts. As an example, Alcan plans to raise approximately \$5.5 billion during three years in the U.S. corporate long-term debt market. Overall long-term borrowing by nonfinancial corporations in that market is projected to reach \$300 billion this year. In 1982, the final year of Alcan's borrowing, it is projected to increase to \$466 billion. Alcan's borrowings would represent only 1.2 percent of this total.

The Alcan financing plan should be viewed as tentative because several important issues must be resolved before funds will be committed to it. These currently unresolved issues include:

1. the final determination of the field price of Alaskan gas;
2. the completion of sales contracts for the gas;
3. the final determination of the rate of return that will be allowed on the equity investment in the project.

A small group of the largest U.S. insurance companies will provide the bulk of the U.S. debt capital required. Accordingly, their perceptions of the risks will be critical. At this initial stage, we cannot be sure how these key lenders will assess the risks or even which risks they will perceive as dominate, e.g., the risks of marketability and non-completion. It will take more than a year before we will know with certainty whether the financing can be arranged.

Participants in a Private Financing

One important aspect of our conclusion on the private financing is that the parties who benefit from the project can and should participate in its financing. The major and direct beneficiaries of this project are natural gas transmission corporations, the producers of North Slope natural gas, and the State of Alaska. Their participation will increase the overall private financeability by reducing the amounts which must be raised on the strength of the project's credit alone. I will discuss each of these parties briefly.

Natural Gas Transmission and Distribution Corporations

Natural gas transmission and distribution corporations comprise the Alcan consortium and they must provide the necessary equity for the project as well as the equity portion of any cost overrun financing. The strength of this sponsoring consortium, therefore, is a key element of the financing. Our analysis shows that the firms currently involved in the Alcan project have the capacity to provide these required equity investments. Furthermore, we expect that the consortium will continue to expand and eventually will include a large portion of the entire natural gas transportation industry. In addition, the Alcan project has the advantage of the substantial equity investment of Canadian transmission corporations, which will total at least \$800 million.

Producers of Alaskan Natural Gas

The owners and producers of Alaskan natural gas are major U.S. energy companies. This group is primarily composed of Exxon, Atlantic Richfield, and the Standard Oil Company of Ohio. These companies will benefit substantially from the sale of their natural gas reserves, and obviously require a transportation system to sell them.

These three companies had total assets of \$51 billion in 1976 and net income in excess of \$3 billion. They

clearly have the capacity to participate in the financing of a transportation system, especially as full returns from their North Slope oil and related pipeline investments are realized. These companies have demonstrated varying degrees of interest and have not yet agreed to participate in the project. It seems in their interest, however, and they should be encouraged to do so. We think that financial participation by the producing companies can be structured so as to avoid anticompetitive practices, a continuing concern of the Department of Justice. This issue is specifically addressed in the Report which has been forwarded to you with President Carter's Decision.

The State of Alaska

The State of Alaska will realize substantial revenue in the form of royalty payments and taxes from the sale of North Slope gas. The State will also benefit from use of the pipeline for natural gas distribution and resulting commercial development within the State.

The State of Alaska can use a portion of its revenues from the sale of Alaskan oil to assist in the financing of this project. Originally, the State offered to assist in the financing of the El Paso project by guaranteeing \$900 million of project debt. Similar State of Alaska support for the Alcan project is considered advantageous and is encouraged.

Federal Government Financial Assistance

Possible Federal government support to the project, viz., loan guarantees or insurance, has been evaluated intensively by the Treasury Department because certain parties earlier claimed that it was necessary. These parties asserted that Federal financing support was necessary to finance the project in the uncertain regulatory environment which then existed. They argued that only such assistance would assure lenders of repayment in the event the project was not economically viable and only this would assure their participation. In particular, the Arctic Gas consortium, which withdrew earlier, claimed that financing assistance by both the Canadian and U.S. governments was required for the financing of their project. In addition, the El Paso proposal incorporated approximately \$1.5 billion in loan guarantees under the existing Maritime Administration Shipbuilding program. On the other hand, no Federal financial assistance has been requested for the Alcan project.

Alcan's investment banking advisors do not believe that Federal financing assistance is necessary for the Alcan project. The Administration shares this conclusion. In

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addition, the Administration believes that Federal assistance to this project would be undesirable for several important reasons.

- 1) Federal financial support substitutes the government for private lenders in the critical risk assessment function normally performed by the private lenders.
- 2) Financial assistance also reduces incentive for efficient management of the project.
- 3) Serious questions of equity would result from the transfer of project risks to taxpayers, many of whom are not gas consumers or will not receive additional gas supplies as a result of the Alaskan project.
- 4) A subsidy in the form of lower interest rates yields an artificially low price for the gas.
- 5) Other large energy projects might not be undertaken without similar Federal assistance.

The Government of Canada also opposes Canadian governmental financial assistance to a binational project.

Transfer of Financial Risks to Consumers

The issue of a new mechanism by which gas consumers bear some or all of the financial risks of this project also has received careful study by the Executive Branch. The most frequently discussed mechanism for consumer support would entail a consumer financial guarantee by means of an all events tariff with non-completion arrangements. The non-completion features would provide for a consumer guarantee of at least debt service in the event of non-completion.

The Alcan sponsors and financial advisors have stated that the Alcan project can be financed without such a consumer guarantee prior to completion and without Federal financial assistance. The Administration has concluded that the bearing of financial risks by consumers prior to completion is unnecessary for this project. Furthermore, the Administration believes that consumer guarantees are undesirable for many of the same reasons that Federal financing assistance is undesirable.

Conclusion

The Alcan project is the largest construction project ever contemplated by private enterprise. The requisite financing is uniquely large, complex and most difficult. Let me emphasize, however, that the Administration currently believes that this project can be financed privately -- that is, without Federal financing assistance or consumer guarantees. We encourage appropriate and equitable financial participation by the parties benefiting directly from the project. In conclusion, I urge Congressional approval of the President's Decision recommending the Alcan project.

Mr. RONCALIO. Thank you very much, Mr. Altman.

Mr. Millard, vice chairman of Loeb Rhoades & Co., would you take your time now?

STATEMENT OF MARK J. MILLARD

Mr. MILLARD. My name is Mark J. Millard and I am a vice chairman of Loeb Rhoades & Co., Inc. I am here with Mr. Paul L. Miller, the president of The First Boston Corp. We are financial advisers to the United States and Canadian participants, respectively, in the proposed Alcan project.

I have a written statement which I would like to place in the record and with your permission, Mr. Chairman, I would like to make a few comments on the highlights of the subject which are otherwise discussed in this statement.

I believe that I can say that the financial advisers to Alcan are keenly aware of the size and scope of the financial task which Alcan is facing.

We believe that the answers to the questions, whether the task can be handled successfully within the framework which we by choice have set to ourselves, depends essentially on three general areas.

The first is whether the Alaskan gas is marketable. To me this question doesn't require a lengthy discussion. The discovery of gas associated with oil in Prudhoe Bay was the discovery of the greatest natural gas resource since the Hugoton and Panhandle fields were found approximately at the time of the First World War. Under today's circumstances, the very thought that this gas will not or cannot be brought to market is absurd.

Mr. Chairman, as long as I am talking about absurdities, may I go back to your question concerning the Wall Street Journal article? The Wall Street Journal has decided sometime ago that it may be worth their while to be noticed even at the risk of looking absurd.

In order to justify what I just said, I would like your permission to read 10 lines in the first article of the series of Wall Street Journal editorials which culminated in yesterday's article. What I am going to read was published on the 27th of April and it reads as follows:

Take natural gas. Mr. Carter apparently thinks the United States is running out of the stuff. If that were true, we might be as scared as he seems to be. But, in the course of the debates on his plan, the President will discover that while we are now consuming 20,000 trillion cubic feet of natural gas every year, we have roughly 20,000 trillion cubic feet of natural gas at hand with some estimates that there may be 50,000 thousand trillion cubic feet of it. That is enough to last between 1,000 and 2,500 years at current consumption.

This statement is the foundation upon which all other Wall Street Journal editorial conclusions are based. Neither the American oil industry nor the members of the editorial board of the Wall Street Journal, nor anybody else in his right mind, is trying to enrich himself by chasing the 20,000 or 50,000 trillions of cubic feet of gas.

If I may say so, I believe there is no question that the Alaskan gas is marketable and must be brought to market.

The next question is, on what terms, with what risks can it be brought to market? The history of the Alcan project was to submit a solution to this question of which we at the time believed that it was superior to the two rival projects. Of course, we are deeply grateful that the two governments, that the majority of the important companies of the American gas industry and finally the President of the United States chose our project as responsive to the technical and economic task.

Mr. McMillian, in his introduction, mentioned the difference between the high profit margins of a high risk industry such as exploration for oil and the relatively narrow profit margin of an industry such as a natural gas pipeline which is essentially a public service industry, even if it is conducted in private ownership under private management and is privately financed. Security of all the assumptions is therefore, Mr. Chairman, essential to the success of an enterprise falling into this category. And this is why the facts which have been very tellingly stated by Secretary Altman are, in our judgment, decisive for our undertaking as advisers to this project in carrying to a successful conclusion the serious and positive effort to finance it privately.

These facts are the close cooperation between the agencies of two governments and the management of the company which will undertake to build this pipeline. There was a time, which is not so many years behind us, when there existed in this country a severe condition of regulatory insecurity. Unless that series of problems had been cured, I do not know and I do not dare to guess whether we would have undertaken to try to finance Alcan privately. We are convinced as a result of the statements made by the Secretary of Energy and as a result of the development of the processes of the Federal Power Commission, that this condition has been changed, had been cured and has led to a state of affairs where the lenders and all the other investors will enjoy a high degree of security in the undertakings and understandings between the various regulatory bodies and the management of the Alcan Company.

I think that while we are associated with very large companies in the gas industry—Columbia Gas, Texas-Eastern, American Natural Gas, Natural Gas Pipeline of America, Pacific Lighting, Pacific Gas & Electric, Northern Natural Gas, we remain, we at Northwest and Alcan, a very small company. I couldn't express better our judgment about the prospects, the chances, the certainty which we feel about our success as by saying to you and the members of the committee that it is today's thinking at Northwest Pipeline and at Alcan, that Northwest Pipeline is willing to commit as much as one-half of its total equity to its investment in Alcan.

Mr. RONCALIO. One-half of the total equity is about what, \$100 million?

Mr. MILLARD. That is right, sir.

Mr. RONCALIO. What is the third condition regarding Prudhoe Bay gas?

Mr. MILLARD. I said marketability, satisfactory economics and satisfactory prospects of regulatory security.

My statement is concluded, Mr. Chairman.

[Mr. Millard's prepared statement follows:]

TESTIMONY OF MARK J. MILLARD,
VICE CHAIRMAN, LOEB RHOADES AND CO., INC.,
AND PAUL L. MILLER, PRESIDENT, THE
FIRST BOSTON CORPORATION, BEFORE THE
SUBCOMMITTEE ON INDIAN AFFAIRS AND
PUBLIC LANDS OF THE HOUSE INTERIOR
COMMITTEE AND THE SUBCOMMITTEE ON
ENERGY AND POWER OF THE HOUSE
COMMERCE COMMITTEE

My name is Mark J. Millard and I am a Vice Chairman of Loeb Rhoades & Co. Inc. I am accompanied by Paul L. Miller, the President of The First Boston Corporation. We are financial advisors to the United States and Canadian participants, respectively, in the proposed Alcan Project. In this capacity, we are pleased to appear before you today to discuss the financing of the Alcan Project which the President has recommended that the Congress approve pursuant to the Alaska Natural Gas Transportation Act of 1976. We believe that the Alcan Project can be privately financed, and we wish to discuss today the bases for our conclusion. Our prepared remarks will focus on first, the nature of the project and its organization; second, the overall economic viability of the project; third, the sources of the funds which the project will obtain; and fourth, the credit support offered to lenders. In addition to our prepared remarks we would be pleased to answer any questions you might have.

Project Organization

The Alcan Project consists of United States and Canadian segments to be owned respectively by groups of U.S. and Canadian pipeline companies. The natural gas companies which will construct and operate the line together with the companies which will participate in the project as investors and shippers of natural gas comprises a substantial part of the natural gas pipeline industry on the North American continent. In addition, since the project may eventually permit the shipment of Canadian as well as U.S. gas to markets, both the United States and Canada will have a direct interest in the successful implementation of the project.

The Canadian and U.S. companies supporting the Alcan Project have already invested substantial amounts of their own capital in the project. They are ready and willing to commit additional sums to the project to assist its implementation. They have not sought to realize a promotional consideration from these investments and they have indicated their willingness to risk recovery of their equity on their ability to construct the pipeline. This dedication of corporate resources and know-how to the project is convincing evidence to lenders of the commitment of the natural gas industry to this project.

This broad base of support for the Alcan Project, together with the interest in and support for the project demonstrated by the governments of Canada and the United States, will

be of great assistance in financing the transportation system. In the agreement signed by the United States and Canada, both countries have committed themselves to expediting the regulatory and governmental approvals required to permit the project to go forward. Both countries have indicated that they view the Alcan Project to be in their national interests and an important aspect of their overall energy policies, and that their decisions to cooperate with one another in this venture will permit increased cooperation in the future on related matters. This affirmative commitment by both countries to the realization of the Alcan Project creates a favorable climate in which to seek project financing.

Project Economics

Before lenders will be willing to invest in any project to transport Alaskan gas to the lower 48 states, they must be convinced that the project is technically feasible and will be economically viable. We believe that the Alcan Project has been designed to minimize the difficulties inherent in constructing a transportation system to deliver Alaska gas and to offer a degree of service reliability that will be reassuring to investors.

First, the Alcan Project will rely on proven natural gas pipeline construction techniques. The pipeline will be constructed principally during the summer months rather than during the severe arctic winter, and it will be constructed

almost entirely along existing utility corridors which permit ready access by men and machines.

Second, the Alcan Project poses few novel problems of technology and engineering. For example, pipe size and pressure will be selected based on traditional engineering and testing methods and will not require the type of technological advances which were required for Alyeska or would be required for an LNG system of a size capable of handling the volumes of gas expected out of Prudhoe Bay. As another example, the existence of well developed techniques for constructing natural gas pipelines in potential earthquake fault areas provides a degree of assurance that Alcan will not be disrupted by a seismic event which cannot be equalled by the proposed LNG system.

Third, it is generally accepted that an all pipeline natural gas delivery system traversing existing utility corridors provides reliability of service and safety far superior to that of an LNG system involving pipelines, liquefaction and gasification facilities, and LNG tankers.

Fourth, Alcan will rely on Canadian operating companies to build and operate the Canadian facilities. These companies have excellent records in pipeline construction and operation in the same region traversed by the Alcan system.

Fifth, Alcan will rely to the extent possible on fixed price construction contracts rather than the type of

cost plus contracts often utilized in constructing the Alyeska oil pipeline. Management informs us that they believe fixed price contracts are possible in both the U.S. and Canada. To the extent such contracts are employed, it will be of substantial assistance in securing financing.

Sixth, investors today are extremely aware and cautious of the possible problems and delays in completing a project where environmental issues are significant. Alcan is recognized to be the environmentally preferable means of moving Alaska gas.

For all these reasons, and because the relevant government authorities in Canada and the United States have committed themselves to facilitating approval and construction of the Alcan Project at the earliest possible date, we believe that lenders will view the Alcan Project as a viable and feasible method of transporting North Slope gas.

Sources of Funds

We estimated that the Alcan Project will have cash requirements of approximately 9.8 billion escalated dollars. Approximately \$3.6 billion will be required for the Alcan Pipeline Company in Alaska, \$3.9 billion by the Foothills Group in Canada, \$1.6 billion by Northern Border for the Eastern Leg and \$750 million for the Western Leg. Canadian market financings, expected to total approximately \$1.7 billion will be comprised of bank term loans of \$500 million, long term debt of

\$400 million and equity of \$800 million. U.S. financings totaling \$8.1 billion will consist of bank term loans of \$1.2 billion, long term debt of \$5.6 billion and equity of \$1.3 billion. Canadian companies will require the entire \$1.7 billion of Canadian financing and \$2.2 billion of the U.S. financing.

We contemplate that each of the initial suppliers of capital will commit to purchase additional securities to finance cost overruns. Our original financing plan provided that the additional commitments would be for up to 20% of the basic commitments. At such time as final cost estimates and construction plans are known the adequacy of the 20% overrun commitment will be reexamined. It is important to point out that our original financing plan utilizes neither supplier credit nor Eurodollar or other foreign financings. The exclusion of these stable and sizable sources of funds is deliberate and is intended to provide the financing plan with an additional element of flexibility.

Credit Support

The economic features of the Alcan Project will affect the nature of credit support that lenders will demand before investing in the project, but such features cannot eliminate the basic requirement that such credit support be provided. Because of the unprecedented capital requirements of the project, government officials and private interests have given

substantial thought to which parties might provide such credit support.

A variety of parties will be direct beneficiaries of the Alcan Project. These include the natural gas transmission companies who purchase Alaska gas, the North Slope gas producers, the consumers of Alaska gas and the State of Alaska. Substantial questions have been raised whether it would be sufficient or equitable for the project to rely on the credit of any one of them alone. For this reason, we have been concerned that a financing plan be developed in which each of the four beneficiaries play an equitable role, and in which no undue burden be placed on the gas consumer.

A definitive financing plan cannot be structured until a number of other decisions have been taken. Prior to extensive discussion with lenders, we will need, among other things, final agreement on system design and financial matters between the two governments, a determination of the price to be paid to producers for the gas, including any compensation to producers for other services, the principles under which the gas will be distributed among the numerous shippers participating in the projects and the necessary commitments for the gas volumes to be supplied to the pipeline. In addition, final decisions must become effective on vital matters of regulation. Among them is the form of tariff, the method for determining the level of rates, the specific application

of the rolled-in method of pricing, such assurances as may be necessary for the continuity of the initial tariff agreements, and adequate provisions for shippers and distributors to recover their costs from consumers. Equally important is that the monitoring system which will be established, expeditiously approve design and investment decisions.

We estimate that the completion of these tasks, which are largely within the purview of the government, and the subsequent development of a definitive financing plan will require a period of no less than one year. Since negotiations with lenders and equity investors cannot be concluded until the engineering and legal framework have been completed and final regulatory orders issued, a financing plan made now can only define targets. Conditions in capital markets are subject to rapid change and the precise terms of a financial agreement are not fully predictable one year in advance. They could, of course be predetermined if the alternative of a wholesale solution of all future problems were chosen by offering a federal debt guarantee or by directing regulatory agencies to issue orders directing the consumer to shoulder all the risks. Neither appears to be acceptable to the U.S. government or the U.S. public. Alcan's objective is to achieve a private financing which minimizes the need for consumer or U.S. government support.

We believe that the targeted private financing is possible. However, its realization will largely depend on the

following conditions, most of which lie in the purview of public authority:

Agreement on a tariff which permits the project to recover its cost of service.

Assurance that all actual legitimate expenses will be recognized for rate-making purposes now and in the future.

A broad based rolled-in pricing system spreading the incremental costs of Alaskan gas over a large enough divisor to insure its marketability.

A climate of cooperation between government and the project management, assuring the risk-taking parties of a minimum of work interruptions and cost overruns.

Additional support may be necessary from other interested parties, notably the royalty-earning State of Alaska and producers, but also the distributors and the suppliers of materials to the project. Government policies may affect the availability of such support decisively.

Only in the unlikely event that there is a failure of most of these prospects would it be necessary to turn back to seek additional consumer or U.S. government support on a limited scale to cover overruns caused by general economic conditions or social obstacles.

Nothing will put Alcan in a stronger position to approach potential lenders than the fact that the governments of the United States and Canada are solidly committed to the success of the project. Prompt and strong approval of the President's recommendation by Congress will be a very positive gesture. This support will establish a degree of industry government cooperation which will reassure lenders and facilitate negotiations to achieve a successful financing. This atmosphere has already been encouraged by the Congress by, among other things, the passage of the Alaska Natural Gas Transportation Act of 1976 and the oversight hearings which it has conducted subsequently.

Mr. RONCALIO. Mr. Paul L. Miller, president of The First Boston Corp.

Mr. MILLER. I and my friend collaborated with Mr. Millard in the preparation of his written remarks and I will reserve myself for any questions the committee may have.

Mr. RONCALIO. Mr. Jeremiah K. Ross.

STATEMENT OF JEREMIAH K. ROSS, JR.

Mr. Ross. Thank you, Mr. Chairman. I find myself in a somewhat awkward position this afternoon following the decision of our client, El Paso, to cease opposition to the Alcan project.

I appear here, therefore, at the request of the House. For two reasons I do not have a prepared written statement. First, the withdrawal of our client late yesterday made a statement on El Paso's plan superfluous. Second, it seemed futile to prepare a statement commenting on the President's decision when we did not have that decision in hand. Be that as it may, I am here and will attempt to assist the House.

Mr. RONCALIO. We will have some questions, Mr. Ross.

There is still the most remote of possibilities, where the treaty says the matter has to be privately financed—if it is not to be privately financed, we might be coming back to El Paso. By that time, Mr. Dingell suggests El Paso might tell us to go to the devil.

Mr. Ross. I will leave that to Mr. Boyd.

Mr. RONCALIO. Are there questions?

Mr. DINGELL. I was impressed by Mr. Millard's statement. I am curious about several points he raises with regard to the matters at hand. He set forth a number of conditions which he felt necessary to the construction of the pipeline. I am wondering, Mr. Millard, if you would amplify on those and perhaps give us some supporting comments to what you have had to say, if you please, sir?

Mr. MILLARD. Before any project can approach the area of meaningful definitive negotiations about the financing, a number of questions must be resolved. Most of these questions fall really into the purview of the governmental action. We do not know today who will be the users of the Alaskan gas and before we will know who the users will be we will need not only negotiated contracts between private parties and actions by the Federal Power Commission or its successor, but we will also need a determination of the price at which the Alaskan gas will enter the pipeline. There was a discussion earlier, whether this price will or will not include the cost of treatment which has to precede its injection into the pipeline. Now, the price which matters in economic terms, is of course, the combination of the wellhead price and the allowance given to the producing companies for treatment.

Mr. DINGELL. I am particularly interested in your first point. You say agreement on a tariff which permits the project to recover its cost of service.

Mr. MILLARD. Yes.

Mr. DINGELL. Would you want to define that as specifically as you could for us, please, sir?

Mr. MILLARD. Mr. Chairman, I will try to be as specific as I can be but there are certain limitations which I cannot deny. I know that the tariff which we will be proposing will not be an all-events tariff.

Mr. DINGELL. I think you are anticipating my next question, but you pique my interest. Go ahead.

Mr. MILLARD. I will admit I didn't realize it, but the subject has moved into the center of the discussion and that is why I am facing it at the very beginning.

Mr. DINGELL. It is not the central one, but it is important.

Mr. MILLARD. May I say, Mr. Chairman, that, having said we do not anticipate and do not demand and do not want an all-events tariff, I must also say that these words are very ill defined. What we do not want is a tariff which solves all questions of ultimate financial responsibility by pushing them over on the shoulders of the consumer. We consider such a tariff unacceptable not only from the point of view of public opinion or of the government, but also from the point of view of—

Mr. DINGELL. You have said several things that were rather impressive, including your comments on the Wall Street Journal, where I gather you indicated they had methane and hot air confused.

Mr. MILLARD. Having dealt summarily with the words "all-events tariff," I must submit to you, Mr. Chairman, that while we seek a conventional form of tariff, I cannot at this moment tell you whether it would be a conventional form of a cost-of-service tariff or a conventional form of a demand-commodity tariff, matters to which Mr. Braun alluded earlier in the questioning of the policy witness.

The reason why I do not know what the answer should be is because there are very many questions of detail yet to be worked out and also the wishes of the ultimate lenders heard. But we do know that the basic principle of what we are setting out to do is

one where the consumer will start paying when he will be receiving service and in general, not earlier.

Mr. DINGELL. Gentlemen, I wonder if each of you at your convenience, rather than at this particular moment, would give us your comments dealing specifically with the questions to which Mr. Millard has been directing his attention.

If you would care to make a comment now, it would be most helpful, but I think one of the things concerning this subcommittee and which I think concerns my good friend, Mr. Roncalio and his subcommittee, is the structure of the tariff which will flow from these agreements. Do you have any comments to make with regard to the form and structure of the tariff?

Mr. MILLER. I might make one comment, just from the background of the discussions here.

The committee seems to have a generalized point of view that the tariff arrangement will be dictated entirely by regulatory authorities, and certainly they will have a large vote, but I would like to point out to the committee that the principal investors who lend money to projects of this type are experienced in this type of thing and have the ability to protect themselves and to influence the nature of tariffs.

We have experienced businessmen involved in these projects on both sides of the border, and you don't start into one of these projects and commit to provide funds unless the tariffs are satisfactory. It is not in any single person's hands and we don't have a bunch of innocents dealing with it. That is my only addition to what Mark has pointed out.

Mr. DINGELL. Would any of the other panel members like to make a comment on this point?

Mr. Millard, I observe that you made a comment in a memo to Mr. McMillian.

You said that an all-events tariff was a "failsafe" regulatory approach.

That is a rather interesting comment and it doesn't tend to indicate any more sympathy on your part toward that mechanism than I feel toward it.

Mr. MILLARD. It does or does not indicate more sympathy for it than you feel?

Mr. DINGELL. I am not indicating any great sympathy and I don't think you are.

Mr. MILLARD. I do not.

Mr. DINGELL. The Chair is going to recognize my colleagues for questions.

Mr. Roncalio?

Mr. RONCALIO. I have some concern for, and hope that a certain, acceptable plan for financing the project can be forthcoming quite soon. I know you gentlemen know how much this means to the country, and I wish some good luck in doing it.

I don't know what our recourse is. I don't know what our alternative is, but I hope you can sit down and work out plans that will continue the eminent, great record we have with Canada on being fair with each other on these matters.

I sat for 3 years as the Chairman of the International Joint Commission, United States and Canada, on establishing rates for

power when we built the three storage dams on the Columbia River and loaned Canada money, at 3 percent in those days, and we had to run it through the computer to compute what part of the additional capacity and load at the 11 Federal installations in the United States on the lower Columbia would generate more power as a result of that much power storage available and return the checks accordingly to Canada.

If we could come up with fairness and justice to the consumers in both countries and the two governments on something that complex, and a man from the State Department was instrumental in helping with that, I should think this problem would not be insurmountable and not any more difficult than was the Columbia River 15 years ago.

So, good luck to you in your work.

That is all, Mr. Chairman.

Mr. DINGELL. The Chair thanks the gentleman.

Mr. MOORE. Mr. Chairman, I have a few questions, if I may.

Mr. DINGELL. The Chair recognizes the gentleman from Louisiana for 5 minutes.

Mr. MOORE. Thank you.

Let me say at the outset that I certainly commend all those who wish to make this financing private, and it should be, and I wish you every success, and we are hoping that is the case. We need it done through private enterprise, not through the government.

I just have this nagging problem of what happens if we cannot finance it privately?

Mr. Secretary, I assume from your testimony there is nothing in your report to the President or nothing in the considerations of the Federal Government, no idea of coming into the financing of this thing, that your complete premise of this entire project is that it will be financed privately; is that correct?

Mr. ALTMAN. Our premise is that it should be financed privately, and we think in our best judgment that it can be financed privately. I repeat what I think is the obvious, namely, that no one can be absolutely certain with a project of this magnitude and complexity, but it is our judgment after several months of analysis that it can be financed privately.

Mr. MOORE. Do you have an alternative plan if all or part of it cannot be financed privately?

Mr. ALTMAN. No, sir; we don't.

Mr. MOORE. Thank you. It is a direct answer and I appreciate it.

I would like to next ask this of the gentlemen who are going to be brokering this project, trying to raise this money. I understand that the price of natural gas in Alaska, what it would sell for at the wellhead, may well have something to do with how salable the bonds or the securities or whatever you are going to be selling will sell for. Would that be a fair statement?

Mr. MILLARD. It is, sir.

Mr. MOORE. Obviously, then, if gas in Alaska sold for \$1.75 per 1,000 instead of \$1.40, it would make your job easier selling those securities through private financing, would it not?

Mr. MILLARD. No, sir. I believe it would be 25 percent more difficult.

Mr. MOORE. You think it goes the other way then. The lower the gas sells for in Alaska, the easier it is to sell the bonds?

Mr. MILLARD. If I may, I would like to address myself to the bottom of the line. The bottom of the line is the price at which the gas is delivered into the consuming area and it has essentially two important elements: One is the cost at the tailgate of the treatment plant, in other words, the wellhead, and the other is the cost of transportation, and the lower the sum total of the two, the easier, the surer, the more certain, is the marketing of the gas.

Mr. MOORE. Then I would ask this question as followup: If that is the case, where do you reach the point of diminishing returns so the producer won't produce for the bottom figure going into the line that you think you have to sell to finance it? Where is your lowest figure you can accept to finance the line?

Mr. MILLARD. There is an expression in economics which is elasticity of demand. In other words, to what extent do people reduce their buying if the price goes up? I believe in areas with which we are most concerned; namely, in the residential, small commerce, agricultural, and heat treatment consumption of gas in industry, the elasticity of demand is very low.

People will, if it cannot be done otherwise, pay substantially more and not consume substantially less. If \$2.50 is the best current guess for the cost at which Alaskan gas will enter the market, I believe there will be no problem whatsoever in selling it, even in these high priority, affluence markets. In other words, the householders, small industry, small commerce, agriculture, would much rather pay a little more on average for the total gas they consume than have to cut down the volume they consume.

Mr. MOORE. What about the figure now, \$3.50?

Mr. MILLARD. Sir, we are not dealing with an exact science, but we have points of reference. The most important points of reference, I believe, are, on the one hand, the cost of fuel oil, which today probably runs at something between \$2.75 and \$3 in terms of heat equivalent, in other words, for the same amount of Btu's which one Mcf of gas represents. However, gas always had in most of its uses premium value because it was a cleaner and more convenient fuel.

The other point of reference is substitutes similar to natural gas. These substitutes are what we call LNG's, liquefied natural gas brought from overseas, or synthetic natural gas, SNG, made from other hydrocarbons, be it oil, be it coal. The best guesses today as to the price of these substitutes run between \$2.75 and \$3.75, so that if you were to look at what other choices consumers had, they still would be just about the figure which you suggested as an example in your question.

Mr. MOORE. So that using your points of reference, if I understand your conclusion, you think that the line would still be sold at \$3.50. That was the ultimate cost of the gas coming out?

Mr. MILLARD. Sir, I don't want to encourage a general conclusion along these lines, but I would like to be specific on one aspect of it. Under the energy bill as passed by the House, it is anticipated that higher cost gas will first be offered to the low priority customers and only if they refuse to take it on an incremental price basis; in other words, in this case at \$2.50 plus a tax equivalent which will

raise it to a point for, which I don't know the arithmetic, would that gas be offered to the high priority customers, and once it is offered to the high priority customers, to the households, it would be rolled in. It would be rolled in at an average price charge.

Mr. DINGELL. The time of the gentleman has expired.

Does the gentleman from Texas seek recognition at this time?

Mr. COLLINS. I would, Mr. Chairman, if I could.

Mr. DINGELL. You are recognized for 5 minutes.

Mr. COLLINS. Thank you very much. I don't want to cover some of the ground that has already been gone over, but when we had the State Department here earlier, they contemplated this entire proposition to be financed in Canada.

Do you think that is at all possible?

Mr. MILLARD. Mr. Collins, may I tell you how we intend to have this financed, and it will show that at least according to our plan, as long as the State Department doesn't compete with us in the investment banking business, it will not be fully financed in Canada.

To talk in broad terms, this is a \$10 billion project at what we call "base figures", which really were 1975 cost figures escalated 5 percent a year, with a small contingency of 5 percent.

It is intended that of this \$10 billion, approximately \$2¼ billion be financed in Canada and the balance be financed in the United States. Pardon me, it is \$1.7 billion in Canada and the rest in the United States.

Mr. COLLINS. In other words, you are talking about at least 80 percent or more will be financed in this country?

Mr. MILLARD. Yes, sir, but may I perhaps qualify what I said by also telling you that of the total of \$10 billion, roughly speaking, \$6 billion or a little over \$6 billion will be American property located in America and roughly \$4 billion or a little less will be located in Canada and owned by Canadians. In other words, the Canadian part will be financed to the tune of roughly 50 percent in the United States, which is standard for anything in Canada.

Mr. COLLINS. Let me take two questions. The first one is: Would you want or expect a guarantee by the American Government behind any type of loan of this type?

Mr. MILLARD. We do not.

Mr. COLLINS. You wouldn't take any type of government insurance? You wouldn't be applying to us to insure this kind of investment?

Mr. MILLARD. We do not.

Mr. COLLINS. You probably have more confidence in Canada than I do, and they are our friends, but I am just talking about investments. Now, you are talking about putting a pipeline across this country here and you are talking about 60 percent of it being in the United States, I judge, what runs across Alaska. When it comes out there what is it worth if Canada ever cut it off?

Mr. MILLARD. Sir, the answer to your question, I think, is obvious, and everybody will agree, that it is totally negative; but the same question, if I may say so, could be asked of a number of projects, realized projects, many of which, most of which have been financed largely with American money, where services originating in Canada flow across the border into the United States and where

all these installations and all the bonds which finance them would become worthless if Canada cut them off.

Mr. COLLINS. Are you familiar that a few years ago American drillers who were in the oil business in Canada began cutting back on their operations because of the way that country developed a very aggressive taxation policy?

Mr. MILLARD. I am, sir.

Mr. COLLINS. And that was the only reason apparently they cut back, but it just about ran all the rigs out of Canada. In other words, they have this nationalization complex up there. What type of climate is that to invite us to build a pipeline across Canada?

Mr. MILLER. I would like to point out, Mr. Collins, if I may, if they cut it off they are cutting off their own ownership. Canadians are investing their own money, their own equity and putting it at risk in the Canadian-owned portion of the overall project. I find it hard to imagine that they would want to spoil their own ownership. I am comparing that to the situation of American ownership in Canada which is not applicable here.

Mr. COLLINS. Isn't it true that Canada is moving more and more toward nationalization in so many ways, and isn't it true that their taxation is tending to move in on national resources of different types? You have no fear of this?

Let me ask you another one: How do you stand on the Panama Canal? Does this kind of thing disturb you?

Mr. MILLARD. I became painfully aware this morning that I am totally ignorant of the issues involved in the Panama Canal. I feel sheepish about it, and I will try to correct it.

Mr. COLLINS. Do you have any doubt that we can finance this project in the American market for \$8 billion?

Mr. MILLARD. Until it is done, there will be concern about it; but, after all the studies which we devoted to this question, we came to an affirmative conclusion.

Mr. COLLINS. Thank you, Mr. Chairman.

Mr. DINGELL. The Chair thanks the gentleman.

Does the gentleman from Alaska seek recognition?

Mr. YOUNG. Thank you, Mr. Chairman.

I am out of my ballpark when it comes to finance. All I know is, if you have got money in this hand you can spend it with that hand; but I am a little bit disturbed, if I read you correctly, that you are indirectly trying to sell the financing of the line at the cheapest wellhead price to make the line financially feasible. Is that what you are telling us?

Mr. MILLARD. No, sir.

Mr. YOUNG. You want to know why I am asking that question?

Mr. MILLARD. I know it well. I think I know it well. This is not the basis of our thinking. I just said that it is somewhat more difficult to sell gas for \$2.75 than it is to sell it for \$2.50, but speaking as a private individual, I wouldn't be at all surprised that the average price of gas in these United States a few years from now may be on the order of \$3.

As far as the price of the Alaskan gas at the wellhead is concerned, that price will be determined by the decisions which you gentlemen will be taking in the next few weeks. If gas is deregulated, the price will find its own market. If gas continues to be

regulated and if the text of the bill which passed the House will be the final energy bill, Alaskan gas will be priced before entry; that is, at the treatment plant, at \$1.45.

Mr. YOUNG. I am pleased to say that with deregulation we can solve this whole financial package. I wish the President could see the same enlightenment because with deregulation, the demand and supply principle, economics would prevail and we would have, I believe, the moneys to finance such a line without all these hidden questions and uncertainties.

Of course, under the energy package, if we don't deregulate it, if I read that legislation correctly—maybe I can be corrected by the chairman—is there some discretion within the Administrator of the energy package to raise that gas above the \$1.45 bracket?

Mr. MILLARD. As far as I understand the present state of the legislation, which obviously is still in flux, the energy bill as passed by the House would set the wellhead price at \$1.45, but leave open the question of what additional compensation the oil companies would receive for the excessively high and nontypical cost of treating this gas in order to make it acceptable for pipeline transportation.

Mr. YOUNG. If I may, again, Mr. Chairman, with my deep interest in it—you will hear from a witness later on—we have received, and this applies to different projects as well as the one being proposed by the administration, some real serious questions on the energy bill, even at \$1.45, the direct revenues to the State, and I can assure the gentleman I will be very disturbed if I see where Alaska is not going to receive at least some justification for its gas, and I hope the administration is aware of that.

If I am alluding to a certain aspect, I think you know what I am alluding to, because it would be very foolish for the State of Alaska and the people of the State of Alaska to sit by idly and see its gas disappear on the horizon without just return.

I don't know how that affects your financial picture, but it could affect it.

I have no further questions, Mr. Chairman.

Mr. DINGELL. The Chair thanks the gentleman.

Mr. Roncalio?

Mr. RONCALIO. I have no questions. I guess the Lieutenant Governor of Alaska will be next.

Mr. DINGELL. Not quite, because the counsel has some questions. Mr. Braun?

Mr. BRAUN. Thank you, Mr. Chairman.

Mr. Ross, Mr. Millard wrote a memo on August 10 to Mr. McMillian, to which you responded on September 1. Your response to Mr. Millard indicates that Alcan proposed an all-events tariff and perfect tracking up until August 2, 1977. Is that correct?

Mr. ROSS. That is correct.

Mr. BRAUN. Is it your opinion that the Alcan project cannot be financed without an all-events tariff?

Mr. Ross. It has been our opinion that because of the potential for commingling Canadian and U.S. gas, which introduces some new regulatory entities into the regulatory panoply that we are dealing with here, that, in fact, the all-events tariff concept, broadly speaking, using that term in the sense that the tariff produces

revenue in all events, did not work for Alcan. I am not aware of the reasons for the shift in their position, but I think we are clear on the record that it didn't work for them in the first place.

Mr. BRAUN. Mr. Millard, can you tell us why Alcan switched from advocating an all-events, full cost-of-service tariff to a minimum bill?

Mr. MILLARD. Will you understand if I reserve my agreement to the statement which you repeated, that we switched our position? I don't believe we did. We did emphasize a variety of uncertainties as did everybody else concerned with a \$10 billion project, and we have to look at the sum total of the facts, conditions, assurances, and safeguards which would be available in the final form of a definitive plan for the transportation of Alaskan gas.

I believe that where we are today is a different and better set of circumstances than where we were 6 months ago; and I believe that under the conditions which have been indicated as being the framework of the planning of the Alcan line, we will succeed with private financing.

Mr. DINGELL. Mr. Millard, I am curious. Can you define to us what the different and better set of circumstances are?

Mr. MILLARD. Mr. Chairman, you asked me specifically what my third point was when I talked about the three elements which constitute the mosaic which we consider necessary.

The third point was regulatory assurances, a climate of regulatory certainty. Certainly in the limited but decisive sense, once the line was finished, all the expenses which led to its construction would have been cleared by the regulatory authorities and declared legitimate and their recoupment in the framework of a tariff would become a matter which was beyond controversy.

Mr. DINGELL. I am not satisfied that that is all that much different from an all-events tariff.

Mr. MILLARD. I would like to point out one difference, and there are others, which I think gives what I just said a different aspect from an all-events tariff. Noncomplex is not included as a burden on the consumer's pocketbook.

Mr. DINGELL. That is an important difference, I must concede.

Mr. MILLARD. I think it is a decisive difference, sir, because we treat—

Mr. DINGELL. But everything else though is included in the all-events tariff?

Mr. MILLARD. No, sir. If I may say so, I believe there is this qualification which should be added: We talk only of costs incurred, approved in advance or at the time when they are incurred, by regulatory authorities. In the climate of 10 years ago, that would have been an illusion. In today's climate, I think it is entirely feasible.

Mr. DINGELL. Thank you.

Mr. Braun?

Mr. BRAUN. With regard to your reference to regulatory certainty, what effect would the possibility of a change in Canadian tariff have on the ability to organize and effectuate U.S. financing?

Mr. MILLARD. Mr. Braun, I don't think I can give you a satisfactory answer to this question. I think it will come up. I think it will

be dealt with. I think it will be dealt with under the watchful eye of our regulation, of Canadian regulation, and of the lenders.

What solution it will find, at this moment I cannot tell you. I think there are many ways of doing it, and I don't believe that a solution must necessarily be questionable or unacceptable from the point of view of consumer protection.

Mr. BRAUN. Mr. Millard, your August 10 memo states as follows:

"The obligations of consumers to pay certified costs of the project can be limited to a minimum bill tariff commencing when initial gas deliveries are made.

What will be covered by what you call a "minimum bill tariff?" What will U.S. customers be required to pay and what will they not be required to pay?

Mr. MILLARD. Speaking first about the system as a whole, the tariff which we have in mind would either have the form of a demand commodity tariff or of an acceptable cost of service tariff.

Now, if you ask the question specifically as to the division between the Canadians and the Americans in dealing with this tariff, or in dealing with tariff matters in general, obviously each of the two systems must have a separate step.

As far as the solution of the details of this tariff matter is concerned, all I can do is to repeat what I said a few minutes ago, that I have no concrete, definitive, detailed answer to the question.

Mr. BRAUN. Mr. Altman, page 2 of your testimony says "The form of the tariff paid by gas consumers is particularly central to financing the project privately." Would you expand on that statement and tell us whether or not an all-events, full cost-of-service tariff would make financing more readily available than a nonfull cost-of-service tariff?

Mr. ALTMAN. Mr. Braun, I don't think there is any question that a so-called all-events cost of service tariff would increase the likelihood of this project being financed privately because it would essentially transfer the major risks in the project, which are noncomplex, business interruption, and to a large extent gas marketability, onto the shoulders of consumers; so the answer to your question as to whether it would enhance the financeability is that it would, but the position that we have consistently taken is that it is both unnecessary for purposes of a private financing and undesirable, and put simply, we oppose it.

Mr. BRAUN. The next sentence of your testimony states that the project applicants originally requested an all-events, full cost-of-service tariff. That included Alcan, did it not?

Mr. ALTMAN. Essentially, yes.

Mr. BRAUN. Can you tell us why Alcan has been able to move from a requested all-events, full cost-of-service tariff to proposing some sort of minimum bill that is yet undefined by Mr. Millard?

Mr. MILLARD. Mr. Braun, I think that is a question that the financial advisers to Alcan and Alcan itself have to answer. It made little difference in our own analysis because we had taken the position well before the communication you refer to that it wasn't necessary, that it was undesirable and we were obviously then disinclined to go along with that concept regardless of whether they asked for it or not; but in terms of the reasons that governed their own thinking on it, I think only they can speak to that.

Mr. DINGELL. Gentlemen, there is one question that is very troublesome to the committee and that is the effect of this project on the capital markets in the United States and Canada. There are several questions that trouble me, and I would appreciate the comments of each of you gentlemen, if you please.

First, is this going to have an effect on the capital markets in terms of interest rates or in terms of shifting of moneys within the capital markets of the two nations from one kind of investment to another kind of investment? Are there sufficient funds available in the capital markets to do this financing without distortion of the markets or hardship on the economies of the two countries or without some kind of government tax policy or something else to encourage the undertaking or perhaps some kind of governmental action such as a loosening of credit or reduction of interest rates by regulatory bodies like the Federal Reserve Board or its Canadian equivalent?

Gentlemen, you are wiser in these ways by far than I am. Can you give me the benefit of your counsel on this? It is going to be a concern to us.

Mr. MILLER. I think it would be impossible to say it won't have any effect on the capital markets of the two countries any more than would be the case with any other financing.

Mr. DINGELL. Will the effect be large or small?

Mr. MILLER. It will be larger than most. It is the largest project that has been undertaken for a single purpose.

Mr. DINGELL. Would there be a difference between the United States and Canada? Would the Canadians have a greater difficulty than us?

Mr. MILLER. It is large in terms of the Canadian market, \$1.7 billion in total equipment, although it goes 4 years, compares with about \$4.7 billion raised in the United States alone last year by Canada; so it is a material amount, but in my view it is not sufficient to be identified as a factor in cost of money to other enterprises or in national allocations of funds.

In the United States market the \$6 odd billion that will be raised is smaller in proportion to the total size of the capital markets here. It is not possible to say it will have no effect, but I don't think it will be material.

Mr. RONCALIO. You are saying you can take it in your stride?

Mr. MILLER. Yes.

Mr. MILLARD. Since you, Mr. Chairman, are interested in this question, may I just add two figures to what Mr. Miller just said?

Mr. DINGELL. I would appreciate it if you would.

Mr. MILLARD. Gross capital investment in the United States runs at a figure of about \$250 billion a year. Bond sales, corporate, private bond sales, amount to approximately \$60 billion a year. This project will absorb less than 1 percent of the—

Mr. DINGELL. So you are indicating then that absent tight money markets or substantial economic downturn or some other distortion of our money markets, that this will not have an adverse effect, at least in the United States? Gentlemen, your comment with regard to the Canadian situation, what is that, please?

Mr. MILLER. We don't believe it will have an adverse effect on the markets in Canada. All I have said was that it is larger in

relation to those markets, \$1.7 billion to be raised there, than the remainder to be raised here in relation to our markets.

The Canadian bond market is the second biggest bond market in the world, and I point out to you that there are other sources of funds in the world. We are not planning presently to use them.

Mr. DINGELL. Mr. Millard, do you have a comment?

Mr. MILLARD. No, sir.

Mr. DINGELL. How about the other two panelists?

Mr. ROSS. I would agree that any impact on U.S. capital markets would be modest and limited to perhaps a particular large sized issue coming at a particular, perhaps relatively short-term, period of congestion in those markets, which is something that can be handled.

Our view of the impact of their financing in the Canadian market is somewhat less sanguine than theirs. Relative to the size of that market, the potential use of the capital market in Canada, the long-term market in particular, is quite a bit larger than anything in the United States. The United States is just so large. So we have publicly in our past criticisms pointed this out, and I think that is still our view.

The problem again we are suffering under is that we don't have any numbers at this point in time. I was handed Mr. Millard's testimony when I came in, but we haven't had a precise plan to sink our teeth into here recently, so I am not on very firm ground other than I suspect from the order of magnitude of numbers that our view would not change.

Mr. DINGELL. Mr. Altman?

Mr. MILLER. I should point out to the committee that these numbers are by no means hard and fast, and that the sources of funds can be shifted back and forth were the markets to be affected in any way.

Mr. DINGELL. Mr. Altman?

Mr. ALTMAN. I agree with the fundamental conclusion, Mr. Chairman, that the amounts necessary to be raised for this project in both the U.S. and Canadian markets are not likely to cause major distortions in either market. We consulted on the Canadian part of that closely with the Canadian Ministry of Finance, and that is also their conclusion.

Mr. DINGELL. Thank you. The Chair recognizes the gentleman from Ohio, Mr. Brown, for 5 minutes.

Mr. BROWN. Mr. Chairman, sorry I haven't been here through all the questioning and if I become redundant in my questions, I trust you will advise me.

Mr. DINGELL. I will do so indeed, with pleasure.

Mr. BROWN. That is what I was afraid of.

In the White House release of September 9, to which reference was made earlier, after the discussion there is a transcript of questions and answers, and the Secretary is saying:

Our figures include 40 percent cost overruns as compared to the file costs by the file costs by the pipeline, by the two companies, slightly less cost overruns in the case of El Paso than in the case of Alcan. The Canadians have insisted that our overrun projections are too high. And as a result we have a sliding scale of U.S. support for the Dawson spur depending upon the success of the Canadians in holding down costs.

Our original projections ran at about 40 percent cost overruns. If the Canadians succeed in holding cost overruns to the 35-percent level, below what we expect, then we will pay 100 percent of that spur, of the cost of the service on the spur.

Question. Is that on the lifetime of the pipeline, to pay the cost of service for all the time it is in use?

Secretary Schlesinger. Yes.

Question. Why do you allow 35 percent cost overrun? That seems an incredible amount.

Secretary Schlesinger. Compared to what benchmark? By the Alyeska benchmark, it is not at all incredible.

Question. Compared to the C-5A.

In Mr. Millard's testimony he said:

Our original financing plan provided that additional commitments would be for up to 20 percent of the basic commitments. At such time as final cost estimates and construction plans are known, the adequacy of the 20 percent overrun commitment will be reexamined.

Where are we? Twenty percent? Forty percent? What is the cost overrun anticipated?

Mr. MILLARD. Mr. Brown, I hope you will forgive me if I quote a Hilaire Belloc line which comes to my mind, which runs as follows: "That one should never, never doubt, what nobody is sure about."

All these figures are guesstimates. This must be admitted; but there is a point which I think is an important point, and that is, that the troubles of Alyeska did not happen in vain. I believe that American industry in general has learned very expensive but still enormously valuable lessons from what happened in Alyeska, and one of the reasons why I may have placed something which may have appeared as an exaggerated emphasis on this cooperation and coordination of Government agencies is because this cooperation and coordination can go a long way to make the things impossible which happened in Alyeska.

There are other differences. I have no right to say that 20 percent is better than 30 percent. I do not understand the 40 percent but you will have the author of this estimate before you tomorrow and he will be able to answer with much more competence than the guesswork in which I would have to indulge.

Mr. BROWN. The guesswork in Hilaire Belloc's two lines that you quote, however, on such things do bankers rise and fall. A bad estimate of the prospect of cost overruns and the inability to get additional financing has made a banker fall recently. You know, if you can't keep it moving to finish the project, you are in deep trouble.

The question that the chairman asked was about the potential for both Canadian and American financing in terms of the aggregate of money that might be available in the future.

I have a comment in the Wall Street Journal this morning which is talking about the capital needs for the expansion of the size of the bank, not of the financing of all of the private industry and the public debt in the United States or Canada, but it says: "Banks face enormous new capital needs for lending demands in the next few years."

The Joint Economic Committee, on which I also serve, will be shortly putting out a midyear report in which we talk about the record investments that are going to have to be made just in the energy area over the next few years, and the record investments are going to have to be made to modernize a lot of other industries

around the country, steel among them, in order to be competitive in the world.

Now, I am somewhat less sanguine than this panel, quite frankly, on how we will meet those total energy needs, and how well we will meet those total capital needs, but maybe my opinion will change.

I would like to shift to Mr. Altman and ask about the difference in your testimony today from what was written by the Treasury Department as the lead agency in the study report to the President called Financing an Alaska National Gas Transportation System, written on July 1, and what you said at that time was:

If the FPC grants such request—for an all-events tariff—the investment is recovered through subsequent charges to consumers. If the FPC denies the request, the investment is lost. The investment involved in the Alaskan gas project is so large that it is uncertain whether a consortium can be formed if the equity remains at risk.

In other words, if it doesn't get the all-events tariff.

If the financing were proposed with even the most secure form of debt financing but no precommitments for recovery of equity in the event of project failure, the equity funding may be impossible to assemble and the Alaskan gas project may not be financed.

Now, in your testimony today you advised us that without the all-events tariff it looks as if it can be financed.

Is there a change in position or are you being consistent?

Mr. ALTMAN. No, sir; I think the purpose of that language in the July 1 report was to simply point out, as I have again done, I hope, today, the risk that with a project of this magnitude, no one can be certain that the requisite financing can be arranged on a conventional private basis.

It is our judgment that it can be. The fundamental conclusion of that July 1 report was that it can be done privately, and so—

Mr. BROWN. Without the all-events tariff?

Mr. ALTMAN. Yes, sir.

Mr. BROWN. I don't seem to read that into that phrase. I don't mean to catch you at a loss.

Mr. ALTMAN. No.

Mr. BROWN. On page 2-5 in that July 1 report to the President, in the next to last paragraph, the tail end of the paragraph, I didn't quite get the same conclusion out of that that you do.

Mr. ALTMAN. Well, just to deal with the broadest part of that—and I will try to come back to your point—on the very first page of the July 1 report,

"The principal conclusion of this report is that there is good reason to anticipate that an economically viable system to transport natural gas from Alaska to the lower 48 States can be privately financed."

And we then go on to point out a series of the risks and also a series of the decisions on which regulatory—which have to occur before—

Mr. BROWN. I don't want to interrupt you because I don't want to be rude, but I also am concerned about the nature of the time. I am not questioning whether or not we can get private financing. We seem to have private financing. The question is whether you can have the project without the all-events tariff, which is what we are worrying about on the committee, because the all-events tariff goes

to whether the consumers will pay a fairly predictable price or will pay any price that the project seems to need to be self-liquidating at some future date.

Mr. ALTMAN. Fundamentally, Mr. Brown, this section that you are referring to argues against an all-events, cost-of-service tariff.

Mr. BROWN. That is what I understand.

Mr. ALTMAN. That is right, and I must be misunderstanding you, because I don't see where the inconsistency is between what I said today and what you are quoting from that report.

Mr. BROWN. Well, let me try to put the question more directly: Did the Treasury in its July report favor the all-events tariff to assure the project?

Mr. ALTMAN. No, sir.

Mr. BROWN. Does it favor the all-events tariff now?

Mr. ALTMAN. No, sir.

Mr. BROWN. Does it oppose an all-events tariff now?

Mr. ALTMAN. Yes, sir.

Mr. BROWN. Did it oppose it in July?

Mr. ALTMAN. Yes, sir.

Mr. BROWN. You seem to hesitate.

Mr. ALTMAN. I am only hesitating in the sense that this was a report by the Treasury to the President. The report which will be delivered to you, I guess, momentarily, reflects the administration's own views.

Mr. BROWN. I hope it comes with trumpets because I have been waiting and I may be asleep by that time. What is it going to say?

Mr. ALTMAN. It is going to say what I just did to you now.

Mr. BROWN. That an all-events tariff is—

Mr. ALTMAN. Undesirable and unnecessary.

Mr. BROWN. Is unnecessary and undesirable, and we will not be a party to one; is that correct?

Mr. ALTMAN. Yes, sir.

Mr. BROWN. Contrary to what is said in my opinion on page 2-5 of the July report, but maybe I am not reading it adequately. Let me ask, what role, if any, do each of you see for the producers in this project, Exxon, Arco, BP, Sohio, and in Ohio we call it Sohio, in the financing of this project? What role do you see? Is their participation necessary? Is it not necessary? Never mind desirable, but you can answer that if you like. I will go down the line and start at the end.

Let's start with you, Mr. Altman.

Mr. ALTMAN. Mr. Brown, our judgment is that producer participation is highly desirable, ought to be encouraged, and that there is a good likelihood that it will occur, but it is not a condition sine qua non to a private financing.

Mr. BROWN. Let's be sure that some of my less sophisticated friends who read the record will understand that, that the project can be successful without the participation of the producers?

Mr. ALTMAN. That is right.

Mr. RONCALIO. Mr. Ross?

Mr. ROSS. I agree with that. I think it is not necessarily desirable that everybody that has an ax to grind here participate; but what they will do and whether they will do anything is something which I cannot foretell.

Mr. BROWN. I would ask the question with reference to what form they should participate or the extent. I don't know whether you want to address that or not. If you don't, you are welcome not to.

Mr. ROSS. I don't think it is a question of which form they choose. There are a number of ways that anyone can participate in this project. None pops out necessarily as more desirable than the other.

Mr. MILLER. I would support that statement in general. I think our view is that everyone who receives benefits from the project, which includes the producers selling their gas, should contribute to the support of the project. That is the most desirable setup and therefore the easiest to finance.

Mr. MILLARD. I share Mr. Miller's view.

Mr. YOUNG. Will the gentleman yield?

Mr. BROWN. I'd be glad to.

Mr. YOUNG. I am interested in the first gentleman's comments. Everybody is in agreement but he included the word "encouraged." Would anyone like to—

Mr. ALTMAN. Elaborate on that?

Mr. YOUNG [continuing]. Elaborate on the word "encouraged," and by whom?

Mr. ALTMAN. My point simply is that participation by the producers in the financing, which we think in our consultations with the Justice Department can be done without violating any of the—

Mr. YOUNG. Antitrust laws?

Mr. ALTMAN [continuing]. Antitrust, that's right, that that participation will reduce any risks that this thing cannot be financed privately and thus such participation ought to be encouraged.

Mr. YOUNG. Now we go back to the definition of "to be encouraged." What is the incentive for the encouragement? You are the Treasury Department. Do you envision yourself encouraging the producers or Secretary Schlesinger encouraging the producers, and if so, how?

Mr. ALTMAN. I have no specific plans nor do I know whether or not Secretary Schlesinger does. You might ask him tomorrow for such encouragement.

Mr. BROWN. If the chairman will yield, could I break in and say that Mr. Miller apparently has some ideas about beneficiaries.

Mr. MILLER. Among the beneficiaries we consider the State of Alaska.

Mr. YOUNG. I recognize that, Mr. Miller, and we will not differ with that. I recognize where the gas comes from and who controls the gas, and that is the State of Alaska. I am not talking about that.

I am talking about the main producers, that is, Exxon, Sohio and Arco. I want to know how you in the financial field are going to encourage and participate primarily in the construction of the line.

Mr. BROWN. If I can get my time back, I have a memo here from Mr. Millard to Mr. McMillian, who is either the chairman of the board or the president or both of Northwest Pipeline Co.

Mr. Millard wrote this on August 10, and in it he says:

There is a tradeoff between regulatory recognition of such a financial contribution in a higher gas price and the advantages which the participation of the oil companies in the financing of the pipeline can bring to the consumers.

I am not sure that I couldn't supply another word for "regulatory recognition." It might be "government blackmail" in terms of what they can charge for their natural gas. Is that right?

Mr. MILLARD. You don't ask me to comment on the characterization?

Mr. BROWN. Well, I ask you to comment on what Mr. Millard means in that memo.

Mr. MILLARD. Mr. Brown, I believe there are two ways in which the producers could participate. There is a way where they would participate and earn the full wages of the capital which they would contribute. In that event, I don't think that there should be any consideration of that in the price of the gas which they receive.

There is another way in which they could contribute, and that is without earning the full wages of capital. In that event, that should be considered in the final regulatory decision unless gas is deregulated as to the price of the gas. If gas is deregulated, the market will take care of the problem by itself because the market will put the price on the gas at the wellhead, which is a function of its value at the point of entrance and the cost of bringing it to that point.

Mr. BROWN. I am not sure I have been struck by lightning on the road to Damascus, but it seems to me I now have a better understanding of Mr. McMillian's support for the continued regulation of the price of natural gas, and perhaps even for the Government's support for the regulation of domestic natural gas.

Mr. RONCALIO. We will have to conclude the time, since we are over the 5-minute rule. That doesn't require an answer, but if you would like to give one, you are welcome.

Mr. MILLARD. Very briefly, I don't believe that my argument depends on regulation. I am saying if gas is deregulated, then the market will take care of it once it is established what it will cost to bring it to market; and if the producers can do something to reduce that cost, their real savings at the wellhead will increase.

Mr. RONCALIO. Gentlemen, I want to thank you very much. I was going to ask you a question about why so much Canadian capital has come into Colorado in the last couple of years, many hundreds of millions of dollars. I assume they want to continue to collect the rent for the next 14 or 15 years on those buildings they have built.

I congratulate the members for the excellent questions. We will see you probably again as we go on with our work.

I would like to call Lt. Gov. Lowell Thomas of the State of Alaska and I would like to call on Don Young to make the introduction.

Mr. YOUNG. Thank you, Mr. Chairman.

Members of the committee, I do take great honor at this time to introduce the next witness and his colleague, a man that has served the State of Alaska for many years and was a seatmate of mine in the State Senate, a man who right now has the honor of being the second ranking elected official in the State of Alaska, a man I believe has more stake in this issue possibly as an elected official than any others.

He is my good friend and a great Lieutenant Governor of the great State of Alaska, and accompanying him is Sterling Gallagher, the commissioner of revenue for the State of Alaska.

STATEMENTS OF LT. GOV. LOWELL THOMAS, JR., STATE OF ALASKA, AND J. STERLING GALLAGHER, COMMISSIONER OF REVENUE, STATE OF ALASKA

Mr. THOMAS. Mr. Chairman, committee members, my old friend, Don Young from Fort Yukon, and all of Alaska, I certainly appreciate that very generous introduction. It is a great pleasure to be with you once again, Mr. Chairman, and here we are back on the same issue.

I am delighted to have with me our commissioner of revenue, Sterling Gallagher, who has some testimony that will follow mine which I think is of real importance to you and the members of the committee as regards our little old State up there whose gas seems to have stirred up some sort of controversy in the last few years.

We only learned last night that El Paso most unfortunately has found it advisable to withdraw from the contest, apparently thereby leaving no alternative routing.

Therefore, most of the testimony I had prepared pointing out what we had believed all along to be the national advantages of the Trans-Alaska system and urging you to turn down President Carter's recommendations and continue to push for El Paso, most of that testimony is now by the board and outdated.

However, based on press reports about the Canadian agreement and the decision—and I want to say I think it is kind of extraordinary that you would be having a hearing without having that document in front of you.

Mr. RONCALIO. The reason for that is this: We have been working very hard this year. I put in my 10-day recess in your State holding hearings until 7 or 8 o'clock at night. We are a little tired. If we are not careful, we can drag this out until Christmas Eve and we are determined not to. The hearing would not be proper had there not been an agreement signed by heads of government and heads of state. So, Mr. Dingell and I decided to go ahead with our hearings rather than postpone them.

Mr. THOMAS. Mr. Chairman, we do appreciate this opportunity, notwithstanding the fact that we have not really seen what we are talking about in many respects. We believe from the reports, the leaks, if you will, and whatnot, that there are major questions that still need to be answered. I would like to call them to your attention.

First of all, the question of financing. Commissioner Gallagher will address in detail the question of financing the Alcan line from our point of view. To state it simply, Alaska believes that there are serious obstacles in the way of State of Alaska participation in financing.

We have now had it confirmed that there is a new definition of private financing and that definition will include State governments. Mr. Altman made it crystal clear that the assumption is Alaska will be considered and assumed to be taking part in the financing of the pipeline.

Mr. RONCALIO. If Alaska is sending its royalty gas down the pipeline, isn't it fitting that you should help pay for it?

Mr. THOMAS. We will touch on that point in a moment.

The price of Alaska gas must be resolved.

The second question deals with native claims. The native claims have not been resolved and only a start has been made at that. Most Alaskans, Congressman Young and I know from our own experience that native claims issues are technical, difficult, and require a great deal of time to resolve. We don't believe that the timeframe for resolution of Yukon native claims is realistic.

Moreover, because of our experiences and the statements of Yukon native leaders who testified before you, sir, earlier, there is a distinct possibility of considerable delay in the commencement of pipeline construction in the Yukon. Court action has been commenced by Yukon natives as well as conservation groups in their territory. Their claims I should think would also complicate financing.

Three has to do with environmental issues. New territory will be cut in the construction of the Alcan pipeline both in Alaska and in Canada, and Alaska wants a voice in setting the terms and conditions, the environmental stipulations and their enforcement. We ask you to make sure that our participation is clearly provided for as regards State lands, stream crossings, protection of fish and wildlife, and so on because believe me, we really do care!

Additional legislation in Canada: The agreement by its very terms requires additional agreements to be negotiated with the Saskatchewan, British Columbia, and Alberta governments. These agreements are a critical part of the undertaking between the countries, and yet their terms have not been established. Before a satisfactory answer to the questions of Provincial taxation and fair treatment is obtained, this Congress and all the affected parties must see and be satisfied with the agreements between the Canadian Federal Government and the Provinces, and must be assured that those agreements will be binding upon future legislative bodies, Provincial and Federal.

That point I thought this morning was admitted indirectly by the representative of the U.S. State Department, Mr. Bosworth, in pointing out the difference between a Territory and a Province.

Before turning it over to Commissioner Gallagher whose testimony is still very much on target, I want to express congratulations to the Alcan group, and condolences to El Paso, on my behalf as well as Governor Hammond's, and wish them well in meeting the enormous challenge of delivering Prudhoe Bay gas to the lower States.

One final plea, gentlemen. Please do everything in your power to see that the many hopes, good intentions and promises in the agreement between Canada and the United States are forged into guarantees as much as possible. Let's not just "fly" this pipeline on a wing and a prayer!

Thank you.

I wonder if Commissioner Gallagher might continue our testimony?

STATEMENT OF J. STERLING GALLAGHER

Mr. GALLAGHER. I am Sterling Gallagher, Commissioner of Revenue of the State of Alaska. My testimony will touch upon the major issues in the financing of the gas pipeline. This testimony is necessarily limited by the lack of any opportunity to study the President's report and decision, and so my remarks are based upon what I understand to be the general elements of the financing plan from press reports, press statements and other informal sources.

It is generally assumed that the administration will ask the State of Alaska and the producers to participate in the financing of the pipeline. That Alaska will participate in the financing of the Alcan pipeline is, in our opinion, a shaky assumption. Let me outline the obstacles I see to State of Alaska participation in financing.

A primary objective of the State's support of a truly Trans-Alaska pipeline such as El Paso was to achieve a means by which royalty gas could be brought to tidewater to aid the economic diversification of Alaska's economy. This goal was so important to Alaska that it justified the State's offer to underwrite a part of the secondary debt of the El Paso project. Also, the El Paso project did not present unreasonable financial risks that would question the advisability of investing large sums of the State's permanent fund behind a pipeline. The picture is different with Alcan.

The Alcan project does not go to tidewater, and so does not offer access to tidewater for royalty gas. The permanent resources that the State would have committed to a pipeline that went to tidewater may now be spent in pursuit of that goal. A recent study by Alcan found that a royalty gasline to tidewater would cost \$708 million, 1975 dollars, to build. If a royalty line is found necessary and our financial backing is needed to accomplish it, then most of our credit would be used in accomplishing this goal of the State.

Beyond that, as a financial investment, the Alcan project presents risks which may be serious obstacles to a prudent investment of the State's funds. These risks include the Canadian native claims issue, dual regulation between the Federal and Canadian Governments, and the effects of the treaty and agreements with the Canadians. We believe that financial advisers to potential investors in the project will have the same questions regarding the enormous financial commitments required by private parties to undertake a joint Canadian-American project.

Beyond that, even with El Paso, the State administration had to obtain legislation from its legislature to implement a debt guarantee or other form of financial participation. With El Paso, such action did not seem difficult. With Alcan, an entirely different and more pessimistic picture is present. El Paso enjoyed nearly universal support in the State of Alaska. We have measured this by public opinion polls, by meetings with numerous groups and individuals throughout the State, and by consultations with our legislature. There is no such support for Alcan. In my informed political judgment, the prospects for implementing legislation from the Alaska Legislature are not good, based on what we know today.

We are sure that the producers will speak for themselves, but if the severe restrictions suggested by the Department of Justice are

adopted by the President, these will provide a major obstacle to producer participation in any form in the financing of the pipeline.

We urge the Congress to examine the President's report and decision with an awareness of the difficulties to Alaska and producer participation in financing.

Mr. RONCALIO. What would you want us to do if we rejected the President's report?

Mr. GALLAGHER. One of the things in examining the producers participation, they put very severe restrictions that there could only be debt guarantees and these guarantees could have no restriction, I believe, on the management and other things having to do with the pipeline. If you make debt guarantees and you can't have any commitments to go along with it, it becomes almost like a blank check.

We do have the Federal regulatory commissions. That is what they are entrusted to do.

Mr. RONCALIO. Is the thrust of your message that you resent the point that you will not be able to invest money in this line?

Mr. GALLAGHER. No, sir.

Mr. RONCALIO. Do you want things changed to make the investment more palatable?

Mr. THOMAS. No, sir. We want to make it clear that it is not going to be as easy as it would have been with the El Paso route.

Mr. RONCALIO. I see.

You may proceed.

Mr. GALLAGHER. There are other related issues. Note the least of these is the price of Alaska gas. Assuming the administration's National Energy Act becomes law, Alaska gas would be entitled to \$1.45 per Mcf. The critical question is whether this \$1.45 is in addition to the costs of conditioning the natural gas. Traditionally, the cost of conditioning in the lower 48 States is but a few cents. But for the Prudhoe Bay pipeline, due to its unique requirements, the cost will more likely be in the 70 to 97 cents range per Mcf of gas.

A critical question, both as to the cost of the pipeline to the American consumer and to its financeability, will be whether the figures in the President's report and decision properly reflect these costs. Press reports have mentioned a \$2.50 delivered cost figure which to us seems substantially understated and not a proper reflection of all costs of the pipeline.

The State of Alaska is unhappy with the fact that the U.S. Government in the Agreement on Principles tied the rates in the Yukon to a particular tax in Alaska. As a practical matter, we feel the other tax escalators in the agreement will accelerate faster than the Alaska rates and, therefore, it will not act as a hindrance. We also feel the escalators are so open-ended as not to act as a deterrent to tax increases in the Yukon.

Mr. RONCALIO. Thank you very much.

Can you tell me why it is that conditioning plants constructed in the lower 48 might only cost a few cents per Mcf for preparing gas for pipeline delivery whereas that same work on that same Mcf of gas costs 70 to 97 cents in Prudhoe?

Mr. GALLAGHER. Yes, sir. These pipelines will be buried in permafrost. If the gas were not chilled to below the dew point for the

gas, there is a possibility that it would condense out and form liquids. So the moisture will have to be taken out of the gas stream. Many of the hydrocarbons other than methanes have to be taken out also for the same condensation reasons.

Mr. RONCALIO. Isn't there a market value for all that is taken out?

Mr. GALLAGHER. Yes, but there is presently no method for transporting them.

Mr. RONCALIO. What you are saying is some of this will be recouped when you find a way to bring the propane down?

Mr. GALLAGHER. Yes, sir. There also has to be additional pressurization because it is a high pressure line.

Mr. RONCALIO. Mr. Young?

Mr. YOUNG. I don't have any questions. I think we ought to make it clear, you asked the question why it costs more in Alaska. Everything costs more in Alaska. The logistics problems and the whole project. This whole project is going to be extremely expensive any way you want to cut it.

I will say, as Lieutenant Governor Thomas and Mr. Gallagher have mentioned, the assumption that the State will participate in a financial agreement for the construction of pipeline is possibly premature. I don't think we should shut the doors to that because, again, the President has made this decision. The State of Alaska is well aware that the selection of Alcan may not be what the State of Alaska wanted or I wanted or these two gentlemen wanted, but that has been done. The State of Alaska right now is possibly in a better posture than they would have been if they had chosen another route.

Mr. RONCALIO. I was going to say that. Do you have a second alternative as to the two existing routes out of Alaska?

Mr. THOMAS. We certainly prefer this one over the one that got shot down in Canada.

Mr. YOUNG. I am not saying this cannot be sold to the legislators in Alaska, but I want to be sure we are not promising the financing of this line on State participation. We do have to diversify—and sadly to say, if we have so many dollars, we tend to spend them on nonreturnable activities—we do have to diversify to guarantee a different economy base, especially if a different group of self-centered individuals manage to put the rest of the State into one great, glorious playground for a few people in the lower 48.

I have no further comments.

Mr. RONCALIO. The gentleman from Ohio.

Mr. BROWN. As someone not involved in interior matters or directly involved in the State of Alaska, I want to be sure that I understand what the issues are.

First, I gather that your concern is that the route, had it gone through Alaska, would have provided you a method of getting your royalty gas to a location where it could be used in Alaska for the development of the State; is that correct?

Mr. THOMAS. That is true. However, we had also made a conditional sale of our royalty gas to three of the transmission companies, Tenneco, El Paso, and Southern Natural Gas, with a take-back provision. There is no way to know how many years the citizens of Alaska would have permitted the royalty gas to have

gone out to those three companies before they would want to have it taken back to create industry.

We would have derived more interest through the Trans-Alaska line. The people have expressed the opinion that they want to have as much of that royalty gas as possible kept within the State for in-State use.

Mr. BROWN. So in effect they are not anxious to sell it to Alcan and maybe not even to El Paso if the El Paso route had been selected? They want to use it for their own development?

Mr. THOMAS. Some had agreed, a little reluctantly, to let it go if it would help get the El Paso route. Now they have changed their sentiment considerably.

Mr. BROWN. Does that relate also to the existing conditioning facilities in Alaska? I understand there are some. I am thinking of the Cook Inlet facility. Does that bear on this issue at all?

Mr. GALLAGHER. No, sir, the liquids in the Cook Inlet do not need the pressurization due to their not being shipped in an Arctic pipeline.

Mr. BROWN. What about the conditioning facilities? Had you decided to use your royalty gas in Alaska, would you not have had to have conditioning facilities?

Mr. GALLAGHER. Yes; The conditioning facilities for this project in 1975 dollars is about \$1.8 billion. That is a necessary investment. There is also a necessary investment of about \$2 billion for water flooding.

Mr. BROWN. But the conditioning facilities have to be there for the gas that goes into the lower 48 in any event, do they not?

Mr. GALLAGHER. That is correct.

Mr. BROWN. Will they be in a different location under the Alcan plan than they would have been under the El Paso plan?

Mr. GALLAGHER. No, sir. We desire there be only one conditioning plant in the North Slope area. We desire it also to be a common carrier because of the huge antitrust implications.

Mr. BROWN. But it would have been in the same location no matter who got the contract; correct?

Mr. GALLAGHER. Correct.

Mr. THOMAS. But it will not be brought to tidewater now which is a difference of 400 miles in terms of utilizing it and using it.

Mr. BROWN. The conditioning facility is located the same in either event, but the pipeline would not have brought the gas down into the industrial area?

Mr. THOMAS. Yes; the Commissioner is saying we may have to invest our money to build a royalty line as it would have been under the El Paso route.

Mr. BROWN. So you feel you are going to have to use your available capital to bring the gas from the conditioning plants rather than investing it perhaps in the conditioning plant or in some other more desirable way.

Mr. GALLAGHER. Sir, it is not clear at this time what they are going to do with the ethanes, butanes and the other gases. There may have to be an additional line from the North Slope for those gases. If the technology can allow them to be transported to Fairbanks, they could be taken off at Fairbanks and put in a royalty line to the Cook Inlet area.

Mr. BROWN. OK. I think I understand the problem.

What is the cost of the line that would bring the natural gas from the conditioning plant down into the area where it would be used?

Mr. GALLAGHER. We only have a cost from Fairbanks to Cook Inlet and that is \$708 million.

Mr. BROWN. Thank you, Mr. Chairman. I think that is all the questions I have.

Mr. RONCALIO. Does the staff have any questions? If not, I want to thank you both very, very much. I can appreciate the complex problems that you have in Alaska. I came home thinking Wyoming had tremendous problems on the wilderness. But they are nothing compared to what you are working with.

We hope whatever is done with this product can add to the well being of Alaska and its people.

This joint hearing stands recessed until tomorrow morning at 10 a.m. in these same chambers.

[Whereupon, at 5:30 p.m., the hearing was adjourned to reconvene at 10 a.m., Friday, September 23, 1977.]

NATURAL GAS PIPELINE FROM ALASKA

FRIDAY, SEPTEMBER 23, 1977

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
AND THE

SUBCOMMITTEE ON INDIAN AFFAIRS AND PUBLIC LANDS,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D. C.

The subcommittees met, at 10 a.m., pursuant to notice, in room 2123, Rayburn House Office Building, Hon. John D. Dingell, chairman, Subcommittee on Energy and Power, and Hon. Teno Roncalio, chairman, Subcommittee on Indian Affairs and Public Lands, presiding.

Mr. DINGELL. The subcommittees will come to order.

I am pleased to announce that this is a continuation of the hearings cochaired by myself and my good friend and able colleague from Wyoming, the Honorable Teno Roncalio, who has been a close friend of mine and a man for whom I have had the greatest respect for many years. We are announcing the continuation of joint hearings of our two subcommittees with regard to the President's decision on the Alaskan Natural Gas Transportation System.

This morning we are particularly pleased to welcome to the committees Dr. James R. Schlesinger, the Secretary of the Department of Energy; and with that I yield to my good friend and cochairman, Mr. Roncalio.

Mr. RONCALIO. I have nothing to say at this time.

Mr. DINGELL. The Chair announces that we are particularly pleased that Dr. Schlesinger and his associates would be with us this morning.

The Chair would ask first, Doctor, that you identify your associates at the committee table. I might make a parenthetical statement that we are well aware of the fact that you were detained elsewhere yesterday because of matters that lay before the Senate relating to natural gas.

I find the consequences of the Senate's labors of yesterday to be somewhat displeasing and I suspect that the administration feels the same way. I anticipate that there will be increased efforts on the part of the administration, within its responsibilities, to attempt to redress those events. I can assure you that the House will insist quite firmly upon its position on matters relating to the pricing of natural gas.

With that, Doctor, we will recognize you, first to identify your associates, and then to make such statement as you choose.

STATEMENT OF HON. JAMES R. SCHLESINGER, SECRETARY,
DEPARTMENT OF ENERGY, ACCOMPANIED BY LESLIE J. GOLD-
MAN, ASSISTANT ADMINISTRATOR, FEDERAL ENERGY AD-
MINISTRATION; RICHARD M. SMITH AND JEROME HASS,
STAFF MEMBERS, ENERGY POLICY AND PLANNING, EXECU-
TIVE OFFICE OF THE PRESIDENT

Secretary SCHLESINGER. Thank you, Mr. Chairman.

Mr. Chairman, to my left is Mr. Les Goldman; to my right, Mr. Richard Smith and Mr. Jerry Hass, of the Alaska Gas Task Force that did much of the work in the preparation of the analyses leading to the President's recommendation that lies before you.

Mr. Chairman, some of the questions this morning will be highly technical questions which demand highly technical answers and so, if I may suggest, we would like in some cases to amplify the record in order to make those technical details clear.

Mr. DINGELL. I think that arrangement would be entirely appropriate and we will proceed with that understanding.

Secretary SCHLESINGER. Messrs. Chairmen, the recommendation of the President lies before these committees and we appreciate the expeditious hearings that are being conducted. In our judgment, bringing on Alaskan natural gas as quickly as possible is in the national interest. The more rapidly we bring on that gas, the lower will be our cost of service to the American people. We would hope to get an early start on the construction and early congressional approval will be welcome.

Mr. DINGELL. Mr. Secretary, we were just advised that there are 10 minutes remaining to vote on the approval of yesterday's journal. Neither Mr. Roncalio nor I feel that that is sufficiently important to take us away from this hearing, so we will remain here.

Mr. Secretary, you have indicated, I think, you want your whole statement in the record?

Secretary SCHLESINGER. Yes, sir.

Mr. DINGELL. Without objection then, the entirety of your statement will be inserted in the record.

Mr. DINGELL. We will proceed to receive such summary of it as you wish to give. We will then move toward questions so that we can consider the matter in the most expeditious fashion.

Secretary SCHLESINGER. Yes, sir, Mr. Chairman. I think I will spend a few minutes on three subjects—the defining of the overland route, the comparison of that overland route to the alternative route, which was the El Paso route, and, finally, some of the larger implications of this agreement with Canada.

With respect to the defining of the overland route, Mr. Chairman, you will recall that the original proposal was the Arctic Gas proposal that would have crossed the the Arctic National Wildlife Range. That proposal contemplated movement of gas down the Mackenzie Valley in such a way as to pick up Canadian gas in the Mackenzie Delta.

On the 4th of July, the Canadian National Energy Board rejected that proposal and accepted the alternative Alcan proposal on environmental grounds and on socioeconomic grounds, so that as a result of those decisions after the 4th of July there was only one alternative that could be described as an overland route that would have to be some variation of the Alcan proposal.

The NEB on the 4th of July had moved away from the original route along the Alcan Highway and gone on what is called the Dawson diversion, which would have reduced the distance between the Mackenzie Delta and the pipeline. The reduction of that distance was intended as an inducement to Canadian producers, seeing transportation closely available, to develop Mackenzie Delta gas.

However, there was the unfortunate by-product that that would have cost us some \$650 million additional in order to construct that Dawson diversion.

Generally speaking, however, we were in a position that after the NEB decision there was only one approved route through Canada and that was the inception of the negotiations between the United States Government and the Canadian Government.

As a result of those negotiations, we have come back to a route along the Alcan Highway that was originally proposed, and as a consequence of that substantially reduced the liabilities to the American consumer for the cost of service of this proposed pipeline.

In the course of this, however, we agreed with the Canadian Government that some fraction, some percentage, of the cost of a contingent spur between Dawson and Whitehorse would be under-written by American consumers. This was advantageous to us relative to the NEB decision because it reduced the volume of capital costs by some \$200 million and at the same time deferred construction to whatever date Mackenzie Delta gas comes on stream; in addition if indeed the Dempster lateral is not built, there would be no additional costs to the United States.

I underscore these matters because we must recognize that we are going through Canadian territory and we must have approval of the Canadian Government. The only approved line by the NEB was the one including the Dawson diversion.

As a result of these negotiations, however, we have improved the position of consumers in both countries. We have reduced the cost of service to American consumers by some 8 cents relative to the NEB decision and by an even larger amount comparatively for the Canadian consumers. It shows, I think, that through cooperation arrangements can be reached that are more favorable from the standpoint of both countries, a subject to which I will return.

The second aspect is the question of the comparison of this route to the proposed El Paso route, the so-called all-American route.

It was our judgment that if the cost of service was substantially lower for one route as compared to the other route that there should be a strong rebuttable presumption of choosing that route with the lower cost of service.

There were ancillary questions in addition that would have to be examined, but the initial calculations had to be based upon the cost of service.

After careful study, it was demonstrated, I think, that there was something on the order of a 17-cent or 15-percent difference in the cost of service as between the El Paso route and the Alcan route, and that over a period of years this should result in a very substantial savings to the American consumer.

Mr. DINGELL. Doctor, I might note parenthetically that the displays which you are making available to the committees this morn-

ing are, I think, quite helpful and, without objection, I would request that your staff and our staffs work together to get them in proper shape for insertion in the record of the hearing at the appropriate place.

Secretary SCHLESINGER. Yes, sir.

Mr. DINGELL. Without objection, they will appear in the record at the appropriate place.

Secretary SCHLESINGER. As I was saying, Mr. Chairman, the consequences of this cost-of-service differential of some 17 cents between projected costs for Alcan and El Paso would over the years, result in a \$6 billion saving for American consumers, and in terms of annual cost of service the difference was some \$300 million a year, a difference between \$2.4 billion and \$2.1 billion. That created a rebuttable presumption in favor of the Alcan route, and I think that there are ancillary benefits of going Alcan as opposed to El Paso.

There are certain considerations that might favor El Paso. In the large, it seemed as we did these calculations that the choice was relatively easy, that there were substantial advantages to be obtained for the American consumer by the overland route, and that is the basis of the President's recommendation.

The third topic to which I wanted to address myself, Mr. Chairman, was the larger topic of Canadian-United States relationships which have been altered over the years. They deteriorated to some extent during the period of the Vietnam war. Our energy relationships also tended to deteriorate.

I think that one of the most intriguing, long-run aspects of this agreement is the symbol that it presents of Canadian-United States cooperation on matters of joint concern.

As I indicated earlier, this is not a zero sum game. The advantage to one country is not a disadvantage to the other country. Through cooperation both benefit. If we had chosen to pursue the El Paso line and the Canadian Government had chosen to pursue the Maple Leaf line, the costs of construction would have been vastly greater, the cost of service substantially greater, and the net national economic benefit to both countries would have been substantially less.

Through joint planning, we have achieved a mechanism that will achieve Canadian purposes better than either the Maple Leaf line or the NEB decision. It will also achieve our own purposes better than the competing El Paso line, and in a larger sense we must recognize the opportunity that this represents for the development of a new era of relationships and of cooperation in energy matters as between the United States and Canada. This close relationship between the two countries, I think, will be fruitful to us, not only on this occasion but also on many occasions in the future.

Mr. Chairman, I think that those brief remarks on those three points should be sufficient for the general outline of the matters that we have at hand.

[Secretary Schlesinger's prepared statement follows:]

STATEMENT OF
JAMES R. SCHLESINGER, SECRETARY OF ENERGY
ON
THE ALASKA NATURAL GAS TRANSPORTATION SYSTEM
ON
FRIDAY, 23 SEPTEMBER 1977

MR. CHAIRMAN, I AM HONORED TO ADDRESS THIS COMMITTEE IN SUPPORT OF THE PRESIDENT'S DECISION AND REPORT ON AN ALASKA NATURAL GAS TRANSPORTATION SYSTEM, WHICH WAS TRANSMITTED TO THE CONGRESS YESTERDAY. THE SUBMISSION OF THIS DECISION AND REPORT REPRESENTS THE CULMINATION OF A UNIQUE STUDY AND REVIEW PROCESS, ESTABLISHED BY THE CONGRESS IN THE ALASKA NATURAL GAS TRANSPORTATION ACT OF 1976, TO SELECT A SUPERIOR AND COST-EFFICIENT TRANSPORTATION SYSTEM.

THE DISCOVERY OF 24 TRILLION CUBIC FEET OF NATURAL GAS IN PRUDHOE BAY RESULTED IN SUBMISSIONS BY THREE APPLICANTS TO THE FEDERAL POWER COMMISSION FOR A CERTIFICATE TO CONSTRUCT A PIPELINE TO MOVE ALASKAN GAS TO THE LOWER-48 STATES. IN MARCH 1974, ARCTIC GAS PIPELINE COMPANY FILED AN APPLICATION BEFORE THE FPC AND THE NATIONAL ENERGY BOARD OF CANADA TO CONSTRUCT A PIPELINE ACROSS THE NORTH SLOPE THROUGH THE ARCTIC NATIONAL WILDLIFE RANGE.

IN JULY OF THIS YEAR, THE CANADIAN NEB REJECTED THE ARCTIC GAS PROPOSAL FOR ENVIRONMENTAL AND SOCIOECONOMIC REASONS. IN SEPTEMBER 1974, EL PASO ALASKA COMPANY FILED AN APPLICATION TO TRANSPORT ALASKAN GAS BY A PIPELINE ADJACENT TO THE ALYESKA OIL PIPELINE TO THE GULF OF ALASKA, LIQUIFY IT AND THEN SHIP IT TO CALIFORNIA BY LNG TANKER.

FINALLY, ON JULY 9, 1976, ALCAN PIPELINE COMPANY AND NORTHWEST PIPELINE COMPANY (ALCAN) FILED THE THIRD APPLICATION WITH THE FPC FOR A CERTIFICATE TO TRANSPORT ALASKAN GAS. THE ALCAN PLAN, AS MODIFIED IN MARCH 1977, CALLS FOR A PIPELINE FOLLOWING EXISTING UTILITY CORRIDORS FROM PRUDHOE BAY THROUGH CANADA TO U.S. MARKETS.

UNDER THE TRANS-ALASKA OIL PIPELINE ACT OF 1973, CONGRESS AUTHORIZED THE PRESIDENT TO EXPLORE THE POSSIBILITY OF A GAS PIPELINE ACROSS CANADA WITH THE CANADIAN GOVERNMENT. AS A RESULT OF THOSE DISCUSSIONS, A TRANSIT PIPELINE TREATY OF GENERAL APPLICABILITY TO ALL ENERGY TRANSPORTATION SYSTEMS SHARED BY BOTH COUNTRIES WAS DEVELOPED AND FINALLY SIGNED ON JANUARY 28, 1977.

CONGRESS, RECOGNIZING THE SHORTAGES OF NATURAL GAS, AND THE POTENTIAL FOR DELAY INHERENT IN THE NORMAL REGULATORY APPROACH TO A PROJECT OF THIS MAGNITUDE, ENACTED THE ALASKAN NATURAL GAS TRANSPORTATION ACT OF 1976. THE STUDY AND DECISION PROCESS ESTABLISHED BY THE ACT HAS CALLED ON THE COLLECTIVE EXPERTISE OF MANY FEDERAL AND STATE AGENCIES. IN MAY 1977, AFTER MONTHS OF HEARINGS, WHICH DEVELOPED OVER 50,000 PAGES OF TESTIMONY AND EXHIBITS, THE FEDERAL POWER

COMMISSION (FPC) ISSUED A ONE-VOLUME REPORT, RECOMMENDATION TO THE PRESIDENT, URGING THE DESIGNATION OF AN OVERLAND PIPELINE SYSTEM THROUGH CANADA. AFTER THE FPC'S REPORT, PURSUANT TO STATUTE, TEN FEDERAL INTERAGENCY TASK FORCES WERE ORGANIZED TO REPORT BY JULY 1, 1977, ON THE VARIOUS ISSUES UNDERLYING THE SELECTION OF A TRANSPORTATION SYSTEM. THOUSANDS OF PAGES OF ANALYSIS FROM THESE INTERAGENCY TASK FORCES, AS WELL AS PRIVATE INDIVIDUALS, WERE SUBMITTED TO THE WHITE HOUSE.

THAT VOLUMINOUS RECORD NOW SUPPORTS THE CONCLUSION IN THE DECISION AND REPORT THAT THE ALCAN PIPELINE SYSTEM WILL DELIVER MORE NATURAL GAS AT LESS COST TO A GREATER NUMBER OF AMERICANS THAN ANY OTHER TRANSPORTATION SYSTEM. THE DECISION AND REPORT EXPLAINS IN SOME DETAIL THE VARIOUS ASPECTS OF THE NATURAL GAS TRANSPORTATION SYSTEM DESIGNATED FOR APPROVAL. RATHER THAN SUMMARIZE EACH CHAPTER OF THE REPORT, I SHALL BRIEFLY DISCUSS THE MAJOR ADVANTAGES OF THE ALCAN SYSTEM AND THE AGREEMENT NEGOTIATED WITH THE CANADIANS TO PROTECT THOSE ADVANTAGES.

THE RECENT AGREEMENT ON PRINCIPLES BETWEEN THE UNITED STATES AND CANADA ENSURES THE BASIC SUPERIORITY OF THE ALCAN

SYSTEM PROPOSAL OVER THE EL PASO ALASKA COMPANY PROPOSAL TO LIQUEFY ALASKA GAS AND SHIP IT TO THE WEST COAST. THE COST OF SERVICE ADVANTAGE OF THE ALCAN SYSTEM IS PERHAPS THE PRINCIPAL FACTOR IN DETERMINING THE VALUE OF THE PROJECT TO U.S. CONSUMERS. OVER A 20-YEAR PERIOD UNDER THE EXPECTED COST OVERRUN CASE, THE ALCAN SYSTEM WILL DELIVER ALASKA GAS TO U.S. CONSUMERS AT A SIGNIFICANTLY LOWER COST OF SERVICE THAN EL PASO--ESTIMATED TO BE \$1.04 PER MMBTU FOR ALCAN AND \$1.21 PER MM3TU FOR EL PASO. THIS \$.17 DIFFERENCE REPRESENTS AN ULTIMATE SAVINGS OF \$6 BILLION FOR U.S. CONSUMERS OVER THE LIFE OF THE ALCAN PROJECT. THE PROPOSED ALCAN SYSTEM WILL DELIVER ALASKA GAS AT THE LOWEST POSSIBLE COST OF SERVICE TO U.S. CONSUMERS--BELOW THE COST OF IMPORTED OIL AND SUBSTANTIALLY BELOW THE COST OF OTHER FUEL ALTERNATIVES.

ALCAN ALSO HAS A MARKEDLY HIGHER NET NATIONAL ECONOMIC BENEFIT THAN EL PASO. THE CALCULATION OF THE NNEB COMPARES THE PRESENT VALUE OF REAL RESOURCE EXPENDITURES FOR A PROJECT WITH THE PRESENT VALUE OF FUTURE BENEFITS. FOR EXPECTED CASE COST OVERRUNS OF 40 PERCENT, ALCAN HAS AN ESTIMATED NNEB OF \$5.57 BILLION, MORE THAN \$1.1 BILLION HIGHER THAN THE ESTIMATED NNEB OF EL PASO. BUT EVEN FOR THE WORST CASE OVERRUNS, BOTH PROJECTS STILL HAVE A POSITIVE NNEB.

THE ANALYSIS INCORPORATED IN THE PRESIDENT'S DECISION AND REPORT SUPPORTS THE FINDING THAT CONSTRUCTION OF AN ALASKA NATURAL GAS TRANSPORTATION SYSTEM AT THE EARLIEST POSSIBLE TIME IS IN THE NATIONAL INTEREST.

THE FUNDAMENTAL DIFFERENCE BETWEEN THE EL PASO AND ALCAN SYSTEMS IS THAT AN OVERLAND PIPELINE SYSTEM IS INHERENTLY MORE EFFICIENT THAN AN LNG TRANSPORTATION SYSTEM. THE LIQUEFACTION PROCESS CONSUMES MORE NATURAL GAS, RAISING THE DIRECT COST TO CONSUMERS AND LOWERING THE BASE OVER WHICH THAT COST CAN BE SPREAD. FURTHERMORE, EL PASO HAS APPROXIMATELY 100 PERCENT HIGHER OPERATING COSTS THAN ALCAN. FOR THESE REASONS ALONE, ALCAN HAS A 16.5 CENT PER MMBTU ADVANTAGE OVER EL PASO.

BEYOND THESE COST-OF-SERVICE ADVANTAGES, ALCAN HAS SIGNIFICANT TECHNICAL AND RESOURCE ADVANTAGES OVER EL PASO. THESE INCLUDE:

- THE SUPERIORITY OF PIPELINE TRANSPORTATION OVER LNG TRANSPORTATION FOR THE SAFEST AND MOST RELIABLE DELIVERY OF GAS, AND FOR EXPANSIBILITY OF CAPACITY TO DELIVER INCREASED VOLUMES FROM RESERVES OTHER THAN THE PRUDHOE BAY POOL;

- THE SUBSTANTIAL ADVANTAGE OF PIPELINE FACILITIES OVER LNG FACILITIES IN HAVING A USEFUL LIFE OF OVER 40 YEARS;
- THE NEED TO ANTICIPATE FUTURE SHIPMENT OF NATURAL GAS FROM THE GULF OF ALASKA WHICH MAY REQUIRE LNG DELIVERIES TO THE WEST COAST, THUS PRESERVING LNG DELIVERY POTENTIAL ON THE WEST COAST.

FURTHERMORE, VIRTUALLY ALL FEDERAL AGENCIES AND PRIVATE PARTIES THAT COMPARED THE TWO PROJECTS DETERMINED THAT THE ALCAN SYSTEM IS ENVIRONMENTALLY SUPERIOR TO EL PASO.

THE AGREEMENT WITH CANADA ON THE ALCAN SYSTEM GUARANTEES THE BASIC ECONOMIC SUPERIORITY OF THE ALCAN PROJECT. THE AGREEMENT ON PRINCIPLES PROVIDES ASSURANCES ON ROUTES, TAXATION LEVELS, PROJECT DELAYS AND OTHER CRITICAL MATTERS. THIS AGREEMENT, ALONG WITH THE TRANSIT PIPELINE TREATY, PROTECTS THE PROJECT FROM UNFAIR OR DISCRIMINATORY CHARGES THAT WOULD OTHERWISE THREATEN THE SAVINGS TO U.S. CONSUMERS.

NEGOTIATIONS OVER THE ELEMENTS OF A JOINT U.S.-CANADIAN SYSTEM BEGAN IN EARNEST AFTER THE JULY 4TH DECISION OF THE CANADIAN NATIONAL ENERGY BOARD (NEB). THE NEB PERMITTED THE

CONSTRUCTION OF THE ALCAN SYSTEM THROUGH CANADA ONLY WITH SUBSTANTIAL MODIFICATIONS THAT MADE THE SYSTEM CONSIDERABLY LESS ATTRACTIVE TO THE UNITED STATES ON ECONOMIC GROUNDS. THE CANADIANS INSISTED ON AN EXPENSIVE ROUTE DIVERSION OF THE MAIN LINE TO DAWSON CITY IN THE YUKON AND A FRONT-END \$200 MILLION IMPACT ASSISTANCE PAYMENT TO THE YUKON ABOVE AND BEYOND ANY PROPERTY TAX THAT MIGHT BE IMPOSED.

THE AGREEMENT SIGNED WITH THE CANADIANS ELIMINATES BOTH THESE CONDITIONS. FIRST, THE AGREEMENT PROVIDES THAT THE ALCAN PIPELINE WILL FOLLOW THE ORIGINAL ALCAN HIGHWAY ROUTE. THIS PROVISION ALONE SAVES THE U.S. CONSUMER UP TO \$630 MILLION IN INITIAL CONSTRUCTION COSTS, OR THE 6 CENTS IN COST OF SERVICE THAT WOULD HAVE BEEN ADDED BY THE ROUTE DIVERSION. FROM THE CANADIAN PERSPECTIVE, THE ROUTE DIVERSION WAS DESIGNED TO BRING THE ALCAN SYSTEM WITHIN REACH OF THEIR MACKENZIE DELTA RESERVES. FROM THE U.S. PERSPECTIVE, IT WAS A COSTLY AND INEFFICIENT MODIFICATION OF THE MAIN LINE TO ACCOMODATE AN UNCERTAIN EVENTUALITY - CONSTRUCTION OF THE DEMPSTER LINE - WHICH MIGHT NEVER OCCUR.

IN PLACE OF THE ROUTE DIVERSION, THE U.S. AGREED TO PAY A PORTION OF THE COST FOR EXTENSION OF THE DEMPSTER LATERAL FROM DAWSON TO WHITEHORSE--IF AND WHEN THE LATERAL IS BUILT.

THIS LIMITED EXTENSION OR "SPUR" WILL CONNECT THE DEMPSTER LINE WITH THE MAIN ALCAN SYSTEM. A HIGHER CAPACITY SYSTEM WILL THEN BE INSTALLED SOUTH OF WHITEHORSE, WITH COST OF SERVICE SHARED ON A VOLUMETRIC BASIS, TO CARRY BOTH U.S. AND CANADIAN GAS.

WITHOUT SOME LIMITED U.S. CONTRIBUTION TO ASSIST CANADA IN DEVELOPING THE MACKENZIE DELTA RESERVES, NO PIPELINE AGREEMENT COULD HAVE BEEN REACHED. HOWEVER, THE FORMULA SHARE FOR U.S. COST OF SERVICE OF THE DAWSON SPUR IS MORE LIMITED THAN COST FOR A MAIN LINE DIVERSION, AND THIS SHARE IS TIED TO THE PERCENT OF ACTUAL COST OVERRUNS ON CONSTRUCTION OF THE MAIN LINE. THUS, THE COST-SHARE FORMULA CREATES A FORMIDABLE INCENTIVE FOR CANADA TO BUILD THE MAIN LINE AS EFFICIENTLY AS POSSIBLE, AND DECREASE THE OVERALL COST OF SERVICE TO U.S. CONSUMERS TO THE MAXIMUM EXTENT. FURTHERMORE, THESE FAVORABLE CONCESSIONS ASIDE, IT IS IN THE LONG-RUN INTEREST OF U.S. CONSUMERS TO ASSIST CANADA IN DEVELOPING THESE RESERVES.

PARAGRAPH 6 OF THE AGREEMENT EXPLAINS THE COST-SHARE FORMULA FOR THE DAWSON SPUR. THE MORE EFFICIENTLY THE CANADIANS CAN CONSTRUCT THE MAIN ALCAN LINE, AND LOWER THE COST OF SERVICE TO U.S. CONSUMERS, THE HIGHER THE U.S. SHARE

FOR CONSTRUCTION OF THE SPUR. FOR EXAMPLE, WITH AN OVERRUN OF 25 PERCENT IN CANADA, THE U.S. PAYS 100 PERCENT. HOWEVER, THE AVERAGE U.S. COST OF SERVICE IN THIS CASE OVER A 20-YEAR PERIOD WILL BE APPROXIMATELY \$1.00 PER MMBTU (IN 1975 DOLLARS), OR 4 CENTS LESS THAN THE COST OF SERVICE UNDER THE EXPECTED OVERRUN CASE OF 40 PERCENT. IN THIS LATTER CASE THE U.S. WOULD PAY ONLY 83 1/3 PERCENT OF THE DAWSON SPUR.

AT A MINIMUM, THE U.S. WILL PAY A TWO-THIRDS SHARE, OR THE PERCENTAGE OF U.S. GAS VOLUMES IN THE MAIN LINE, FOR THE TOTAL COST OF SERVICE OF THE DAWSON SPUR. THIS WOULD ALSO HAVE BEEN THE U.S. COST SHARE FOR THE ROUTE DIVERSION REQUIRED BY THE NEB.

THE AGREEMENT ADDITIONALLY IMPOSES A CEILING ON THE COSTS TO WHICH THE MINIMUM SHARE APPLIES. THUS, THE U.S. WILL NOT BE LIABLE FOR COSTS OF THE SPUR IN EXCESS OF 35 PERCENT ABOVE THE FILED COSTS, UNLESS THE CANADIANS CAN CREDIT COST OVERRUN SAVINGS THEY ACHIEVE ON THE MAIN LINE TO THE DAWSON SPUR. THE U.S. SHARE OF THE DAWSON SPUR COST OF SERVICE CAN NEVER BE LESS THAN THE U.S. PERCENTAGE OF GAS VOLUMES IN THE LINE SOUTH OF WHITEHORSE, MULTIPLIED BY THE ACTUAL COSTS OF THE DAWSON SPUR, NOTWITHSTANDING THE DAWSON

SPUR CEILING AND THE OVERRUN FORMULA. HOWEVER, THIS LAST CONDITION IS ONLY RELEVANT IN THE CASE WHERE SUBSTANTIAL OVERRUNS IN EXCESS OF 50 PERCENT ARE EXPERIENCED ON THE ENTIRE SYSTEM. FURTHERMORE, THE AGREEMENT ENSURES THAT THE SYSTEM INSTALLED ON THE DAWSON SPUR WILL BE THE SAME AS THAT FOR THE WHOLE DEMPSTER LINE IN ORDER TO PREVENT LOADING OF COSTS ONTO THE DAWSON SPUR.

SECOND, THE AGREEMENT ON PRINCIPLES ELIMINATES THE REQUIREMENT OF A \$200 MILLION IMPACT ASSISTANCE PAYMENT, AND IMPOSES A COMPREHENSIVE CEILING ON TAXATION OF THE PIPELINE. THE THREE WESTERN PROVINCES HAVE AGREED TO ABIDE BY THE PRINCIPLES OF THE TRANSIT PIPELINE TREATY, AND HAVE STATED PUBLICLY THAT TREATMENT OF THE ALCAN LINE WILL BE THE SAME AS FOR SIMILAR PIPELINES IN THEIR JURISDICTION. IN THE YUKON TERRITORY, WHERE THERE ARE NO SIMILAR PIPELINES, SPECIAL CEILINGS WERE NEGOTIATED AS PART OF THE AGREEMENT ON PRINCIPLES. THE RATE OF PROPERTY TAXATION IS ESSENTIALLY THE SAME AS THAT FOR ALASKA. THE AGREED RATE WILL CONTINUE FOR 25 YEARS OR UNTIL A SIMILAR PIPELINE IS BUILT. IT IS EXPECTED THAT THE DEMPSTER LATERAL, OR SOME OTHER LATERAL TO THE MACKENZIE DELTA WILL BE IN SERVICE IN 1985, TWO YEARS AFTER THE MAIN LINE IS OPERATIONAL. AT THAT POINT

THE TREATY WILL APPLY, AND THE TAX ON THE MAIN LINE WILL BE SIMILAR TO THE TAX ON THE CANADIAN-BUILT LATERAL. OTHERWISE, THE NEGOTIATED CEILINGS WILL APPLY ONLY IN THE EXTREMELY UNLIKELY EVENT THAT THE CANADIANS DO NOT DEVELOP THEIR MACKENZIE DELTA RESERVES.

AFTER 1988, THE YUKON TAX LEVEL COULD BE ADJUSTED TO RISE EITHER WITH THE GNP DEFLATOR OR WITH THE RATE OF INCREASE OF PER CAPITA REVENUES FOR THE YUKON TERRITORIAL GOVERNMENT, FROM SOURCES OTHER THAN THE PIPELINE. IT MIGHT ALSO BE ADJUSTED RETROACTIVELY FOR THE PERIOD 1983 TO 1987 IF THE YUKON PER CAPITA TAX RATE OR THE ALASKAN PROPERTY TAX HAS INCREASED AT A RATE HIGHER THAN THE CANADIAN GNP DEFLATOR.

ANY REQUIRED IMPACT PAYMENTS NEEDED IN ADVANCE OF TAXES WILL BE TREATED AS A LOAN BY THE COMPANIES TO THE GOVERNMENT TO BE PAID BACK OUT OF FUTURE TAX REVENUES. THE U.S. WILL HAVE NO ROLE WHATEVER IN THIS ARRANGEMENT. THE CEILING ON YUKON TAXES REPRESENTS ONLY A MODEST INCREASE OVER THE LEVEL OF TAXES INCLUDED IN ORIGINAL COST OF SERVICE ESTIMATES FOR ALCAN. THIS AGREEMENT IS, THEREFORE, A SUBSTANTIAL GAIN FOR THE U.S. OVER THE NEB DECISION, AND REMOVES A POTENTIALLY

TROUBLESOME OPEN-ENDED TAX AND A LARGE ADDITIONAL IMPACT PAYMENT.

FINALLY, THE AGREEMENT COMMITS BOTH COUNTRIES TO A TIMETABLE FOR CONSTRUCTION OF THE ALCAN SYSTEM. THE AGREEMENT CALLS FOR MAIN LINE PIPELAYING TO BEGIN IN THE YUKON BY JANUARY 1, 1981. IN ADDITION, THE CANADIAN GOVERNMENT HAS MADE A CLEAR PUBLIC STATEMENT THAT SETTLEMENT OF NATIVE CLAIMS IN THE YUKON WILL NEITHER DELAY THE PROJECT NOR INCREASE COSTS.

AS A RESULT OF THE AGREEMENT ON PRINCIPLES, BOTH THE U.S. AND CANADIAN GOVERNMENTS HAVE MEASURABLY IMPROVED THEIR POSITIONS FROM THE NEB DECISION. THE MODIFICATIONS OF THE NEB DECISION WILL LOWER THE COST OF SERVICE PRICE OF ALASKAN AND CANADIAN GAS FOR CONSUMERS IN BOTH COUNTRIES. BUT THE AGREEMENT IS PARTICULARLY ADVANTAGEOUS TO THE U.S. BY PROVIDING CEILINGS ON EVERY ASPECT OF POTENTIAL U.S. LIABILITY WHILE CREATING NEW INCENTIVES FOR EFFICIENT CONSTRUCTION ON A PORTION OF THE PROJECT THAT WOULD NORMALLY BE SUBJECT TO EXCLUSIVE CANADIAN JURISDICTION.

IN GENERAL, THE CANADIANS WILL HAVE THE GREATEST INCENTIVE TO MINIMIZE COST OF SERVICE BECAUSE CANADIAN, AS

WELL AS U.S., SHIPPERS WILL SHARE THE ALCAN COST OF SERVICE ON A VOLUMETRIC BASIS. THE CONSUMERS OF BOTH COUNTRIES WILL BE ADVERSELY AFFECTED IF THE COST OF SERVICE TARIFF IS UNREASONABLY HIGH.

FURTHERMORE, ALTHOUGH THE CANADIAN NEB HAS AUTHORITY OVER TARIFF MATTERS IN CANADA, THE TARIFF MUST ULTIMATELY BE ACCEPTED BY THE FPC, WHICH CAN REFUSE TO CERTIFICATE THE PROJECT IF THE TARIFF IS INAPPROPRIATE.

BEYOND ITS COST OF SERVICE SUPERIORITY, HOWEVER, ONLY A JOINT UNDERTAKING NEGOTIATED WITH CANADA COULD HAVE PROVIDED U.S. CONSUMERS WITH ENERGY SUPPLIES FROM CANADA IN ADDITION TO ALASKA GAS. THESE POTENTIAL SUPPLY ADVANTAGES WOULD ALMOST SURELY HAVE BEEN LOST IN A UNILATERAL ALL-U.S. PROJECT LIKE EL PASO'S. SPECIFICALLY, THE ALCAN SYSTEM WILL:

- ASSIST CANADA TO CONTINUE SUPPLYING GAS EXPORTS UNDER EXISTING CONTRACTS BY PROVIDING IT WITH ACCESS TO SUBSTANTIAL MACKENZIE DELTA RESERVES;
- PROVIDE THE OPPORTUNITY TO OBTAIN ADDITIONAL GAS AT AN EARLY CONSTRUCTION OF PORTIONS OF THE SOUTHERN CANADIAN AND LOWER 48 SECTIONS OF ALCAN, WITH

DELIVERY OF GAS FROM ALBERTA (WHERE THERE IS TEMPORARY EXCESS SUPPLY) IN ADVANCE OF THE DELIVERY OF ALASKA GAS;

- ENCOURAGE EXPLORATION FOR NEW RESERVES AND STIMULATE EXPANSION OF THE GAS INDUSTRY IN CANADA, WHICH MIGHT ULTIMATELY BENEFIT U.S. CONSUMERS THROUGH THE ENHANCED POTENTIAL OF CANADIAN SUPPLIES.

FURTHERMORE, THIS JOINT U.S.-CANADIAN UNDERTAKING COULD RESULT IN SIGNIFICANT COOPERATION WITH CANADA ON A VARIETY OF OTHER ENERGY ISSUES, SUCH AS OIL EXCHANGES, PIPELINES AND STRATEGIC RESERVES. CHOICE OF THE ALL-U.S. ROUTE WOULD HAVE RESULTED IN SACRIFICE OF THESE BENEFITS.

FINALLY, THIS JOINT UNDERTAKING BETWEEN THE UNITED STATES AND CANADA HAS IMPLICATIONS THAT GO BEYOND THE SUPPLY AND COST OF SERVICE ADVANTAGES THAT WILL BE PROVIDED BY THIS PARTICULAR PROJECT TO U.S. CONSUMERS.

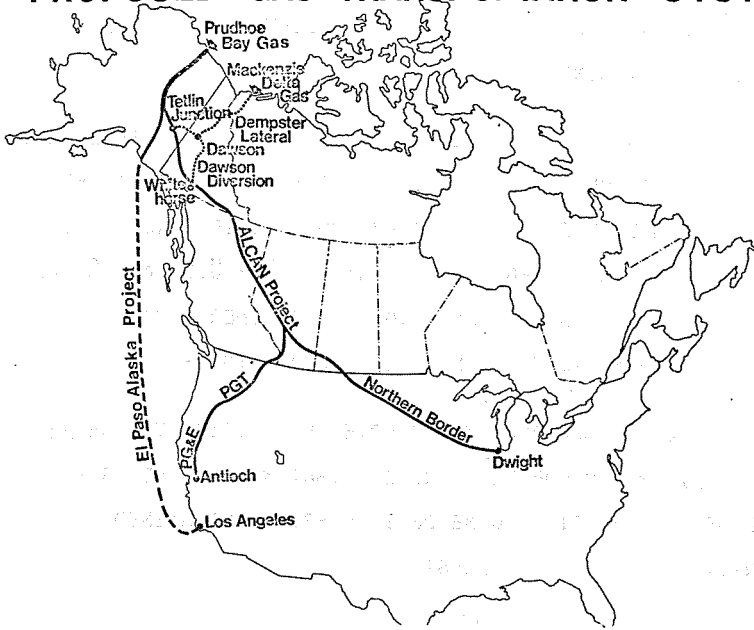
ALMOST FOUR YEARS HAVE PASSED SINCE THE INDUSTRIALIZED COUNTRIES WERE BROUGHT FACE TO FACE WITH THE ENERGY CRISIS. SINCE THAT TIME, EACH HAS BEEN EXPLORING ITS OWN OPTIONS FOR COPING WITH THE PROBLEM, WITH ONLY LIMITED ATTEMPTS AT COOPERATION. IN THE COURSE OF ANALYSIS AND DISCUSSION

DURING THAT PERIOD, THE NEED FOR BETTER INTERNATIONAL COOPERATING IN DEALING WITH ENERGY PROBLEMS HAS BECOME INCREASINGLY EVIDENT.

THE ALACAN JOINT PIPELINE PROJECT IS A CONCRETE EXAMPLE OF HOW COOPERATION BETWEEN TWO COUNTRIES IN ENERGY MATTERS CAN MAKE BOTH BETTER OFF THAN THEY WOULD BE IF CONSTRAINED BY A TIMID KIND OF ENERGY ISOLATIONISM. THE U.S. AND CANADA WORKING TOGETHER CAN MOVE MORE VOLUMES OF ENERGY MORE EFFICIENTLY THAN EITHER COUNTRY ACTING BY ITSELF.

I URGE THE CONGRESS TO APPROVE THE PRESIDENT'S DECISION AND REPORT, AND AUTHORIZE A PROJECT THAT WILL SERVE AS A SYMBOL OF THE BENEFITS TO BE DERIVED FROM ENLIGHTENED RECOGNITION OF MUTUAL INTEREST.

PROPOSED GAS TRANSPORTATION SYSTEMS



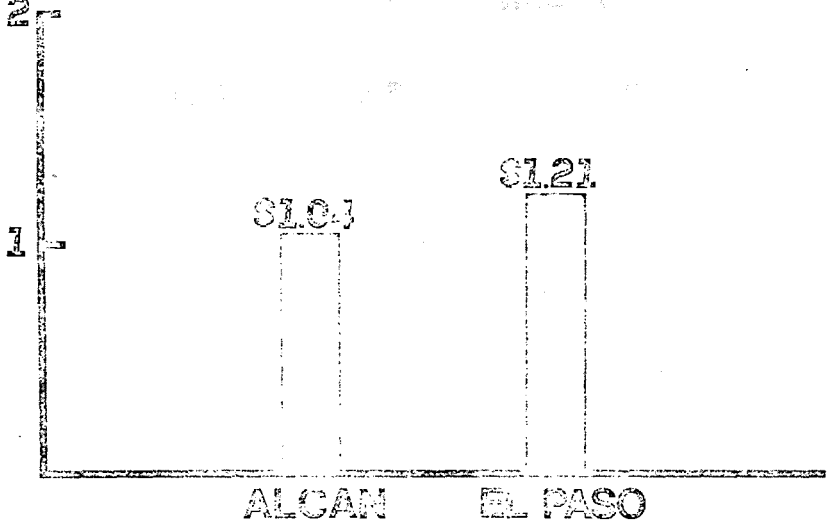
NET NATIONAL ECONOMIC BENEFIT TO THE U.S.

ALCAN \$ 5.77 BILLION

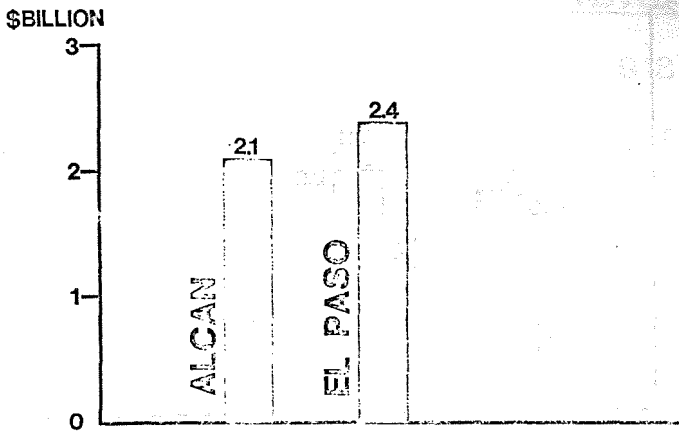
EL PASO \$ 4.63 BILLION

20 YEAR AVERAGE COST OF SERVICE (\$ 1975)

\$ PER
MILLION BTU

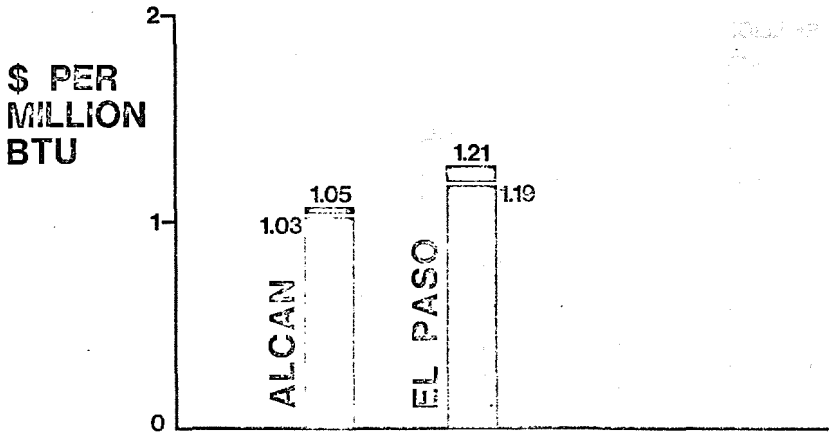


AVERAGE ANNUAL COST OF SERVICE



TOTAL SAVINGS OVER 20 YEARS.. \$6 BILLION

20 YEAR AVERAGE COST OF SERVICE (\$1975)

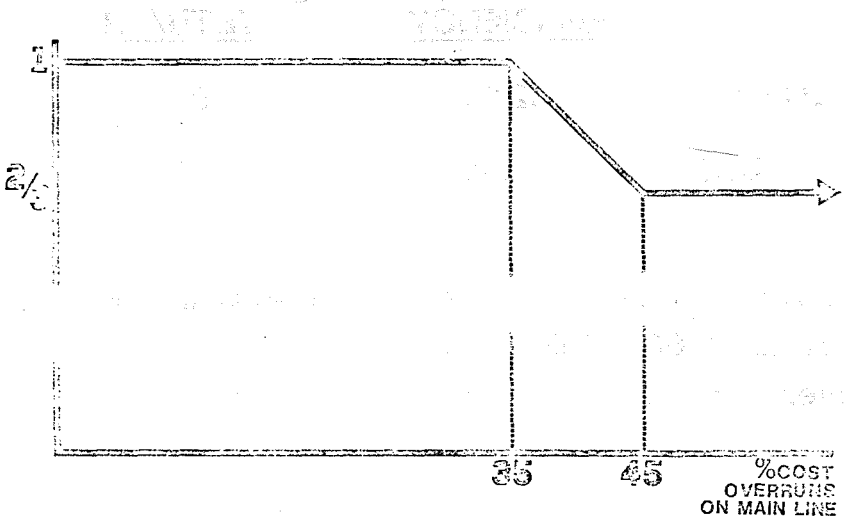


FUEL DELIVERIES

	<u>EFFICIENCY</u>	<u>TBTU/YR</u>
ALCAN	92.1%	918
EL PASO	89.1%	888

The higher fuel deliveries of the ALCAN system will total 600 trillion Btu's over first 20 years of the Project

FRACTION OF COST OF SERVICE ON THE DAWSON SPUR PAID BY THE U.S. SHIPPERS



Mr. DINGELL. Mr. Secretary, we thank you for a very helpful statement.

The Chair yields to my good friend and cochairman, Mr. Roncalio.

Mr. RONCALIO. Thank you, Mr. Cochairman.

Just two questions, Mr. Secretary: Yesterday morning, Mr. Howard Boyd, board chairman of the El Paso Co., surprised fiscal Washington by announcing that he was facing the reality, the international facts of life, and withdrawing the El Paso opposition to the President's decision.

I believe that act aids you in marshaling the assets of this Nation for the best interests of its energy and of its progress. Is that substantially so?

Secretary SCHLESINGER. Yes, sir. I thought it was a most generous act upon the part of Mr. Boyd and on the part of El Paso. The competition, I think, has served the national interest well. It was a good fight between the two contenders and I think that the final result is a sportsmanlike result.

Mr. RONCALIO. They live to fight again some other day. Very good.

Mr. Secretary, the other day in Ottawa, you most graciously and diplomatically discussed with the Prime Minister of Canada and his deputies and others present, the fact that this treaty was, as you say here, about to embark on a way to a better degree of understanding between our beloved neighbor and our country, and in view of this long historical friendship and peaceful border, and you said, "I feel somewhat like Lee for giving us our horses when he told the men to take them home for spring plowing."

Yesterday, during some of our questioning, we thought of that statement a time or two. Would you care to embellish a little bit on what prompted that observation?

Secretary SCHLESINGER. I hope that this is responsive, Mr. Chairman.

In our relationships with the Canadians, they have always been tough bargainers before an agreement is reached. Let me say there is no case that we know of in which the Canadians have failed to be fully committed to carrying out the terms of an agreement after that agreement has been reached. I think that their record of splendid performance is one that we can take both pride and assurance from.

Mr. RONCALIO. Thank you.

Mr. DINGELL. I observe that in the quote alluded to, if I remember correctly, Lee got not only the horses for his officers and men to conduct the spring plowing but they also got to keep their sidearms; as I observed yesterday, we may have come out less well than at Appomattox.

Can you give us a comment on that, Mr. Secretary?

Secretary SCHLESINGER. I think that we will need to retain safeguards. I prefer that term to "sidearms," Mr. Chairman. I think that the safeguards are included in the agreement that lies before you now.

Mr. DINGELL. I will observe that that is a matter which will be considered during the inquiry which now lies before us.

Mr. RONCALIO. I was going to ask the staff, Mr. Braun, why don't you ask the question again about the specific possibility of an across-the-board all-purpose tariff that we did yesterday? It has a bearing.

Mr. DINGELL. The Chair recognized the staff yesterday for that purpose. I think this morning we will be best served if we have members ask questions first. The members have now achieved familiarity with the issues relating to the agreement, so the Chair is going to recognize members in the order they came in. The gentleman from Nevada was the first to arrive, so we will recognize him.

Mr. SANTINI. Thank you, Mr. Chairman.

Mr. Secretary, yesterday I shared a point of concern with the very able Representative related to the floating tariff concept as applied to the Yukon Territory.

The principal impediment, as I envision it, to potential tax or tariff abuse by the Canadian Provinces is the provision that no tax can exceed that that is presently being paid by pipelines of comparable size.

In the Yukon there are no pipelines of 48- or 54-inch diameter; therefore, the floating tariff test has been created in the hope that that would in some measure control or contain costs.

I am disturbed by the potential that in the Yukon Territory an imaginative, inventive finance minister could create a taxing scheme whereby, on the one hand, he would be appearing to increase the local tax burden, for example, \$3, which would automatically create a potential obligation of \$1 on our part. Then through a tax rebate scheme—and we in this country toy with this notion annually—through a tax rebate scheme return \$2 of those \$3 in a rebate to the 21,800 inhabitants or whomever or wherever that are presently residing in the Territory.

What are the safeguards, as you envision them, to that kind of potential excess?

Secretary SCHLESINGER. Thank you, Mr. Santini.

There have been, of course, these kinds of questions raised on both sides. Some of the Canadian negotiators felt that on the Alaskan side of the border, which is taken as a model for Yukon taxation, that similar arrangements might be made that would hold down the level of taxation in Alaska and thus preclude an appropriate increase at the appropriate time in the Yukon.

I think that we persuaded our Canadian counterparts that that indeed was an unlikely possibility, and we consider this also to be an unlikely possibility.

As you have indicated, there is no problem in the Provinces themselves and we negotiated long and hard on the question of Yukon taxation.

In addition, we plan, Mr. Santini, an exchange of letters between myself and the Canadian Ambassador to cover the point that you are raising.

Mr. Chairman, I can read these letters at this time responsive to Mr. Santini's question, or I can insert them into the record. Generally speaking, it would be an understanding between the two governments that would preclude the kind of development or the kind of possibility to which Mr. Santini's question is addressed.

Mr. DINGELL. This is a concern of mine. The insertion of the full letters would be extremely valuable. We will keep the record open for a period of time in order that we might have them in the record.

Mr. SANTINI. I would so move, Mr. Chairman, for insertion of the complete letters.

Secretary SCHLESINGER. Mr. Chairman, since it is a matter of general concern, let me read very briefly from the letters.

Mr. DINGELL. First, without objection, the full letters will be inserted at the appropriate place in the record. We will now recognize you for reading from the letters, which I think will be most helpful.

Secretary SCHLESINGER. These are letters that would have been signed in a prior period had we not been so busy but will be signed within a few days.

We refer to the agreement between the two countries and my letter states:

We would appreciate your confirmation of our understanding that those provisions are intended to cover situations where there has been an increase in the Yukon property tax on the pipeline less than proportionate to the increase in revenue derived from the specified property taxes and grants, and that the total revenue would be reasonably required for governmental needs of the Yukon Territory.

Accordingly, calculations relating to the specified property taxes and grants will be made in the spirit of the foregoing and due account will be taken by governments of any unusual benefits returned to the property taxpayer.

The prospective reply from the Canadian Ambassador would read:

"I refer to your letter"—and so on. "With reference to subparagraph 5(b) of the agreement, and I am pleased to confirm our understanding as set forth therein."

So I think that that, Mr. Santini, was intended to cover what I regard as an unlikely contingency, but still we want it covered.

[The full text of the letters follows:]

Canadian Embassy



Ambassade du Canada

1746 Massachusetts Ave. N.W.
Washington, D.C. 20036

October 6, 1977

Dear Mr. Secretary,

I refer to your letter of October 3 with reference to subparagraphs 5(b) (iv) and 5(b) (v) of the Agreement on Principles Applicable to a Northern Natural Gas Pipeline, and I am pleased to confirm our understanding as set forth therein.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "P. Towe".

Peter M. Towe
Ambassador

The Honourable James R. Schlesinger
Secretary of Energy
The White House
Washington, D.C. 20500

Dear Mr. Ambassador:

With reference to subparagraphs 5 b (iv) and 5 b (v) of the Agreement between Canada and the United States of America on Principles Applicable to a Northern Natural Gas Pipeline, we would appreciate your confirmation of our understanding that those provisions are intended to cover situations where there has been an increase in the Yukon Property Tax on the Pipeline less than proportionate to the increase in revenue derived from the specified property taxes and grants and that the total revenue would be reasonably required for the Governmental needs of the Yukon Territory.

Accordingly, calculations relating to the specified property taxes and grants will be made in the spirit of the foregoing, and due account will be taken by Governments of any unusual benefits returned to the property taxpayers.

Sincerely,

Signed

James R. Schlesinger

His Excellency Peter Towe
Ambassador of Canada
1746 Massachusetts Avenue, N.W.
Washington, D.C. 20036

bcc: Phillip R. Trimble
Department of State

Mr. SANTINI. Mr. Secretary, was that unlikely contingency envisioned by the negotiators at the inception of the treaty negotiation with Canada?

Secretary SCHLESINGER. This is related to the agreement rather than to the treaty. It was discussed by both parties. We regarded these matters to be a relatively unlikely development, but we felt that there should be reassurance with regard to such a development.

Mr. SANTINI. Was it examined or considered prior to the execution of the agreement between our two countries?

Secretary SCHLESINGER. Yes, sir.

Mr. SANTINI. I am concerned because it seems to me that we have remaining the problem of the Canadian Government, subjectively or objectively, having to make determinations of what is good spending and bad spending on the part of the local government in the Yukon. For example, is a food stamp rebate bad spending, a housing rebate, a tax subsidy, a health or minimum income, any of these that are reasonable on the surface of it, particularly in view of our own country's enthusiasm for such mechanisms, but could nonetheless create a gross inequity?

Secretary SCHLESINGER. At the moment, Mr. Santini, the per capita payments in the Yukon are at a very high level of about \$3,500 per head, and we would expect that if there is an increase in the population of the Yukon that this will lead to greater efficiency and that indeed the prospect is one of reduced per capita payments.

Mr. SANTINI. In summary, if I might, Mr. Chairman, my concern is based upon apprehensions that when you are dealing with the rugged individualists that presently occupy the Yukon Territory, you are dealing with both the local government and the people that pride themselves on their independence from the Canadian National Government and pride themselves on going their own course and plotting their own way; and I admire that spirit in the context of my own Nevada inhabitants.

I apprehend it in the context of local government in the Yukon Territory thumbing its nose both at the Canadian National Government and at us, and doing darn well what they please with that tariff potential.

Secretary SCHLESINGER. There are two aspects of that. In the first place, there is a clear limitation on the tax take for the first 25 years of the life of the pipeline.

Mr. SANTINI. What is that clear limitation, Mr. Secretary?

Secretary SCHLESINGER. I should have said the first 5 years. The limitation is that there are specific sums that will be allowed that are anticipated to be \$30 million in 1983 Canadian dollars.

The other element is that any increases would have to be approved by the Canadian Federal Government. There would be no local entrepreneurship of the type that you have mentioned that would be permissible.

Mr. SANTINI. Only if they remain as a Territory. We anticipate an increase of population in the Territory which, in turn, would suggest that they move from Territory to Province status. Once they occupy Province status, they are no longer subject to that containment.

Secretary SCHLESINGER. In the event that the Yukon Territory were indeed to become a Province, the Canadian Federal Government has negotiated this agreement on behalf of the Yukon Territorial government and thus has the authority to commit the Yukon Territorial government and its successors to that agreement.

Mr. DINGELL. The time of the gentleman has expired.

The Chair recognizes the gentleman from California, Mr. Moorhead.

Mr. MOORHEAD. Thank you, Mr. Chairman.

Dr. Schlesinger, is there a total commitment in kind to build both east and west lines of the pipeline at the earliest possible time?

Secretary SCHLESINGER. Yes.

Mr. MOORHEAD. And how soon would you anticipate that they would be begun? Will they be built simultaneously as far as the two lines are concerned?

Secretary SCHLESINGER. They would be completed simultaneously. Because of the existing pipeline facility going to the west, the leadtime to the date of completion for the western leg will be less than the leadtime for completion of the other segment of the pipeline. Therefore, we have the opportunity to defer the decision

regarding the appropriate size of such a pipeline until we know what purchases will have been made by western recipients of Alaskan gas.

Mr. MOORHEAD. Can you tell me the anticipated costs that the United States will pay for the extension of the Mackenzie Delta?

Secretary SCHLESINGER. My recollection is the Dawson spur is slated to cost \$435 million. The precise percentage depends upon the degree of underruns or overruns compared to our projections in the construction of the main line.

The Canadians from the first have insisted that our projected overruns in Canada are excessive in relation to their experience, and they are confident that they can achieve much lower costs in Canada than we have projected.

We projected a 40 percent cost overrun in Canada. If the cost overrun is 35 percent or less, we will pick up 100 percent of the cost of the Dawson spur. If the cost overrun indeed is 40 percent, as we anticipate in our projections, we would pick up 83½ percent. If the cost overrun were 45 percent or more, we would be charged 67 percent.

Mr. MOORHEAD. There is no real limitation on our liability therein?

Secretary SCHLESINGER. There is no absolute limit on our liability, but any cost overruns from 35 percent to 100 percent would not significantly increase the cost to us. We have an interim cap on our liability at 135 percent.

Mr. MOORHEAD. Is it anticipated that those expenses will be passed on to the consumer here in the United States?

Secretary SCHLESINGER. Yes, sir.

Mr. MOORHEAD. There was one question that came up earlier that I want to go back to, just briefly. You mentioned the fact that the population was growing in the Yukon and as it did you anticipated that the cost per person up there of running the government might well go down, but isn't there a tie-in in this agreement with the cost of running the government in Alaska, so even if you got a rate that was coming in from one area, if the cost of government in Alaska was going up, that we still have to pay the same amount?

Secretary SCHLESINGER. No.

Mr. MOORHEAD. That was explained yesterday by the State Department and one of the—

Secretary SCHLESINGER. The only tie is to the property tax level in Alaska, and it is permissive for the Yukon Territory to increase its taxes if the taxes in Alaska, property taxes in Alaska, were to be increased. It is not tied to expenditure levels in Alaska, just to the property tax level.

Mr. MOORHEAD. I want to get back once more to that east-west link. There have been some rumors that the gas from Alberta will be brought down first for the exclusive benefit of the East and the Midwest, to the exclusion of the west coast. Is there any truth to those rumors?

Secretary SCHLESINGER. That is not the case. It depends upon the vigor of the competition for the gas. If the gas is purchased in the west, then the western leg would be augmented or built. We would see to it that the gas that was purchased in the west indeed was delivered in the west.

We anticipate that the first deliveries of that gas would come, according to the pipeline companies, in the winter of 1979-80. That might slip; but depending on who purchased gas, the gas will be delivered to the point of purchase.

Mr. MOORHEAD. At the present time there is no contemplation in either direction?

Secretary SCHLESINGER. There is not.

Mr. MOORHEAD. At the present time it totally depends upon the purchase of the gas, no commitments or expectations of any kind?

Secretary SCHLESINGER. That is the normal procedure at this point.

Mr. MOORHEAD. I think I have one more question and that deals with the termination of the agreement.

In one of the last paragraphs of the agreement it indicates that will last 35 years and then after that it can be extended by mutual consent.

Would it be anticipated that if it were extended it would be under the same terms that we have here, or is there a likelihood that the cost to our consumers would be considerably higher than that?

Secretary SCHLESINGER. Let me go back to a question you raised earlier with regard to the tax regime in the Yukon. We believe that there is a 95-percent chance—we hope close to a 100-percent chance—that the Dempster lateral will be built from the Mackenzie Delta down to Dawson, and when that Dempster lateral is constructed the property taxes applied to the Alcan line could be no higher than the taxes applied to the Dempster lateral.

In further consideration of your later question, if indeed that Dempster lateral would be built, and we must anticipate, given the volume of hydrocarbons in the Arctic, that there will be pipelines in the Yukon, the Alcan line would be protected at that time from whatever points pipelines are built in the Yukon.

If there were no pipelines built in the Yukon, we would nonetheless expect that the general regime applying to the Alcan pipeline would continue much as it is under the first 25 years.

Mr. MOORHEAD. Thank you, Mr. Secretary.

Mr. DINGELL. The time of the gentleman has expired.

The Chair next recognizes our colleague, Mr. Weaver.

Mr. WEAVER. Thank you, Mr. Chairman.

Mr. Secretary, a petroleum engineer from Stanford testified before the Public Lands Subcommittee that because of the large amounts of natural gas necessary to ship over such a pipeline, to amortize it, much more than the flow of natural gas emanating from the field, that this would take the pressure out from the field and result in a net loss of energy. In other words, there will be less oil produced over the lifetime of the field resulting in a net energy loss.

What do your studies show on this issue, please?

Secretary SCHLESINGER. We will insert into the record technical comments on that point, Mr. Weaver.

[The following material was received for the record:]

IMPACT OF GAS PRODUCTION ON OIL RECOVERY

The testimony and submissions referred to by Congressman Weaver were by Professor Sullivan S. Marsden, Jr., before the House Interior Committee's Subcommittee on Indian Affairs and Public Lands in March, 1977. In one of Professor Marsden's submissions for the record, he makes reference to an Oil and Gas Journal article which refers to a study by H. K. Van Poolen and Associates on potential oil production from the Prudhoe Bay Field. That same firm was retained by the Division of Oil and Gas Conservation of Alaska's Department of Natural Resources for further work in the course of the unitization proceedings for production of the Field.

The Report of the Working Group on Supply/Demand and Energy Policy Impacts of Alaska Gas, submitted to the President on July 1, 1977, contains a discussion of the more recent Van Poolen work, and the final unitization plan as approved by the State of Alaska. The relevant portion of that report, prepared by the Interior Department's U.S. Geological Survey, is attached. The main points made in this section of the report are as follows:

1. The unitization plan submitted by the North Slope producers and approved by the State of Alaska provides for production of 2.0 billion cubic feet a day (bcfd) of pipeline quality gas out of the Main Pool Reservoir. Additional reservoir production history will be required to confirm that figure, but there is a possibility of increase as well as a possibility of decrease.
2. A large scale water flooding program to maintain reservoir pressure, in conjunction with sales of natural gas, will actually increase oil recovery slightly.
3. An additional 0.3 bcfd of natural gas deliverability is likely from other reservoirs and additions to proved reserves in the Prudhoe Bay structure.

The report goes on to lay out estimates of other North Slope production, in addition to that which will be available from the Prudhoe Bay structure.

Attachment

REPORT OF THE WORKING GROUP ON SUPPLY, DEMAND AND ENERGY POLICY IMPACTS OF ALASKA GAS

JULY 1, 1977

FEDERAL ENERGY ADMINISTRATION

DEPARTMENT OF COMMERCE

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF TREASURY

ENERGY RESEARCH & DEVELOPMENT
ADMINISTRATION

Main Pool, Prudhoe Bay Field

Proved Reserves

Gas-in-place in the Main Pool; 1/ was estimated to be 40.4 tcf by the State of Alaska and 42.8 tcf by the three largest operators (ARCO, BP and Exxon) at the Prudhoe Bay Unit Hearings in Anchorage on May 3, 5, and 6, 1977. Total shrinking (non-saleable gas, including carbon dioxide, natural gas liquids, and field fuel) was estimated to be 24-27 percent by the operators. The DOI has estimated that 70 percent of the gas reserves can be produced during the first 20 years a gas pipeline from Prudhoe Bay is available. 2/ Estimated 20 year proved saleable reserves will, therefore, be in the range of 20.6 - 22.8 tcf. For example: $40.4 \times 0.76 \times 0.70 = 20.6$

The gas-in-place and shrinkage estimates for the Main Pool can be regarded as reasonable since they are based on an adequate data base and are consistent with previous estimates, including those discussed in the FPC recommendation.

1/ Including the Sadlerochit, Sag River and Shublik formations.

2/ U.S. Department of the Interior, "Alaskan Natural Gas Transportation Systems: A Report Pursuant to Public Law 93-153," December 1975.

Deliverability Estimates

Deliverability estimates are based on independent analyses by ARCO, BP, Exxon and by H.K. van Poolen and Associates, Inc., 1/ a highly qualified consulting firm retained by the Division of Oil and Gas Conservation (DOGC), Department of Natural Resources, State of Alaska. The company estimates were presented at the public unit hearings previously cited and in their Unit Agreement. 2/ The deliverability estimates are based on computerized reservoir performance simulation models. This is the standard method for conducting such studies. The four estimates are in reasonable agreement. It is important to recognize that actual field production data is needed to check the validity of these model studies. They can, however, be accepted as reasonable at this time. Significant changes are not likely. Reservoir simulation is an advanced science and an adequate data base is available.

Alaskan Regulatory Decisions

The DOGC, 3/ has concluded that:

(Conclusion 20) "The Plan of Operations proposed by the applicants which includes average annual offtake rates of 1.5 million barrels per day for oil plus condensate production and 2.7 billion cubic feet per day for gas are consistent with sound conservation practices based on currently available data."

(Conclusion 21) "After the field and local fuel requirements and the removal of carbon dioxide and liquids from the produced gas, it is estimated that a gas production rate of 2.7 billion standard cubic feet per day will yield 2.0 billion standard cubic feet per day of pipeline quality gas."

1/ "Prediction of Reservoir Fluid Recovery, Sadlerochit Formation, Prudhoe Bay Field", January 1976, and Supplement A, thereto, February 1977.

2/ "Exhibits to Unit Agreement, Prudhoe Bay Unit, State of Alaska", March 24, 1977.

3/ "Conservation Order Number 145, Prudhoe Bay Field, Prudhoe Oil Pool", June 1, 1977.

(Conclusion 22) "Production history will be needed to locate water injection wells and to refine reservoir model studies."

(Conclusion 23) "The offtake rates approved by the Committee at this time must be established without the benefit of production history. Therefore, these offtake rates may be changed as production data and additional reservoir data are obtained and analyzed."

The last statement in Conclusion 23 emphasizes the degree of uncertainty that exists regarding gas production rates that will be approved by the DOGC in the future. If field production data later indicates that gas production at the rate discussed above is likely to reduce the ultimate recovery of oil or gas from the Prudhoe Oil Pool, the DOGC can order that gas production be reduced or even terminated. Conversely, such data and increased proved gas reserves (e.g., in the West (Eileen) Area of the Pool) may justify increased gas production.

Reservoir Management

Reservoir studies by the DOGC and the operators have shown that large scale water injection will probably be necessary to maximize oil recovery. Such injection is planned within five years after the start of oil production (June, 1977). The water injection program will enable the operators to influence reservoir performance by the injection volumes and locations selected.

This ability to manage reservoir performance coupled with the economic incentives resulting from as early as possible and maximum allowable gas production give credence to the proposed gas offtake rates. The DOI has conducted independent studies, ^{1/} which verify the proposed rates. Many events are underway based on separate judgments regarding Prudhoe Bay gas production by the State, the operators, and the transportation system applicants. No dispute with the studies or the conclusions appears in the total record.

^{1/} DOI, "Alaskan Natural Gas Transportation System," Op. Cit.

Approximately 50 percent of the estimated 2.0 bcfd Main Pool gas sales (2.7 bcfd reservoir offtake) will be produced from the gas cap. In producing oil fields with gas caps it is essential that oil not be allowed to invade the gas cap. About 50 percent of the oil that moves into the original gas cap will become unrecoverable. Moderate expansion of the gas cap into the oil band, as reservoir pressure declines, is desirable. The Main Pool plan of operations approved by the State, is designed to accomplish these objectives.

The injection of both water and associated gas poses a delicate engineering problem. The behavior of the reservoir under conditions of production is still open to question, and will be until some 3 to 5 years of performance is observed. The behavior of the oil/water and gas/oil contacts with oil withdrawal (production) will have a great effect on reservoir behavior and subsequent production of the pool. A balance must be maintained that will prevent oil migrating into the gas cap; alternatively, excessive expansion of the gas cap as a result of gas reinjection will result in gas coning through to oil-producing intervals, increasing amounts of gas produced with the oil, and compounding reinjection problems. Injection of water has to be done very selectively, according to the producers, as there is minor water drive indicated at some points along the oil/water contact. Should a strong natural water drive develop, gas withdrawal rates would have to be adjusted to prevent integration of oil into the gas cap. This possibility is considered remote, but should be definitively answered after a few years of producing history.

In light of the above factors the DOI accepts the estimates of 2.0 bcfd of gas sales from the Prudhoe Bay Pool as does the FPC recommendation. Consultants to the DOI have estimated that field sales will be approximately 2.4 bcfd. ^{1/} The DOI concludes that the proposed deliverability backed by the volume of proved Main Pool reserves justifies the construction of a pipeline of the capacity and at the costs of any of the proposed systems. Prudhoe Oil Pool gas, in the volumes indicated, can be transported by and of the proposed systems.

^{1/} The Aerospace Corporation, Inc., "Gas Supply Study, Alaskan Natural Gas Transportation Systems, Economic and Risk Analyses, June, 1977 Supplement", prepared by the U.S. Department of Interior.

Alternate Main Pool Production Method

An alternate method for producing the Prudhoe Oil Pool merits analysis, to insure that all possibilities have been considered. This issue is not considered in the FPC recommendation. This method must also be considered in reviewing delay as a policy option, since delay in gas transportation would require gas reinjection. All produced gas could be injected, (after removal of the liquids and less field fuel and oil pipeline station fuel), creating a pressure maintenance project and delaying gas sales for a period to be determined as results are analyzed. The justification for such a program would be increased ultimate oil recovery. The following discussion analyzes the proposal from the points-of-view of reservoir engineering, field operations, and economic benefits. The currently proposed plan of operations includes gas injection during the period of gas pipeline construction (5 years).

Reservoir Engineering Considerations. The Prudhoe Bay operators have stated that "Studies have shown that the Prudhoe Bay (Main Pool) Reservoir could be managed so that planned deliveries (2.0 bcfd) would not effect ultimate oil recovery." 1/

H. K. van Poolen and Associates in their report to the State of Alaska have stated "The offtake rates of 1.5 million barrels for oil and 2.0 bcfd for gas sales, as proposed in the plan of operations submitted to the State by the operators, appear to maximize the oil recovery according to the results of this study." 2/

1/ Exhibits to Unit Agreement, Op.Cit.

2/ Prediction of Reservoir Fluid Recovery, Op.Cit.

The van Poolen report further analyzes the potential benefits of gas injection. These estimates are shown in Table I-1. The van Poolen report cautions that these numbers "should be considered to be relative rather than absolute." A relative comparison is all that is required in this phase of the analyses.

Table I-1

Van Poolen Main Pool Analysis of Gas Injection Benefits

	<u>Gas Sales Case</u>	<u>No Gas Sales Case</u>
Years to Gas Sales	5.0	---
Daily Gas Sales, bcfd	2.0	---
Source Water Injecting, mmbpd*	2.0	0.6
Years to Source Water Injection	5.0	---
Maximum Oil Rate, mmbpd	1.5	1.5
Cumulative Water Injected, mmmb	15.9	3.5
Cumulative Gas Removed, tcf	25.3	1.5
Gas Recovery, Percent	52.0	3.6
CUMULATIVE OIL PRODUCED, mmmb	7.84	7.56
OIL RECOVERY, PERCENT	40.94	39.47

In summary, van Poolen's simulation studies for the State and statements by the operators at the Unit Hearings support the position that injection of produced gas into the reservoir for longer than five years will not further increase ultimate oil recovery. No contrary data has been presented. As stated previously, the planned water injection program will provide operational flexibility in managing reservoir performance and provide assurance that the predicted results can be attained.

* mmbpd - million barrels per day

Field Operating Considerations. The Main Pool gas injection project requires reinjection of produced gas into the gas cap overlying the oil band. (This would be the plan for either five or ten years of injection.) As a result, the gas cap will expand, driving oil down structure to the producing wells. At the conclusion of a long term gas injection program the reservoir is almost fully occupied by gas and residual (essentially unrecoverable) oil. The cap can be produced (blown down) at that time (or earlier if economically justifiable).

Long term gas injection in Main Pool, such as ten years or more, compared to gas injection for five years (as proposed by the operators and accepted by the State DOGC) would require changes in the field development and field operating plans. These changes would result in additional capital investment, additional operating costs, and require that more gas be consumed as field fuel. The net result would be less hydrocarbon (oil and gas) recovery from the Pool at a higher cost. The three factors resulting from changed plans are discussed below:

The requirement for additional capital costs would result from these operating conditions:

1. With long term gas injection it would be necessary to drill more wells to maintain the proposed oil rate from the reservoir. Many up-structure wells which that would be used, under the present plan, as oil producers would be invaded by the advancing gas cap and require costly remedial work to control gas and finally would be abandoned when gas production could no longer be controlled. Gas cap advance would not be restricted to the top of the producing zone, but would occur throughout the section selectively following higher reservoir permeability. Gas viscosity is far less than oil viscosity under producing conditions and gas is, therefore, much more mobile.
2. Long term gas injection would require more gas compression equipment to recycle the continually increasing volume of produced gas.
3. The additional investment is estimated to be several hundred million dollars.

Additional operating costs would result from these factors:

1. The well workovers described under item 1, above, would increase operating costs and require that wells be shut-in for extended periods.
2. Substantially increased operating costs would result from the additional gas compression requirements.

Additional gas would be required as compressor fuel:

During the currently planned five years of gas injection approximately 7 percent of the produced gas will be used as compressor fuel to reinject the produced gas. Fuel usage would increase as produced gas volumes increase. Assuming that the 7 percent fuel usage remained constant it is estimated that in excess of 250 billion cubic feet of gas would be required as compressor fuel during an additional five year gas injection period.

Additional complications may exist at Prudhoe Bay. Natural water drives can exist in oil and gas fields. They result from underlying (aquifer) water expansion into the oil band as reservoir pressure decreases (as a result of oil and gas production). This can be beneficial since reservoir pressure is, thereby, maintained to some extent. The extent and location of peripheral water influx into the Main Pool can only be assessed as the pool is produced. Monitoring the movement of the oil-water contact is planned.

The Sadlerochit (Main Pool) reservoir rock deteriorates away from the productive area, i.e., it loses permeability and porosity. The size of the effective aquifer is, therefore, probably not large. Further, a tar-heavy crude seal is known to exist in portions of the reservoir just above the oil-water contact. Massive natural water encroachment in the Main Pool is unlikely, because of these factors and none may occur. If large scale water encroachment does occur, withdrawals from the gas cap would be controlled to prevent oil movement into the gas cap and the resulting loss of oil. It is most unlikely that significant reduction in gas deliverability would result. Controlled water encroachment can be created by water injection. Such a program is planned at Prudhoe.

Producing the Main Pool under the accepted Plan of Operations for the first five years includes these elements: a slowly expanding gas cap and encroaching water (natural or injected)

both acting to maintain reservoir pressure in the oil band and maximize oil recovery. Gas cap expansion will probably be minimal after five years as gas is sold.

Economic Considerations. Delay in gas sales beyond the five year period proposed by the operators would substantially reduce field income during the additional gas injection period and also reduce the value of the gas in present worth dollars to the operators and to the State. The gross income that would be realized from gas sales of 2 bcfd at \$0.50 per mcf is \$365 million per year. Costs of producing the gas and conditioning it for sale would be substantially less than reinjection costs.

- If no benefits resulting from delay can be substantiated, action compelling delay would be considered as arbitrary and unjustified by the State and the producers. The exception would be State regulation to maximize oil recovery. As stated elsewhere in a different context, the DOGC can restrict or terminate gas sales if lower ultimate oil recovery appears possible. Operational flexibility gained by water injection makes this situation unlikely.

Increased Gas Sales

The Prudhoe Bay operators have stated "Depending upon the reservoir performance it might be possible to increase gas deliveries to 2.5 bcfd". ^{1/} The FPC report accepts this assessment, as does the DOI. The DOI judgment is based on independent studies performed for it by consultants. ^{2/}

^{1/} Exhibits to Unit Agreement, Op.Cit.

^{2/} DOI, "Alaskan Natural Gas Transportation System," Op.Cit.

The projected 2.0 to 2.5 bcfd rate is based upon the productive capacity of the Main Pool. Additional gas may also be available from the Sadlerochit, Kuparuk River and Lisburne pools. Potential deliverability from these pools is estimated by the DOI staff to be 0.3 bcfd by 1985. (See discussion below). The FPC recommendation states that deliverability from the additional pools in the Prudhoe Bay geologic structure will be small compared to the Main Pool. The DOI staff believes that while they may be relatively small compared to the Main Pool, they are of significance in appraising expansibility.

Potential Reserves - Other Prudhoe Bay Pools

Three additional oil pools are known to exist in the Prudhoe Bay geologic structure; the North Sadlerochit area, and the Kuparuk River and Lisburne zones. Each has been explored and delineated to a lesser degree than the Main Pool and potential reserves and deliverability are, therefore, far less certain. No production from them is included in the 2.0-2.5 bcfd Prudhoe Bay deliverability estimates submitted at the May, 1977, Unit Hearings.

The lack of firm data presented at public hearings or otherwise documented makes it difficult to estimate gas reserves and deliverability for these four units. However, each is potentially significant. The DOI prepared in June, 1977, estimates utilizing the methodology employed in its report to Congress in 1975. See Table I-2. 1/

1/ Conservation Order Number 145, Op.Cit.

Table I-2

Expected Additions To Proved Gas Reserves
In The Prudhoe Bay Structure by 1985, tcf

	<u>Probable</u>	<u>70% Value</u>	<u>Possible</u>	<u>30% Value</u>	<u>Total</u>
Sadlerochit Formation	1.0	0.7	2.0	0.6	1.3
Lisburne Formation	2.5	1.8	1.5	0.5	2.3
Kuparuk River Formation	1.0	0.7	0.5	0.2	0.9
Totals	4.5	3.2	4.0	1.3	4.5

Employing the estimating techniques previously described for the Main Pool these reserves could produce 2.4 tcf of gas in the 20 years following completion of a gas pipeline and add deliverability of approximately 0.3 bcfd.

Among the factors that should encourage their further exploration and development (if indicated) are completion of the crude oil pipeline, final approval of a gas pipeline, and approval of a crude oil pricing and entitlements system for Prudhoe Bay. Strong economic incentive to develop potential oil reserves to fully utilize anticipated capacity of the crude oil pipeline (and possibly increase its capacity) will exist now that the Alyeska line is completed. Unused capacity would represent deferred income. This same thrust will encourage other exploration on the North Slope.

As oil production increases gas production will similarly increase, in rough proportion. The existence and size of gas caps in the "Other Prudhoe Bay Pools" is not known to the DOI. It is probable, however, that if present they will be proportionately smaller with respect to the volume of the oil band than is the case for the Main Pool.

Secretary SCHLESINGER. Generally speaking we anticipate that the flow of gas in the pipeline will be 2 billion cubic feet per day from the drain pool reservoir in the Prudhoe Bay field, which would be sufficient to maintain the pressure.

We anticipate later that as a result of development of other reservoirs in the Prudhoe Bay field, or of new finds in Alaska, that that flow rate will go to 2.4 billion cubic feet a day.

The National Energy Board decision told us initially to reserve 1.2 billion cubic feet per day for delivery from the Mackenzie Delta. I would think that for the foreseeable future the likelihood of inadequate pressures is very low.

Mr. WEAVER. But doesn't this large amount of natural gas—apparently they think there is a market for methanol.

Has the administration studied this idea, which would, of course, save billions and billions of dollars?

Secretary SCHLESINGER. We will be happy in the record to examine this particular proposal in detail, Mr. Weaver.

Generally speaking, there is no market for methanol as such. What happens is that the methanol would be regasified at the end of shipment. In the course of that conversion to methanol and the regasification it would lose approximately 35 percent of the Btu's and that would be a very costly venture indeed.

However, we will be happy to examine this in greater detail for the record.

[The following material was received for the record:]

ALTERNATIVE USES OF ALASKA GAS

The Report of the Working Group on Supply/Demand and Energy Policy Impacts of Alaska Gas also included a chapter on alternative possibilities for utilization of the North Slope natural gas.

Methanol is, at least superficially, an attractive alternative because it is a less capital intensive way to move the gas, and because it can be manufactured incrementally - in fact, production of methanol from natural gas is used for the collection of amounts of natural gas which are too small to justify connection to a pipeline system. It has been estimated by the supply/demand working group and others that methanol could be delivered to lower-48 markets for a price per BTU which would be not far in excess of that estimated for the Alcan Project.

The difficulty with the methanol concept is the energy loss in conversion. This loss is estimated variously at 35 to 45 percent of input BTU's, depending on the process used and its efficiency of operation. It is our judgment that the Nation needs energy delivered as natural gas much more than it needs energy in the form

of methanol. If methanol is to be manufactured from natural gas for transportation, then converted back to natural gas in order to meet demand for energy in that form, the energy loss involved in converting natural gas to methanol and back to natural gas is rather more costly in terms of energy efficiency than direct delivery of the natural gas itself. If SNG from naphtha or imported LNG must be used to make up the BTU's of natural gas demand lost to the conversion processes, then the composite price of the natural gas derived from both the methanol and the other supplemental gas which must be used to make up for the conversion losses adversely affects the economic attractiveness of the methanol alternative.

It is clear that there is a growing market for methanol as a turbine fuel, and perhaps as a blending component for gasoline. However, as long as natural gas continues to be the desired fuel form, and an economic transportation system is available, then conversion of North Slope gas to methanol seems an unwarranted waste of BTU's.

Attachment

Conclusions:

1. Production of methanol in Alaska and delivery to the lower 48 states by any of the several transportation alternatives is a viable option in terms of potential market. As a fuel for electrical generation or automotive use, potential markets could absorb all the North Slope gas production. As a petrochemical feedstock, Alaskan methanol could avoid the commitment of additional lower 48 natural gas to methanol production.
2. If natural gas can be delivered to the lower 48 at the prices estimated in the proposals to the FPC, none of the methanol alternatives are price competitive or better aligned with National energy objectives.
3. If the cost of delivering natural gas by the methods proposed to the FPC exceed the estimates significantly, the methanol alternatives would be price competitive. At roughly 80% overrun, the use of Alaskan methanol as a fuel would be competitive with delivered natural gas. Alaskan methanol as a petrochemical feedstock would be price competitive at smaller overruns but the market size might not be able to absorb the full natural gas production for 20 or more years.
4. Production and delivery of ammonia and urea appear technically feasible but the price is too high to be competitive and the market size is uncertain. Ammonia does not appear to be a viable option for full Alaskan production.
5. Conversion to LNG on the North Slope and transport to the lower 48 appears technically feasible by several methods. However, the estimated delivered LNG prices by these methods appear higher than those presented to the FPC and there is no reason to believe that any of the alternate methods embodies significantly lower risk or uncertainty.
6. The alternative transportation possibilities are best considered as fallback positions in the event that the methods proposed to the FPC are seen as likely to suffer serious cost overruns, to be otherwise infeasible, or if the gas delivery rate is lower than expected. Until such risk is eliminated, research on these alternatives, particularly on the direct water routes, should be pursued.
7. If one of the three proposals to the FPC is selected, it would be prudent to schedule a second decision point for the time when detail engineering is largely completed but before major construction and material funds are committed. The improved knowledge of cost expectation and the experience on oil flow in the field will permit a better decision on the need for these alternatives.

Mr. WEAVER. I think, Mr. Secretary, the consortium in North Dakota intended to burn the methanol, to drive turbines to make electricity.

Thank you very much, Mr. Chairman.

Mr. DINGELL. The Chair observes there is a vote on the floor. We are finding out what it is. Pending that, the Chair will persist in recognizing my colleagues for the purpose of questions. As soon as we have an answer to that question, we will decide what to do.

The vote on the floor is for a final passage of H.R. 6696, the ERDA authorization research and development. I guess you want that passed, Mr. Secretary?

Secretary SCHLESINGER. It is all right with us if it doesn't pass, Mr. Chairman.

Mr. DINGELL. In any event, it strikes me that my colleagues may want to vote. I will stay here and maybe my good friend and colleague Mr. Roncalio would like to leave now, and he can come back.

In the meantime, the Chair recognizes our good friend Mr. Meeds who will proceed with his questions.

Mr. MEEDS. Thank you, Mr. Chairman.

Mr. Secretary, I didn't get to hear your formal statement, but I have quickly scanned the written statement and I would like at the outset to commend you, not only for this statement but also for your tenacity and ability in this whole project, and the way that you have pursued this. I think you have done a very fine job and those who have worked with you should also be commended.

Secretary SCHLESINGER. Thank you, Mr. Meeds.

Mr. MEEDS. I have somewhat a concern as was stated by the gentleman from California, Mr. Moorhead. There are some press reports in Canada which suggest that in the process of these negotiations with the Canadians that the Canadians are offering perhaps early delivery, over the next several years, out of the Alberta fields on existing pipelines or perhaps pipelines that can be built quickly, and that this would be an exchange for some relief from current contracts which the Canadians have with U.S. sources.

Is there any validity to that rumor at all?

Secretary SCHLESINGER. There is the expectation that the Canadians will be delivering prior to the coming on of Alaskan gas something on the order of 800 million cubic feet a day, and wherever that is purchased in the United States it would be delivered to that point.

Mr. MEEDS. My major concern is that it might be pledged in return for some relief from the contracts into the 1990's, and you must recognize—as I am sure you know, I am from Washington State—and we get a very substantial share of our natural gas, and those very contracts are the ones into the 1990's which will furnish that gas, so you can see I have some substantial concerns about that. I hope you will be able to mollify my concern.

Secretary SCHLESINGER. I think that we can dissipate those concerns entirely, Mr. Meeds.

Mr. MEEDS. Good.

Secretary SCHLESINGER. There is no intention of using this in any way that reduces or frees Canadians from any obligations in the 1990's.

Mr. MEEDS. Or any other time?

Secretary SCHLESINGER. Or at any other time. Of course, the Canadian Government is in a position to terminate these contracts on the basis of Canadian needs. We do not expect such termination. Indeed, one of the great advantages of construction of the Alcan pipeline will be that it brings into play the Mackenzie gas and may help sustain or augment the flow of the gas to the United States.

Mr. MEEDS. In any event, the Canadians could hardly say that they were going to breach the contracts into the 1990's because of Canadian needs when they were increasing the flow of natural gas early, could they?

Secretary SCHLESINGER. That is correct.

Mr. MEEDS. It doesn't sound very logical, anyhow?

Secretary SCHLESINGER. That is correct.

Mr. MEEDS. Mr. Chairman, I have several other questions but unless I leave right now I am going to miss that vote. It is important. I would like permission to conclude my questions when I return.

Mr. DINGELL. You have, a minute and a half remaining. We probably ought to recess, Mr. Secretary. I don't want to miss this vote myself.

The committee will stand in recess and we will be back as soon as we can.

[Brief recess.]

Mr. RONCALIO [presiding]. Ladies and gentlemen, the committee will resume. We will pass to Mr. Brown and return to Mr. Meeds later.

I call on my colleague from Ohio, Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman.

Mr. Secretary, the question of the risks of noncompletion has been raised. How would the financing be worked out if there is that threat still pending? Do you think there will be a financing problem if there is still the possibility of noncompletion of the pipeline?

Secretary SCHLESINGER. Both governments have agreed, Mr. Brown, that the financing of this pipeline must be through the private sector. If the firms were unable to arrange that financing, then construction would not start. We believe that the risks of noncompletion, once substantial construction is underway, is minimal, because with the large investment already made at some particular point, the failure to complete that investment would represent a much larger loss.

But this is not an all-events tariff. We have specifically excluded an all-events tariff, and the cost of service to the customers would occur when gas begins to be delivered. So until that point, the responsibility for noncompletion would be on the companies, themselves.

Mr. BROWN. Presumably if you had an all-events tariff, if you had lengthy interruption, and the capital cost is eating into itself, somebody has to pay the interest rates or the cost of the capital.

That would be laid off on the consumers in the price of gas delivered to them because the cost of the pipeline would go up. But without that, there is this question, then, of cost overrun.

I must say that the assurance that we pay all the collateral costs absent an overrun of 35 percent, even the overrun of 35 percent makes me a little nervous, but without the all-events tariff, are you sure that financing is going to be forthcoming?

Secretary SCHLESINGER. We expect that financing to be forthcoming. We have had extended conversations on that subject, and we will include some discussion of that matter in the record, Mr. Brown.

[The following material was received for the record:]

PROJECT FINANCEABILITY AND THE "ALL-EVENTS" TARIFF

In the course of the Federal Power Commission (FPC) proceedings on the Alaska Gas Transportation System Decision, much consideration was given to the risk that the project would not be completed, and the impact of that risk on project financeability.

A particular scenario was frequently related to illustrate the need for some sort of completion guarantee. According to that scenario, the time would come that the project was most of the way through its budgeted capital outlays, but not yet close to completion. Cost overruns would quickly begin to strain the capacity of the project's sponsors, and additional capital from lenders to finance overruns would become increasingly expensive. The point would then come when capital suppliers would no longer be willing to provide additional funds for the project, at any price, and at that point the project would have to be abandoned. The feeling was that since all capital suppliers knew of and were concerned about this scenario, none of them would put up the first dollar for the project until it had been determined who would put up the last dollar; i.e., who would be willing to guarantee that enough money would be forthcoming to complete the project, regardless of how much it cost.

Because of their limited size and limited financial strength, it was clear that the gas transmission company sponsors could not provide the required unlimited debt guarantee. Other creditworthy parties would have to be found who would be willing and able to accept the non-completion risk.

In the FPC's Recommendation to the President, two alternative proposals were presented for underwriting the non-completion risk. The first was an incentive scheme to induce the gas producers to join the sponsoring consortium, bringing their financial resources to expand its capacity. In return for their participation, the producers would have the opportunity for a significantly higher wellhead price than would otherwise be the case. The second alternative was to have consumers bear the non-completion risk through an agreement to pay the cost of service on the pipeline whether or not gas ever flowed through the pipeline (a non-completion agreement). In return for their participation, consumers would get lower gas prices by virtue of a debt guarantee fee which would be effectively credited to consumers when the delivered price of the gas was set. A third alternative, of course, would be to have the Federal government participate in the financing of the project in some way.

In the course of analysis and discussions with members of the financial community after the FPC's Recommendation, it

became clear that the scenario upon which the need for some form of non-completion guarantee was based was simply not valid. In particular, referring to the Alyeska experience, lenders continued to supply funds for that project on competitive terms even as costs escalated, because they were convinced of the essential economic viability of the project. Even as costs escalated, there was no question but that the oil which flowed through the pipeline would be marketable, and that the debt which had been issued to finance it would be repaid out of the proceeds of the pipeline tariff.

In the case of the gas pipeline project, there is similarly no question that the gas will be sold. According to our analysis, only in the event of a "worst case" cost overrun would the delivered price of the gas be above that of the least expensive alternative supplemental source of gas supply, liquefied natural gas (LNG) imports. Even in that instance, the Alaska gas would be less expensive than synthetic natural gas (SNG) from liquid petroleum feedstocks, the next most expensive source of supplemental supply. The probability of the "worst case" cost overrun is already extremely low.

The lenders contacted in this analysis were skeptical about a non-completion feature of an all-events, full cost service tariff. Because such a tariff might involve charges prior

to the time that the "used and useful" test had been met, lenders assumed an immediate court challenge to FPC approval of such a tariff, and extreme reluctance by State public utility commissions to pass such a tariff through to consumers. The uncertainties associated with likely litigation over the all-events tariff actually detracted from the financeability of the project. The lenders much preferred a financing package which included regulatory features that were in line with accepted practice, and which assured maximum incentive to maintain the economic viability of the project.

The President has conditioned approval for the Alcan project in a manner which maximizes incentives to maintain its economic viability. There will be incentives to control cost overruns through application of a variable rate of return on common equity, and by virtue of our agreement with Canada which links the U.S. shippers' share of the cost of service of the Dawson Spur to cost overrun performance on the Canadian segments of the project. Secondly, the President has conditioned approval on placing sponsoring company equity capital at risk, and on assuring that the complete amount of equity is committed from the beginning of construction on the project. After the pipeline companies have invested 1.6 billion dollars of their own equity money in the project, there is simply no chance that it will not be completed. Finally, the major direct beneficiaries should share any residual risks through provision of loan guarantees. Those

major direct beneficiaries include the sponsoring companies themselves, the Prudhoe Bay Field gas producers, and the State of Alaska. Among those three groups, there is more than ample debt guarantee capacity to manage whatever risks need to be covered.

The President's conditions and the recommended financial plan are adequate to secure financing of the project. Lenders primarily want assurance that the project will be economically viable. It is clear that the project will deliver gas to the intended markets at a price which will be competitive with alternative sources of supplemental gas supplies. Assuming the modified incremental pricing which is part of the National Energy Plan is utilized, there is virtually no risk that the gas will not be sold.

The regulatory climate is of more concern to the lenders than the precise distribution of any non-completion risk, and adequate assurances should be forthcoming on this point. The FPC has expressed its intention to utilize periodic audits to allow timely inclusion of expenditures in the rate base, thereby eliminating any uncertainty about the size of the rate base once the project is operational. Additionally, the Federal Government's intention to streamline and coordinate government interaction with the successful applicant should convince lenders of the government's intention to see that the project is completed in an efficient and timely manner.

Mr. BROWN. What kind of tariff will be necessary to get that long-term financing?

Secretary SCHLESINGER. The expectation is that the average rate of return would be about 15 percent, but that that would be a variable rate of return which will help to induce a desire to hold down costs. We have agreed with the Canadians that we will have what is referred to as a minimum bill provision, or strive for that. We have mentioned three different categories of tariffs here, the all-events tariff; you mentioned the cost-of-service tariff, and a distinction is appropriate there. Indeed, the consumers would have to pay the cost of interruption once service started. They would not have to bear the cost of noncompletion which would be the case in an all-events tariff. But we would seek a minimum bill provision that in the event of service interruption that return on equity, for example, might lapse.

Mr. BROWN. How long? Are there limits to that?

Secretary SCHLESINGER. We do not have the specific details, and that is one of the reasons it is not spelled out in the agreement. For example, if there were an interruption of flow, one does not know whether the minimum bill provisions would apply 15 days after the stop, 10 days after the stop. That would have to be worked out.

Mr. BROWN. What role do you see for the producers in light of the Attorney General's view about this?

Secretary SCHLESINGER. We would hope the producers would participate in loan guarantees.

Mr. BROWN. You are familiar with the Attorney General's report to the President on this subject, in which he said that the Federal Power Commission is encouraging participation of producers of substantial amounts of gas in the joint venture in order to contribute significant financial resources to aid in financing the pipelines. The Justice Department disagrees.

We have recommended in a report to Congress that ownership interests or participation in any form in the transportation system by producers of significant amounts of natural gas or their subsidiaries or affiliates should be prohibited.

Secretary SCHLESINGER. Yes, sir, we have a further development of the Department of Justice position on that issue that is included in page 213 of the decision and report to the Congress.

Mr. BROWN. This is July, 1977. When was that further development?

Secretary SCHLESINGER. This is August 9, 1977, and the main point is that while the Department of Justice continues to oppose ownership and participation by the producers, that they have no objection to producer participation in financing or loan guarantees.

Mr. BROWN. How would that be accomplished—loan guarantees?

Secretary SCHLESINGER. Yes, sir.

Mr. BROWN. How would that be accomplished? Would the producers get a return, then, on anything they were obliged to guarantee or put in or have assurance they wouldn't lose money?

Secretary SCHLESINGER. I think that is a matter for negotiation between the pipeline owners and the producers.

Mr. BROWN. Would they have a say in the pipeline?

Secretary SCHLESINGER. No; the notion is they would have no ownership rights. I presume as compensation for such loan guaran-

tees, they would be paid a fee by the pipeline, but that would be a matter of negotiation between the pipeline company and the producers.

Mr. BROWN. Why would they want to do it if they had no control over that rather substantial amount of money?

The Standard Oil Company of Ohio, I understand, hangs by a thread from time to time because of the substantial investment that that relatively small company in the whole oil spectrum has put into the Alyeska pipeline.

Secretary SCHLESINGER. Absolutely, Mr. Brown, and I might say I think Sohio's performance as a relatively small company among the majors has been extraordinary. It is the kind of entrepreneurial spirit we like to see.

Why would they want to do that? That is distinct from their ability to do so. The motivation is quite clear. There is 25 billion dollars' worth of gas up there which is virtually costless, and the returns would amount to \$25 billion in 1977. In order to get it out, of course, they must have a pipeline. With regard to their ability, that must be taken into account. Quite obviously, the financial position of Sohio at this stage is less robust than it is for Exxon.

Mr. BROWN. Would you recommend, Mr. Secretary, a certain rate to encourage them to participate in the pipeline financing, or if they didn't participate, their rate might be different? I am talking about the wellhead price.

Secretary SCHLESINGER. Yes, sir, I think that the issue of the processing cost of that gas in the President's decision was left to be reviewed by the Federal Power Commission or subsequently FERC, and I think that might be relevant to that matter, and it would be a matter for FERC to review.

Mr. DINGELL. The time of the gentleman from Ohio has expired.

The Chair observes that Mr. Meeds had 1½ minutes remaining from his earlier questioning, and we recognize him at this time to continue his inquiries.

Mr. MEEDS. Thank you, Mr. Chairman.

Mr. Secretary, I hope you don't think I am unduly provincial, but my questions will be largely centered around what is going to happen to the State of Washington with regard to this matter, and it is my understanding that there is an eastern and western leg and approximately 70 percent is to go to the East and 30 percent to the West. Is that correct?

Secretary SCHLESINGER. That is the general ball park figure. It depends on the purchases by the lining up of gas in both parts of the country.

Mr. MEEDS. Is the split to be determined solely on the basis of price, or are we to have some guarantee that we are going to have the availability of the western leg?

Secretary SCHLESINGER. You have a guarantee that the FPC, or subsequently FERC, will review that distribution between East and West to insure that it is equitable, and that matter is left to the judgment of the Federal Energy Regulatory Commission.

May I have one additional word with regard to the question that you raised just before your departure?

On page 233 of the President's decision, there is the statement that prior to the issuance of a certificate of public convenience and

necessity the Secretary of Energy will determine the size and volume of the western leg to be certified as well as review the need for any prebuilding to take direct deliveries for the west coast of any short-term increases in Canadian exports from Alberta.

So that is responsive to the question you had raised just before the recess.

Mr. MEEDS. But there is no linkage between that and the contracts into the 1990's in the Pacific Northwest?

Secretary SCHLESINGER. Absolutely.

Mr. MEEDS. Absolutely no linkage?

Secretary SCHLESINGER. Indeed, there may be some overall advantage once again that in building the capacity to produce this bubble of gas in Alberta, that it will encourage exploration and, as a consequence, there may be additional gas available as compared to the preexisting situation.

Mr. MEEDS. Have any ballpark determinations been made as to how 30 percent of the gas will be divided in the West? What will be the method first?

Secretary SCHLESINGER. The initial division will be based upon contracting by private parties. That will be reviewed by the Federal Energy Regulatory Commission ultimately to assure that the West and the East get just or equitable shares.

Mr. MEEDS. And in that regard, in contracting, it is my understanding that Northwest Pipeline is now the carrier into Washington State, but it is also involved in this leg. Will it be able to contract for gas as well as be a carrier?

Secretary SCHLESINGER. Yes, sir. Absolutely.

Mr. MEEDS. Fine. Thank you.

Thank you, Mr. Chairman.

Mr. DINGELL. The Chair thanks the gentleman. The Chair recognizes the gentleman from Alaska, Mr. Young.

Mr. YOUNG. Thank you, Mr. Chairman.

Some of the questions, Mr. Secretary, I was going to ask, have been asked.

I have three questions, and we can expound on them.

First, let me say I think you have your ducks in a row today. If you don't know what I am referring to, we will get to it later on.

Isn't the project unusual in that it is being proposed in this proposal to tap only one gas source? Are there any major pipelines in the United States built to serve only one field?

Secretary SCHLESINGER. I think that it is not being proposed to serve only one gas source. What we are saying is that that Prudhoe Bay field provides the minimum requirements for the construction of a pipeline, but we anticipate substantial additional finds of natural gas in Alaska that would be conveyed by that pipeline.

Mr. YOUNG. You are saying the proven gas reserves of Prudhoe Bay are sufficient to support the project without any additional gas reserves?

Secretary SCHLESINGER. The judgment is yes, it will provide 2 billion cubic feet per day.

Mr. YOUNG. What is your Department, or the administration, doing to increase the possibility of gas reserves on Alaska's North Slope?

Secretary SCHLESINGER. The search for gas on the North Slope at the moment is wholly intertwined with the search for oil, and the gas that we are going to ship is associated gas. Consequently, one cannot separate that matter from the question of oil pricing.

The Department has given the highest possible price for Alaskan oil, giving it also the equivalent of foreign oil entitlements in order to hold the wellhead price of North Slope oil at a high enough level to encourage further exploration.

Mr. YOUNG. Mr. Secretary, I am well aware of that, and I think we have a field. What I am saying is the Federal Government has the gas reserves in Alaska's North Slope.

What I am alluding to is—and I compliment you, your administration newly organized—the administration today has a recommendation to turn the Arctic wildlife refuge into a wilderness area, which would preclude any further development of gas that has been estimated to be larger than or nearly as large as Prudhoe Bay. The administration has also recommended that the PET-4, which was set aside for oil and gas reserves, be turned over to the Fish and Wildlife, and it appears to me that the administration, if they are planning on further financing or amortization of this pipeline with further discoveries, is far afield.

I know your position on this, but I hope that you can somehow explain—I cannot see, if my maps are correct, that there is any area left to discover gas and oil on land in Alaska.

Secretary SCHLESINGER. I think the point you made is quite pertinent, Mr. Young. I am not familiar, and I have not been familiar, with the decision on acreage in Alaska. That was a recommendation by the Department of the Interior. I am not sufficiently familiar now to explain the details of that.

Mr. YOUNG. Mr. Chairman, I am sure you are well aware of this trying to make the refuge into a wilderness area, and I deplore that.

Mr. Secretary, can I say although it may be the administration's position, I think the American public, through your leadership, should be well aware of the potential in Alaska. I know Alaska is aware of it, not for Alaska, but the lower 48, and the need, and I hope those in the administration that possibly can disagree with one side of the administration do not decide that they will go hide in the closet, because I believe the American people better be aware we have the supply of gas in Alaska that will make the pipeline more feasible than it is proposed today.

Mr. Chairman, I have no further questions.

Secretary SCHLESINGER. Mr. Young, you raise a set of issues that are, of course, very important ones. They go to the heart of the tradeoff between environment and energy considerations. We are keenly aware of that large structure in the Arctic National Wildlife Range, and I think that the question that you raise is one that is well taken.

Mr. YOUNG. I thank you, Mr. Secretary.

Mr. DINGELL. The time of the gentleman has expired.

The Chair recognizes the gentleman from Texas, Mr. Collins, for 5 minutes.

Mr. COLLINS. Thank you, Mr. Chairman.

One thing that disturbs me a great deal is our arrangement with Canada, because regardless of the length of the pipeline, it comes through Alaska, or how much of it is in the United States, it is essential that we have a working relationship.

With your experience in energy and dealing with Canada, haven't you found that they want to get the full pound of flesh on everything? Let's take the price of gas. Did you ever see them give us any breaks on the price of gas?

Secretary SCHLESINGER. Yes, sir; we negotiated with them just recently, and they refrained from making an increase they had previously projected. I expect that the Canadians will negotiate in the Canadian national interest, but I do not accept the phrase "pound of flesh."

Mr. COLLINS. Let's take the cents and dollars. What are the Canadians asking for gas today? Are they asking the same price you are asking here in the United States?

Secretary SCHLESINGER. The Canadian price was recently raised, and I don't know whether it has gone into effect yet, to \$2.16 at the border.

Mr. COLLINS. Hasn't your administration recommended \$1.75 here as being what you considered a fair price?

Secretary SCHLESINGER. \$2.16 at the border, of course, includes transportation. The Canadian methods of pricing gas are quite different from our own. They normally price at the city gate, and they back out the transportation costs to provide a wellhead price. In Canada, for example, when you back out transportation costs, the average wellhead price is around \$1. We are proposing a wellhead price of \$1.75. I don't think that the Canadian pricing of natural gas is the model that you are seeking.

Mr. COLLINS. Did you find when we were dealing on this oil shortage last fall, do we have any historical basis that Canada has tried to be under the market? Can you think of a single instance where they weren't selling above the market?

Secretary SCHLESINGER. I think that the Canadians have normally been inclined in their export policies to follow the market. In their internal domestic pricing, however, they have done as we have done, which is to hold down the costs to their consumers on both oil and gas.

Mr. COLLINS. I am not worried about the domestic market of Canada. I think they do a good job of that. I am thinking about what they do to us.

If they are going to be a partner in this, I am wondering how much confidence we can have in Canada. They have moved toward nationalization, and they not only have the right to tax, but the Provinces have the right to tax, and they did it back when they moved in on the drillers.

What assurance do you have on these easements—and that is all we have are easements, aren't they?

Secretary SCHLESINGER. Yes, sir.

Mr. COLLINS. What assurances do we have they wouldn't tax them to a confiscatory level?

Secretary SCHLESINGER. We have entered into a pipeline treaty with the Canadians that was recently ratified by the U.S. Senate that assures that the Provinces and the Central Government will

treat American pipelines on a nondiscriminatory basis. We have that assurance. The reason we have been particularly concerned about the Yukon Territory is that there are no other pipelines, and, consequently, the protection of nondiscrimination is limited there, and the issues had to be pinned down in the Yukon Territory, but elsewhere we are protected by nondiscrimination.

Mr. COLLINS. On that nondiscrimination, they could say it applied only to pipelines of a certain distance, and this will be the only pipeline that distance, so they could pass anything they wanted.

Secretary SCHLESINGER. Not within the Provinces, sir.

Mr. COLLINS. The Provinces have the right of taxation.

Secretary SCHLESINGER. The Provinces are bound by the treaty to treat American-owned pipelines in the same way as Canadian-owned pipelines, and I must say that we do not expect to get to the position of national confrontation or retaliation, but there are extended pipelines in the United States which serve Canadian pipelines. One of them starts along the coast of Maine and runs into Montreal.

The treaty is designed to give protection to the pipelines of each country in the other country, and I think it effectively does so.

Mr. COLLINS. Mr. Secretary, this administration has taken a position on our canal down in Central America, where, because they requested us to give it back, that they think we should give it back and make them a loan and pay them to get it back.

Now, if Canada took the same position, how would you feel about that?

Secretary SCHLESINGER. Well, with respect to the Panamanian decision, the treaty is a fulfillment of the principles that were established in 1974 under the Ford administration, and President Ford has given his total endorsement to that treaty as one that carries out the commitments of his administration. But that is not at all relevant to the Canadian situation because the pipelines in Canada, unlike the canal, would be owned by Canadian companies. Any punishment brought forth by the Canadian Government on those pipelines, of course, would be abuse of corporate citizens in Canada.

Mr. COLLINS. They estimated yesterday only 20 percent of the funding would be done by Canadians. They anticipated 80 percent would be done by Americans. What extent do you feel we would be responsible to protect American investors?

Secretary SCHLESINGER. Well, in relation to the total American investment in Canada, this will not be a very sizable fraction. If we are worried about protection of general American investment in Canada, not only debt ownership, but equity ownership as well, then it is a problem that vastly transcends the issue of pipeline in Canada. We have major investments there.

Mr. COLLINS. Mr. Secretary, it doesn't matter where the pipeline is; it is all an interrelated relationship, and the pipeline is worth nothing unless the Canadians abide by their part and protect their interest. The fact that we build a pipeline there is like building a road to the end of the river and not having a bridge.

Secretary SCHLESINGER. There are two forms of protection. They are not absolute, but they give us very high-level confidence. Our

relations with the Canadians have always been relations in which we could rely upon the Canadians to fulfill their share of an agreement. Indeed, if I may say so, some of our negotiations with the Canadians have gone more smoothly than some of our negotiations with some of our own States in the course of this particular arrangement.

Second, if those relationships were to become fractured in the way that implicitly your question suggests that the relationships might develop, there are equivalent Canadian assets on this side of the partnership to get oil into Montreal, from Maine, which requires acquiescence by the United States. We both have shared advantages in these mutual relationships fulfilling our agreements and keeping our relationships pleasant and peaceful.

Mr. COLLINS. Thank you, Mr. Secretary.

Mr. DINGELL. The time of the gentleman has expired. The Chair recognizes the gentleman from Wyoming, Mr. Roncalio.

Mr. RONCALIO. Dr. Schlesinger, I have what I hope will be valid questions, and I would like to have the record show an analogy to help my good friend from Texas, Mr. Collins. In this case, Canadian money is now building some of the finest new high-rise skyscrapers in Denver, several hundred million dollars each. No law says the city of Denver can't raise the taxes on them substantially, but if it does, the Canadian interests know enough to hire lawyers and come to Colorado and fight the unreasonable and unjust taxation because they have nondiscriminatory right in America, as we do in their country.

To me, the fear of unreasonable or unnecessary taxation should be leveled and considered together with this. We have a Canadian corporation mining coal and drilling for oil and gas in Wyoming, Canadian majority-owned, Husky Ltd. The interrelationship is so close that I believe we simply have to have that basic trust in each other, with the two countries in the world that have this going, and it is far too great a thing to have it jeopardized or doubted by these proceedings, even though there are those in this proceeding who have said, in the newspaper of Canada, the Globe and Mail, that Canada can expect reciprocity in future negotiations with the United States possibly to eliminate tariff barriers such as those that now prevent the competitive entry of Canadian petrochemicals, so they may have ads or columns down the road in a few years, since they are tough bargainers, but I would have more concern about this review expressed by one or two people in the Canadian entity than I would about unjust taxation.

Tax at the wellhead is taxed about at \$1.45. I would like to ask you if the treatment plant on the North Slope is going to absorb some of the 75 cents per Mcf cost now allocated to the treatment plant. Some of that is included in the \$1.45?

Secretary SCHLESINGER. That is a decision that must be made by the FERC. In the President's recommendation it suggests that the FERC examine this particular feature and see to it to what extent the processing costs should be absorbed by the producers within that \$1.45 price as escalated.

Mr. RONCALIO. Don't you see an area for mischief if this discussion must proceed on the same level and at the same time as

discussions regarding loan guarantees by the producers for the pipeline owners?

Secretary SCHLESINGER. I see some possibilities of leverage. I am not sure that is mischief, however.

Mr. RONCALIO. Any leverage I have run into has ended up as mischief to me. I thought this may be separated. Mr. Dingell and I have been discussing this. Perhaps a wise policy might be to hope that this could be financed without having to rely upon the producers for loan guarantees. None of us want to harm existing multinationals in their effort, but I don't think we should foster the air for continuing cartelization of everything we have in the continent. Maybe enough is enough. There is that possibility.

Dr. Schlesinger, an article in the Wall Street Journal suggests there may be no need to construct the gas line if the Nation would deregulate natural gas prices. It is asserted deregulation would enable production of vast reserves in the lower 48, diminishing the importance of Alaska gas. These arguments were advanced by others. They were set aside rather markedly by New York analysts and investment-house people yesterday, and I would like to have your comments on that. Are we making a gross massive error in approving this pipeline?

Secretary SCHLESINGER. There were some errors in that editorial, Mr. Roncalio. I read those editorials at least for amusement, if not for edification.

Faith is the evidence of things unseen, and I think that reflects that particular editorial writer. The emphasis in that editorial was on gas costing \$3.50 as delivered in the United States. We would expect a price of \$2.50 to \$2.75 in 1977 dollars. Now, let me underscore that is comparable.

Mr. BROWN. Would you break that out for us, how we will get to that price?

Secretary SCHLESINGER. Yes, sir; basically it is a dollar for transportation cost; \$1.45 wellhead cost, plus some small cost augmentation; possibly part of the processing cost would keep that in the \$2.50 to \$2.75 range.

At a price of \$2.50, this is comparable in price to the importation of foreign crude, and, consequently, it is an attractive venture from our standpoint, even aside from the fact that this purchase does not represent any cost to us in terms of continuing expenditures for exploratory development, and that sort of thing.

Mr. RONCALIO. Thank you.

Mr. DINGELL. Would you yield?

We have \$1.04, you indicated, Doctor, with regard to transportation. The wellhead price, we assume, if the legislation passes, will be \$1.45. So that is \$2.49.

Secretary SCHLESINGER. Yes, sir.

Mr. DINGELL. That does not deal, however, with the question of the processing plant which must be built at the head of the pipeline in order to prepare the gas for transportation.

Secretary SCHLESINGER. Yes, sir; as I have indicated, those questions have not yet been settled. It is recommended that the FERC determine to what extent the processing charges should be charges against the producers and come out of the \$1.45 price, and to what extent they not be charged against the producers, and, in addition,

we have an allowance of something like 15 cents above the \$2.49 price that you mentioned, estimated additional cost to processing.

Mr. DINGELL. Fifteen cents, you indicate?

Secretary SCHLESINGER. Yes, sir.

Mr. DINGELL. We have heard from the Alaskans that that might be somewhere between 70 and 97 cents. I am advised that the Federal Power Commission also has that figure.

Secretary SCHLESINGER. We can put a statement in the record. Our preliminary estimate is 35 cents for processing, 1975 dollars. Now they may be dealing with dollars of a later date.

Mr. DINGELL. To give us that figure would be immensely helpful.

Secretary SCHLESINGER. Yes, sir.

[The following material was received for the record:]

The Cost of Conditioning

Prior to delivery to the pipeline, Prudhoe Bay gas must be "conditioned", i.e., the water, carbon dioxide and other non-methane content elements are reduced. This study provides a preliminary estimate of the cost of such conditioning.

Exhibit 1 depicts the flow of fluids at the Prudhoe Bay. Prior to commencement of actual gas sales, the natural gas produced with oil will be reinjected into the gas cap to retain reservoir pressure. The gas gathering and central compressor plant facilities necessary for reinjection are already in place. The sale of natural gas requires the addition of conditioning, sales compression and refrigeration facilities.

The only estimates of the costs of constructing these facilities appear in the FPC record in letters to Brian J. Heisler from George Mickum, III (on behalf of Arco, Exxon and Sohio) on October 20, 1976 and from Martin N. Erck (on behalf on Exxon) on October 28, 1976. The first letter provides excerpts from the September 17, 1971 study by Ralph M. Parsons Company entitled "Prudhoe Gas Project - Final Report" and the second adjusts the capital cost estimates for conditioning and provides estimates for sales compression facilities and the required electric plant:

<u>Facilities</u>	<u>\$ mid-1975</u>
Conditioning (incl 14% contingency)	\$580 million
Sales Compression	320
Electric Power Plant	<u>50</u>
	\$950 million

The federal and state income tax rates are set at 48 and 9 percent, respectively. Allowing for the deduction of state taxes for federal tax computations results in an effective overall tax rate of 52.68 percent. It is assumed that the facilities will be financed similarly to the pipeline which results in an overall after-tax cost of capital of 7.30 percent.

<u>Type of Capital</u>	<u>Percent</u>	<u>Cost</u>	<u>After-Tax Cost</u>	<u>Weighted A.T. Cost</u>
Debt	75%	.10	.04732	.0355
Equity	<u>25%</u>	.15	.15	<u>.0375</u>
	100%			.0730

A 15 percent rate of return on equity is deemed adequate; the risks appear to be essentially the same as those experienced by suppliers of equity capital for the pipeline.

Operating costs and fuel requirements are from a letter to Judge Nahum Litt on August 27, 1976 from Martin Erck (on behalf of Arco, Exxon and Sohio). The operating cost reported therein was \$50 million per year in 1975 dollars and fuel usage was 300 bbtu/day. These estimates may include the operating costs and fuel consumption of some facilities that would be built and operated even if the facilities discussed herein are not constructed and producers continue to reinject the gas. Therefore, they are likely an overstatement of costs, but they are used in total here because the record provides no basis for a division.

Fuel costs are obtained by assuming liquids not used on the North Slope have a value as product to be shipped by pipeline of \$7.25 (in 1975 dollars) per barrel net of transportation:

$$\frac{\$7.27/\text{bbl}}{5.4 \times 10^6 \text{ btu/bbl}} \times 300 \times 10^9 \text{ btu/day} \times 365 \text{ days} \\ = \$147 \text{ million/year}$$

An inflation rate of 5 percent is also assumed on O&M and fuel costs.

Property taxes are assumed to be 20 mils per dollar of book value, the current tax rate in Alaska. For these

purposes, book value is based upon straight line depreciation over 25 years applied to the initial value of \$1229 million.

Accelerated depreciation is used for tax purposes; an 18 year ADR life and the double declining balance switching to straight line method are employed.

Using mid-1982 as the zero point, the present value of the net outlays reported above is \$1251 million at 7.3 percent. Assuming an output of 2.0 bcfd/ at 1137.8 btu/cf, a 1975 dollar price of \$.325/mmbtu will provide sufficient cash flow to cause the net present value of the cash flow from operations to be \$1251 million, equal to the present value of the outlays. Exhibit 2 demonstrates this fact by calculating the present value of each year's cash flows under this price (escalated at 5 percent per year) and the cost assumptions outlined above. At a discount rate of 7.3 percent, the present value in mid-1982 of the cash inflows is \$1251 million.

—/ This appears to be the design capacity of the facilities. It is probable that after a few years the Prudhoe field could provide up to 2.4 bcfd. At the higher volumes, economies of scale probably would drive the cost nearer 30 cents.

Thus the price of conditioning is estimated at 32.5 cents/mmbtu in 1975 dollars. It must be emphasized, however, that the data is old, the design is preliminary, and the descriptions in the record of the facilities and their related capital and operating costs are vague. Thus proper coverage may not have been achieved and the final cost may vary substantially.

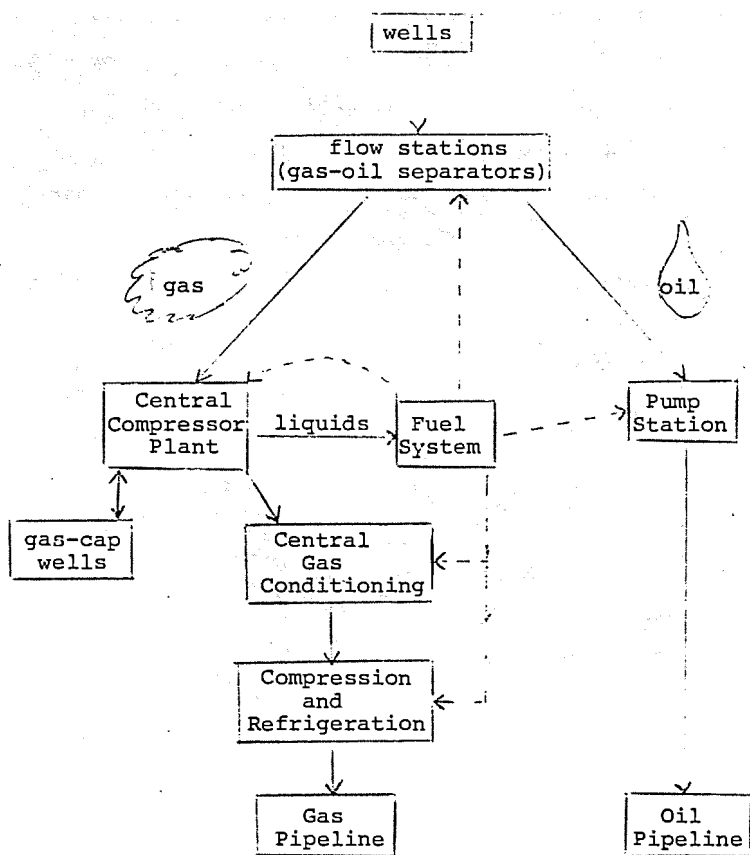


Exhibit 1. Flow of Fluids at Prudhoe Bay

2

Exhibit 2. Annual Cash Flow Projections
Price = 33.5¢/mmbtu

YEAR	REVENUES	O&M	PROP TAXES	FUEL	DEPREC	PRETAX INC	NET INC	CASH FLOW	PRES VA
1983	398.83	73.87	24.09	217.19	136.55	-52.07	-25.02	111.53	103.95
1984	418.77	77.57	23.10	228.05	121.38	-31.33	-14.82	106.56	92.55
1985	439.71	81.44	22.12	239.45	107.89	-11.20	-5.30	102.59	83.05
1986	461.69	85.52	21.14	251.42	95.91	7.71	3.65	99.56	75.10
1987	484.78	89.79	20.16	263.99	85.25	25.59	12.11	97.36	68.45
1988	509.02	94.28	19.17	277.19	75.78	42.60	20.16	95.93	62.86
1989	534.47	99.00	18.19	291.05	67.36	58.88	27.86	95.22	58.15
1990	561.19	103.95	17.21	305.60	59.87	74.56	35.28	95.16	54.16
1991	589.25	109.14	16.22	320.88	53.22	89.78	42.49	95.71	50.76
1992	618.72	114.60	15.24	336.93	47.31	104.64	49.52	96.82	47.86
1993	649.65	120.33	14.26	353.77	47.31	113.98	53.94	101.24	46.64
1994	682.13	126.35	13.27	371.46	47.31	123.74	58.56	105.86	45.45
1995	716.24	132.67	12.29	390.04	47.31	133.94	63.38	110.69	44.29
1996	752.05	139.30	11.31	409.54	47.31	144.60	68.43	115.73	43.16
1997	789.66	146.26	10.32	430.01	47.31	155.75	73.70	121.01	42.05
1998	829.14	153.58	9.34	451.52	47.31	167.40	79.21	126.52	40.98
1999	870.60	161.26	8.36	474.09	47.31	179.58	84.98	132.29	39.93
2000	914.13	169.32	7.37	497.80	47.31	192.33	91.01	138.32	38.91
2001	959.83	177.78	6.39	522.69	0.00	252.97	119.71	119.71	31.38
2002	1007.83	186.67	5.41	548.82	0.00	266.92	126.31	126.31	30.86
2003	1058.22	196.01	4.42	576.26	0.00	281.52	133.22	133.22	30.34
2004	1111.13	205.81	3.44	605.07	0.00	296.80	140.45	140.45	29.81
2005	1166.68	216.10	2.46	635.33	0.00	312.80	148.02	148.02	29.28
2006	1225.02	226.90	1.47	667.10	0.00	329.54	155.94	155.94	28.75
2007	1286.27	238.25	0.49	700.45	0.00	347.08	164.24	164.24	28.22

Mr. DINGELL. The decision on that particular point will be made, as I understand it, by the Federal Power Commission or its successor agency, FERC. Is that right?

Secretary SCHLESINGER. Yes, sir.

Mr. DINGELL. If that is to be assessed against the pipeline as part of the transmission cost that would then raise the cost to the consumer. If it is assessed against the owner of the gas before it enters the pipeline, it would then be assessed against that owner and might or might not come under your discretionary power to raise the prices. Is that correct?

Secretary SCHLESINGER. Yes, sir.

Mr. DINGELL. So that question then remains one which is not at this moment resolved; am I correct?

Secretary SCHLESINGER. That is correct; that there is leeway, flexibility, that was conveyed to the FERC as it deals with this pricing issue. The only point that I wanted to make about that was in relation to the question raised by Mr. Roncalio, on the advantageousness of going ahead with this pipeline. There is no question that this pipeline will bring in gas more cheaply, either than the equivalent crude oil from abroad or indeed more cheaply than the price of deregulated gas.

Mr. DINGELL. Can you tell us, Doctor, what the regular practice in the industry is with regard to who constructs the processing plants at the head of the pipeline? Is there a regular traditional practice in that matter?

Secretary SCHLESINGER. I think there is some disparity in practice, but prior examples are not necessarily appropriate for Prudhoe Bay gas, which is somewhat more complex to process, as I understand it, than is gas here in the lower 48 States.

Mr. DINGELL. But the judgment as to who is going to do this, and what the cost and the benefits would be, are, in large part, determined by the products that would be stripped from the gas, such as water, sulfur, and natural gas liquids, propane, butane, and some other things that come out of the gas as it is processed; am I correct?

Secretary SCHLESINGER. Yes, sir.

Mr. DINGELL. Could you include that please in the additional submission that you make to us?

Secretary SCHLESINGER. Yes, indeed.

[The following material was received for the record:]

DISPOSITION OF NATURAL GAS LIQUIDS

Natural gas liquids (NGL's) currently being produced in association with the oil from the Prudhoe Bay Field are being reinjected along with the gas back into the producing horizons. When the gas processing plant is built and operating, the pentanes and heavier liquids which are produced can be shipped through the oil pipeline. Their vapor pressure is sufficiently low at the flowing temperature of the oil line (about 140°F) to allow shipment without difficulty. The ethane could remain in the gas for shipment through the gas pipeline.

Some of the propane may be shipped through the gas pipeline. The rest will be used as field fuel or gas processing plant fuel, or it will be reinjected. Most of the available butane could be shipped through the oil pipeline. That which remains could also be used as field or processing plant fuel, or it could be reinjected.

Final disposition of the NGL's awaits conclusion of gas sale contracts and detailed design of the gas processing plant itself.

Mr. BROWN. Would the Chair yield?

Mr. DINGELL. The Chair has been most patient waiting for my colleagues to finish their questions. I will be delighted to yield to the gentleman briefly.

Mr. BROWN. I think the question should be what you do, then, with the things stripped out, how you transmit them?

Mr. DINGELL. I think that is a fair part of the analysis that I seek to procure.

There are a couple of other questions I would like you to answer. Can you tell us whether or not the recommendations of the Attorney General with regard to ownership of the pipeline are

going to be carried forward and what will be the treatment inside the United States and inside of Canada?

Secretary SCHLESINGER. It is the intention to follow the recommendations of the Department of Justice in that regard. They are included in the terms and conditions, and it certainly would apply within the United States. I do not know that it would necessarily apply with regard to the Canadian companies, but there has been no intention so far as I know of the Canadian company seeking participation in ownership shares by American producers on the North Slope. But let us check further on that latter question with regard to Canada, Mr. Chairman, and insert it in the record.

Mr. DINGELL. I believe it would be helpful for us to have the answers both with respect to the Canadians and the United States. [The following material was received for the record:]

PRODUCER PARTICIPATION IN THE ALCAN PROJECT

The terms and conditions in the President's *Decision* preclude any participation in the Alcan project by producers of significant amounts of Alaskan gas other than by loan guarantees that terminate when the project tariff becomes effective. That condition applies to the United States companies, Alcan Pipeline Company, Northern Border Pipeline Company, Pacific Gas and Electric Company.

The principal Canadian company related to the Alcan project is Foothills (Yukon) Ltd. It is owned by Westcoast Transmission Co. and Alberta Gas Trunklines Ltd. which are pipeline companies that operate respectively in the Provinces of British Columbia and Alberta. It is anticipated that Trans-Canada Pipelines Ltd. and Alberta Natural Gas Co., two other Canadian pipeline companies, will acquire interests in Foothills (Yukon) or subsidiaries thereof. To the knowledge of the Department of Energy, United States or Canadian oil or natural gas producers have no equity or debt interest in Foothills (Yukon) or any subsidiaries thereof. It is not contemplated that the producers will acquire such interests.

Mr. DINGELL. The next question goes to some of the problems we found on the Alyeska system. We found that there was an appalling lack of coordination between the Department of Transportation and the Interior Department. We found there were appalling abuses in connection with the construction of the Alyeska pipeline. There was everything from out-and-out fraud to criminal misbehavior of wide varieties, including theft of property. There were employees who did not work. We found the most outrageous and dishonorable kind of so-called quality control which, in fact, was more honored in not being carried forward than in being carried forward. In addition, there was intimidation of supervisors, a lack of attention to things like radiographic safety of employees, fraud in connection with identification of welds, and all manner of dishonorable and improper misbehavior.

What steps are going to be taken to discourage the repetition of that, because I tell you one thing, this subcommittee is going to have investigators up there if you folks are not going to be watching it.

Secretary SCHLESINGER. We are well aware of certain deficiencies—

Mr. DINGELL. I am sure you are, and I am sure you don't encourage them any more than I do.

Secretary SCHLESINGER. I think these matters are dealt with starting on page 197 of the President's report. We will have a Federal inspector for the construction of the Arctic transportation system—

Mr. DINGELL. We had them last time, and they were intimidated or run off or participated in the rascality. I am not sure that is going to give me or any other honest man any confidence. How are you going to ensure you have someone reliable up there, somebody who is not only going to do the job, but see to it he has the authority to carry forward his responsibilities?

Secretary SCHLESINGER. Effective coordination. You will have the opportunity later on this year, and at the appropriate time, I think, next year, to survey a reorganization plan under the President's reorganization authority, which will pull together the various competing and divided Federal jurisdictions which you referred to in your question.

Mr. DINGELL. As to the Department of Transportation's Office of Pipeline Safety, the kindest thing to be said is that they don't earn their pay. The Interior Department seemed to kindly regard all of the rascality—fortunately your agency did not exist, so you can't take any credit for the outrages that went on.

I would like a clear statement from you for the record as to what you propose to do, and I am going to get the same thing from DOT, and the Interior Department.

[The following material was received for the record:]

PROPOSED FEDERAL OVERSIGHT OF ALCAN PROJECT

The terms and conditions set forth on pp 27-43 of the Presidential Decision and the proposal for coordinated enforcement authority set forth on pp 197-207 of the Report will give the Federal Government an expanded role in the oversight of project management and construction. This oversight authority will be far more comprehensive than the limited Federal monitoring effort over Alyeska's project management. If the general terms and conditions are effectively enforced, most of the management abuses associated with the Alyeska project should not occur. If the proposed reorganization is approved, the Federal Inspector will be given adequate authority over field level enforcement of the terms and conditions.

As noted in the Report, Presidential supervision over the Federal Inspector will be delegated to an Executive Policy Board, to be created by Executive Order. The Board will be made up of the Secretaries of Interior, Energy, Transportation, the Administrator of the Environmental Protection Agency, and the Chief of the Army Corps of Engineers, or their respective deputies (or senior officers who have been delegated authority over gas pipeline matters).

Being delegated with the President's supervisory authority, the Board will ensure that the Federal Inspector vigorously performs his duties, and it will have the full power to discharge the Federal Inspector for misfeasance or non-feasance in office.

The terms and conditions which are immediately discussed below will expand the oversight function of the Federal Inspector; the proposed reorganization plan will then give him the enforcement authority to make that oversight more effective.

1. Terms and Conditions

The terms and conditions ensure that the Federal Inspector can require imposition by the applicant of unusually strong cost and quality controls. Under the heading "Construction Costs and Schedules" (pp 27-31), the terms and conditions prohibit the use of cost-plus contracts with execution contractors, except where the Federal Inspector has determined that special conditions warrant this type of contract. Otherwise, the Federal Inspector will require the use of fixed-price contracts, including the firm fixed-price, the fixed-price with escalation and the fixed-price incentive

type of contract (p 28). This prohibition will force the applicant to prepare reliable design cost estimates before it can make fixed-price contracts attractive to potential contractors. The terms and conditions independently require that the applicant submit to the Federal Inspector a design cost estimate and a construction schedule for at least 70 percent (or greater) of the system before the start of construction. The Federal Inspector will enforce minimum percentage requirement, and may relax it only with the consent of the Executive Policy Board (p 29).

The Federal Inspector will direct the applicant to provide a detailed overall management plan and description of the applicant cost and schedule control techniques prior to the start of construction. The Federal Inspector will also direct the applicant to develop quality control and adequate equipment supply procedures to avoid project delays, breakdowns and overruns. Finally, the Federal Inspector shall conduct periodic audits of the financial records of the applicant, and shall have full subpoena power to obtain these records and any other records he deems pertinent.

The general terms and conditions do not hold the successful applicant to any specific management approach, but merely provide certain minimum standards for cost and quality control and timely completion of construction. The terms and conditions set forth in the Decision reflect the collective experience and knowledge gained by the various Federal agencies which were involved with the oversight of the Alyeska project.

Perhaps the most significant term and condition for cost and quality control is the variable rate of return. This provision, however, unlike the others, will be a self-enforcing control tied to the size of the cost overruns incurred by the applicant. If there are cost overruns, the applicant will pay for these inefficiencies through a lower rate of return on equity. The applicant is required to submit its revised cost estimates to the Federal Power Commission, prior to the issuance of the certificate for the project. If approved by the Commission, these estimates will be the final estimates for the U.S. segments of the system, and will be the basis for fixing a variable rate of return (p 37). The variable rate of return, which is

both a term and condition and an independent requirement of the financing plan, will provide a substantial incentive for efficient project management.

2. Increased Enforcement and Compliance Authority

As stated on pp 197-207 of the Report, the President will submit to Congress some time after approval of the Decision a limited reorganization plan for the very specific purpose of transferring to the Federal Inspector field level supervisory authority over the enforcement of the terms and conditions. This coordinated field level authority over compliance and enforcement activities of the respective Federal agencies is essential to avoid project delays and minimize cost overruns. Such increased enforcement authority is consistent with the intent of Congress in the Alaskan Natural Gas Transportation Act to improve the quality of Federal oversight and monitoring.

The reorganization plan will also vest the Federal Inspector with supervisory authority over the supplemental enforcement powers given to the agencies by Section 11 of ANGTA. This section provides that any Federal officer or

agency shall issue a compliance order or bring a civil action against any person for violation of any provision of law administered by that officer or agency. See Section 11, ANGTA, 15 USC 7191. Under the statute, the Federal Inspector will have field level authority over issuance of such compliance orders, which will state the nature of the violation with specificity, and set a time for compliance, not to exceed 30 days, which is appropriate for the nature of the violation. Continued non-compliance by the applicant or any other person in violation of such a compliance order would permit the Attorney General, at the request of the Federal Inspector and agency authorized officer to commence a civil action for appropriate relief, including a permanent or temporary injunction or civil penalty not to exceed \$25,000 per day for each day of continued violation.

The coordination of this supplement enforcement power, which will be part of the authority transferred by the reorganization plan, ensures that the Office of the Federal Inspector is far stronger than the predecessor office which monitored the Alyeska construction. However, in the unlikely event that additional enforcement power or coordination of authority is needed, the Administration will not hesitate to ask the Congress for the appropriate authorizing legislation.

Secretary SCHLESINGER. All the powers and authorities of these various departments for this particular project will be investigated in the Federal inspector through the reorganization plan that we intend to send to the Hill. That will eliminate the duplications, the overlaps, the divisions, and so forth.

Mr. DINGELL. Slovenliness, indifference, laziness, and outright corruption?

Secretary SCHLESINGER. We cannot give guarantees, but only provide the best efforts of this agency. The Federal inspector will be a gentleman who will be selected by the President of the United States to be approved by the Senate. You will have an opportunity to observe his qualifications.

Mr. DINGELL. With respect to the last Federal inspector, the kindest thing I can say is he gave the appearance of being either totally indifferent or involved.

I just want you to know that there is a very dark history of misbehavior.

Now, let me inquire further: As I recall it, under the ICC ruling, the pipeline company got the privilege of rolling in its debt for purposes of calculating a fair return. As a result, they didn't mind at all seeing the cost of that undertaking rise from some \$700 million to \$7 billion. What do you propose to do to discourage that kind of rascality?

Secretary SCHLESINGER. We have three general measures to deal with that, Mr. Chairman.

Mr. DINGELL. Well, you will admit that under the last arrangement, they had no incentive to cut the cost? I am talking about what they did before. They had no incentive to cut the cost.

Secretary SCHLESINGER. Exactly. That is why we have two procedures here which point in precisely the opposite direction and give the companies every incentive to hold down costs. One will be the variable rate of return to the extent that the cost overruns rise to the extent the project costs rise, the rate of return will fall. And consequently—

Mr. DINGELL. It won't fall far if you let them roll their debt in for purposes of computing their fair rate of return. I don't know what the fair rate of return on the Alyeska line is, but I have heard the figure somewhere between 35 and 80 percent a year.

Secretary SCHLESINGER. The FPC will be determining this rather than the ICC.

Mr. DINGELL. We are going to have them up to explain that to us.

Secretary SCHLESINGER. To the extent you are concerned about the organizational and procedural aspects, I think there is a difference in this case. There is first the variable rate of return.

Mr. DINGELL. If there isn't going to be a change, we are going to have to fill the jailhouses. What went on in Alaska under the other regime was a shame and disgrace to society.

Secretary SCHLESINGER. If these things were to reoccur, we would encourage you to fill the jailhouse, Mr. Chairman.

Mr. DINGELL. That is not a congressional prerogative. That is an executive one. We are going to ask you why you don't.

Secretary SCHLESINGER. But we do not expect these things to reoccur. We have first the variable rate of return. Second, we have

in our agreement with the Canadians the provisions with regard to the funding of the Dawson spur.

Mr. DINGELL. I don't quarrel with what you are saying. Those are fine where the Canadians are concerned, but you are going to have inspectors on the Alaska section of this line, which is 700 miles of the line. I am not addressing myself to what you are going to do to keep the folks who build the Canadian line honest, but our own rascals in line.

Secretary SCHLESINGER. As I mentioned before, first we have the variable rate of return. We have a policing operation, a general higher awareness about these possibilities that existed after 1970, and an awareness not only of that, but of considerable congressional interest and scrutiny.

Mr. DINGELL. Be assured it will be vigorous.

Secretary SCHLESINGER. Which will heighten our awareness, and finally we have a reorganizational plan, and that reorganization plan, and if the Federal inspector fails to discharge his responsibilities, he will be discharged.

Mr. DINGELL. We look prayerfully toward that event. In the case of the last inspector, we simply found that it got worse rather than better.

Will you make sure that this committee is kept informed of all steps taken in these areas, and make sure that this committee is advised of all undertakings in this regard?

Secretary SCHLESINGER. Absolutely.

Mr. DINGELL. So that we can achieve not only the comfort of your word, for which I have great respect, but also the comfort of keeping an eye on things ourselves.

Secretary SCHLESINGER. Yes, sir, and he will have early warning of rascality, if we find it.

Mr. DINGELL. Can you address yourself now to this question of the variable rate of return? What are the dimensions of it? How is it going to work to hold prices down?

Secretary SCHLESINGER. Quite obviously, transportation companies of this sort are interested in the return on capital, return to their stockholders, among other things. They are undoubtedly interested in performing a service.

The rate of return will be enhanced, the greater the success of the company in holding down costs in some relation to their filed costs which I will spell out to a great extent in the record, which I can do now.

To the extent that they have vast cost overruns, of course the rate of return would be diminished. There is that understanding at the outset, and consequently to the extent that the companies wish to limit their investment of capital and at the same time obtain a higher return on that capital, the only route to do that is to achieve efficiency in the process of construction of the line.

Mr. DINGELL. Does this embody the disallowance of wasteful undertakings, stolen property, and other things that might constitute gross waste of resources in the construction of the line?

Secretary SCHLESINGER. If there is stolen property, gross waste, and so forth, that is not disallowed. That would, of course, be included in the cost calculations and consequently would bring about a lower rate of return.

So, the companies have not only the desire to avoid sheer theft, but that they will go on paying for that theft more or less in perpetuity if they should permit it. That is a very powerful incentive.

Mr. DINGELL. We will be sending you communications to procure a more precise definition of the variable rate of return and how it works. I think it would be helpful to all of us if this will be done by correspondence.

Without objection, that will be inserted in the record at this point.

[The following material was received for the record:]

VARIABLE RATE OF RETURN

The variable rate of return is a device intended to create a real incentive for the pipeline project owners (sponsors) to build the system at the lowest possible cost and in the shortest possible time, while providing gas consumers with relatively assured cost-of-service charges. While the details have been left to the Federal Energy Regulatory Commission (FERC) to develop, it is anticipated they would adopt something similar to the following plan:

- (1) In accordance with Finance Condition 2 in Section 5 of the President's Decision (p. 36), the FERC would use the direct capital cost estimates (in 1975 dollars), the proposed time schedule for outlays, and the company-projected capital acquisition program, all filed with the FERC immediately prior to certification, as input data for providing a rate base at the time of completion under an assumed rate of inflation and AFUDC rate. The cost of equity capital used to develop the AFUDC rate would be a normal rate which reflects anticipated market conditions and includes a risk premium to compensate equity investors for the risk they bear by having their equity at risk throughout the life of the project.

- (2) Upon completion of construction, but prior to leave to open, the projected rate base in (1) shall be reestimated using the original 1975 dollars costs and timetables, but the interest rates and the rates of inflation which reflect actual borrowing cost, capital market conditions, and inflation experience.
- (3) The reestimated projected rate base in (2) shall be compared to the actual rate base proffered by the company and a determination of the extent of rate base overage or underage should be made. The cost of equity capital used in the AFUDC rate by the company shall then be adjusted upward or downward, depending on whether there was an underage or overage and the final rate base shall be redetermined using actual outlays and timing with the AFUDC rate based upon actual borrowed funds and costs and the adjusted rate of return on equity determined above. This final rate base shall be determinative of the cost of service charges to be levied by the pipeline on shippers.
- (4) This procedure shall be applied to each company owning a section of the Alcan system on a company-by-company basis. The FERC may wish to modify (3)

to reflect the expectation that filed costs and schedules are likely to be overrun. They may, for example, choose to permit the "normal" equity rate from (2) to be earned if the actual rate base is a certain percent over the reestimated projected base, with the higher rate allowed if the actual rate base is below this target level.

Our current thinking is that the variable rate of return mechanism should only be operative during the construction period.* It is expected that the rate of return permitted in (4) would vary substantially with overages or underages. The reason for requiring a large range is that this is necessary to create a significant incentive. With some care a rate of return to rate base overrun trade-off function can be developed that provides both a high return for the pipeline equity owners

*An alternate version would make the variable rate of return on equity operative throughout the life of the project. While this would substantially narrow the range of possible rates of return and still provide a significant incentive scheme, it has at least two undesirable side affects. First, it would be operative years beyond the construction period, requiring the FERC to adjust the company's "normal" rate as market conditions change. While this would be possible, it extends the adjustment into a period well beyond the time over which behavior was to be affected. Second, if any of the companies which jointly constitute the Alcan system were to undertake activities other than the construction and operation of the original system (including system expansion), it would be necessary to segregate the original equity capital from either reinvested income or new capital in order to keep the adjusted rate of return from affecting the financing of these activities. Again, while this is possible, it seems much cleaner to make a one-time adjustment to the initial rate base, as suggested in the procedure above, and then treat the equity thereafter in a normal fashion.

and a cost of service lower than anticipated by shippers if a significant underage occurs. Alternatively, it would result in a low rate of return to keep the rate base down if a significant overrun occurs. Thus, the variable rate of return will not only create an incentive to keep costs low, but also absorbs a portion of cost overruns, thereby cushioning the cost-of-service impact on consumers in the event overruns occur.

Mr. DINGELL. But can you tell us the upper and lower limits of this variable rate of return?

Secretary SCHLESINGER. These are decisions that we are not proposing. We have agreement between the two governments with regard to the concept of the variable rate of return.

The actual implementation in numbers will be up to the Federal Power Commission, or the FERC subsequently, and to the NEB in Canada.

Mr. DINGELL. Well, that means that NEB and FERC can fix some rather remarkable upper and lower limits so as to virtually render this mechanism either unworkable or incapable of achieving its announced goal.

Secretary SCHLESINGER. It is our intention to make this an effective mechanism. While the responsibility to make it effective rests with the NEB and with the FERC, I am sure that they have, as they have always had, the public interest in mind in this matter.

Mr. DINGELL. Doctor, I have the highest regard for you, and the greatest respect for you. My experiences with the Federal Power Commission over the years have been somewhat wanting in terms of achieving any significant respect for that body.

I must indicate that I have no experience at all with the Canadian National Energy Board, except in the cost of energy to my constituents.

My problem here is precisely what this splendid variable rate of return is going to be, and what are you going to do to assure that it does what you say it does.

My old daddy—and I keep saying this—used to say, "Son, trust everybody, but do cut those cards." It may be this is like the fellow walking down the street and another guy asks where he is headed. He says, "I am going down to One-Eyed Minnie's to play poker." The other guy says "Don't you know that is a crooked game?" The man replies, "Of course it is a crooked game, but it is the only game in town."

If we have a crooked game, I am not anxious to play unless I am sure there is no other game in town.

Secretary SCHLESINGER. We assume this is a straight game and not a crooked game.

Mr. DINGELL. I am not making any assumptions at all. I am just satisfying myself first.

Secretary SCHLESINGER. The One-Eyed Minnie analogy is one we will reject right now.

I cannot give you the answers with respect to the precise dimensions of the return by NEB and FERC. I think we can give you some conceptual guidance.

Mr. DINGELL. You will concede a certain natural skepticism is not abnormal here, when I don't know the bounds of this or precisely how it works. I have the greatest respect and regard for you, but I would be more comfortable if I could see that formula.

Secretary SCHLESINGER. Absolutely. Let me say the formula itself does not alleviate all problems. We must be wary. Undoubtedly skepticism, continuing skepticism, is fully warranted, Mr. Chairman.

Mr. DINGELL. The Chair observes I have used altogether too much time. The Chair is going to recognize my colleagues.

Mr. Meeds?

Mr. MEEDS. Thank you, Mr. Chairman.

I have a question which you may not be in a position to answer at this time. Please feel free to say that you are not if that is the case, Dr. SCHLESINGER.

Being mindful of the story in the morning Post about problems with the Alaska D-2 lands, and being on the committee that will be making the decisions, and being unable to hear your testimony before that committee, and being informed that there is apparently a great potential for gas and oil from the Arctic Wildlife Range, and knowing that the administration, Department of Interior's position, which is the administration's position, on D-2 lands would prevent further exploration or exploration in the Arctic Wildlife Range, my question to you is—and again, please feel free not to answer this if you can't at this time—do you feel that certain careful controlled exploration—not development at this time, but certain careful controlled exploration—of the Arctic Wildlife Range would be warranted and would not be unduly harmful?

Mr. DINGELL. Would the gentleman yield simply for a comment? I don't mean to cut into his time. The Chair observes two bells have rung. That is final passage on H.R. 3, which is the medicare-medicaid antifraud abuse amendments.

Mr. Roncalio has gone to answer this and will return forthwith. Any member who wants to do so, we will protect against the time of his return.

The Chair again recognizes the gentleman from Washington.

Mr. MEEDS. I have concluded my question, Mr. Chairman.

Secretary SCHLESINGER. Mr. Meeds, I am not familiar with the proposal that came up with Secretary Andrus. That proposal had the blessing, I presume, of the President, and it should come as no surprise to the committee that I support the President's decision in this matter.

Mr. MEEDS. Thank you, Mr. Chairman.

Mr. SANTINI. Mr. Chairman, may I pursue one additional line of inquiry?

Mr. DINGELL. I recognize the gentleman.

Mr. SANTINI. Earlier in your observations you concluded that we know of no case where the Canadians have failed to live up to an agreement. I would share with you apprehension in terms of past experience that may technically verify your conclusion, but suggest

that where economic self-interest dictates otherwise, we could find ourselves very well, as the Chairman has suggested, at the will of the Canadian Government.

Now, they did induce and participate in the uranium cartel of 1972, 1973, and 1974, which was designed to fix prices, and obviously would have negative consequences in terms of our domestic uranium market.

They have become a principal importer or exporter, from their standpoint, of nickel. I am disturbed about certain things that have occurred in the nickel market.

But most particularly, I am concerned about the pricing experiences that this country, my State, and the Northwestern region of the United States, endured and has experienced as a result of the increase in 1973, of 32-cent gas at the border to \$2.16, making those of us dependent upon Canadian natural gas paying the highest prices in the Nation.

Now, it is contended that there were either contractual violations or stretching. It is asserted those contracts have in effect been torn up and thrown away for all legal purpose and consequence. This has been done without certainly, or with certainly the direct acquiescence, if not direct involvement, of the Canadian Government.

I know the motivations. I know the economics that influenced the circumstance. But, it does augur negatively for prospective reliance, where we are at odds with Canadian self-interest in terms of either energy issues or economic issues. Any comment that you might wish to volunteer in response to that negative experience would be welcome.

Secretary SCHLESINGER. I think that we should recognize in this case not the conflicts of interest, but the coincidence of interest between ourselves and the Canadians. Their gas will be traveling over the very same line for the most part as will our own. They have an interest for their gas in holding down the cost of service.

Their communities along the line through the Yukon will be served by the Alcan line, and consequently those prices to those communities would reflect any misbehavior on their part.

I would emphasize in any event that we have a very firm contractual relationship in this regard, and in addition I do not know precisely what it is that the Canadian Government is supposed to do.

If they violate the agreement and the decision, which is reflected here, at the time of establishment of tariffs, we must remember that the FPC or FERC must review all tariff proposals. They will be attached. Those tariffs must be in the decision of the FPC or FERC consistent with the President's decision as outlined here.

Mr. SANTINI. Isn't that true only initially? Will it apply down the line, so to speak?

Secretary SCHLESINGER. Let me come back to that question in a moment.

There is that aspect of it. So, the tariffs must be approved initially, at least, by the FPC before construction. In addition, the facilities in Canada are owned by Canadian concerns. I don't know what kind of harassment and so forth one envisages the Canadian Government visiting on those Canadian concerns.

I think that there is ample protection in the treaty, in the agreement, and in the general relationships between the two countries.

Mr. SANTINI. I am not as concerned, Mr. Secretary, with harassments as I am gratuitous donations being made. I hope that your confidence is going to be fulfilled. I know that your commitment has been well enunciated here this morning in that direction.

If there is any laxity in that commitment, I have the distinct feeling that the chairman will rise to the occasion, based on his observations this morning.

I thank you very much, Mr. Secretary.

Mr. DINGELL. Thank you.

The Chair would like to ask a question.

Do you have any appreciation of what is going to be the rate of return fixed by FERC or NEB? If a 20-percent rate of return is fixed, or if debt is rolled in for purposes of calculating the rate of return, the rate of return could hit 30 or perhaps 80 percent.

I have some curiosity as to what assurance we have as to what will be a fair rate of return as opposed to what is going to be highway robbery here.

Secretary SCHLESINGER. The calculations that lie before you are based upon a 15 percent rate of return on equity.

Mr. DINGELL. On equity?

Secretary SCHLESINGER. On equity.

Mr. DINGELL. Not on equity and debt.

Secretary SCHLESINGER. No, sir, 10 percent on debt. Those are our calculations, in the task force. They do not prescribe what the FERC would do.

Mr. DINGELL. With the utmost of respect, that is the real question; that is, what is FERC going to do, and what is NEB going to do here.

Secretary SCHLESINGER. Mr. Chairman, in establishing the Department of Energy, the FERC was given an existence independent of the Secretary, so I will not—

Mr. DINGELL. I have some recollection of who the sponsors were of that. But, I am just curious, who is going to be bound by these calculations?

Secretary SCHLESINGER. If they are to be independent in that decision, surely I would not try to influence them, sir.

Mr. DINGELL. Mr. Secretary, you might not try, but I certainly might have them before us to explain that because fair return is very nice and thievery just ain't. I am going to keep a close eye on that particular question.

The Chair observes that we have a vote on. I have just got to run over there. Can we recess briefly? I think all of us would appreciate a brief surcease here.

The committee will be in brief recess.

[Brief recess.]

Mr. RONCALIO [presiding]. The hearings will resume, please.

I recognize Mr. Brown for 5 minutes.

Mr. BROWN. Thank you, Mr. Chairman.

Dr. Schlesinger, could Canada ever require U.S. customers to bear the risk of noncompletion of the Alcan system?

Secretary SCHLESINGER. Can the Canadians do so? No.

Mr. BROWN. Could you elaborate? Is it covered in the treaty or the agreement?

Secretary SCHLESINGER. Yes, sir. We agreed that there would not be an all-events tariff responsibility until service starts.

Now, quite obviously in one way or another, for those parts of the system that are in the United States, if they were started, and major costs incurred, some of those costs would have to be borne by somebody. We assume they would be borne out of the capital of the promoters of the pipeline.

Mr. BROWN. I wonder if you would ask somebody to check so that you can cite that part of the agreement for me?

Secretary SCHLESINGER. Yes, sir.

Mr. BROWN. The next question is, could the initial tariff used in Canada, which I understand would be set by the Canadian National Energy Board, for use of the pipeline, require that U.S. customers pay the full cost of service in the event of an interruption of service or a failure to deliver the full amounts that the pipeline might have, might otherwise be expected to carry?

Secretary SCHLESINGER. Yes, sir. However, let me reiterate that the final tariff arrangements must be specified before the first bulldozer moves, and must be approved by the Federal Power Commission or its successor before it issues the final certificate to the pipeline company.

Mr. BROWN. That is the initial tariff that is set?

Secretary SCHLESINGER. Yes, sir.

Mr. BROWN. And that is the result of negotiation between FERC and NEB?

Secretary SCHLESINGER. Yes, sir.

Mr. BROWN. Can a tariff be implemented in Canada after the initial commencement of the service by the Canadian pipeline which would require U.S. customers to pay the full cost of service as the Canadians see it that would bear additional costs or would cover the possibility of an interruption or anything of that nature; in other words, a modification of the tariff resulting from some judgment made by NEB after the gas is flowing and the pipeline has been completed?

Secretary SCHLESINGER. I cannot exclude entirely such a conceptual possibility, but let me emphasize three factors.

First, contracts are made for the lifetime of the project.

Second, those contracts, and the tariffs associated with those contracts, must be approved by the Federal Power Commission or its successor, which will be obliged to carry out those tariff arrangements which are specified in the original request for a certificate.

If I may continue, Mr. Brown—and obliged to follow the President's decision. If the NEB in your hypothetical question were to attempt unilaterally to go beyond the tariff specified and approved by the Federal Power Commission they would be without force.

The burden would fall upon the Canadian sponsors of the Canadian segments of the line which would attempt to recover those additional costs in U.S. courts. I believe that those are circumstances in which the NEB would be deliberately punishing the Canadian companies involved, the capital structure of those companies.

I think that is fair assurance against that taking place, as well as what has always been the very high professional standard of the NEB.

Mr. BROWN. But you are suggesting the possibility that the Federal Power Commission would decertificate the transmission of the gas through the line if they did not agree with the NEB tariff, the Canadian set tariff?

I guess the result of that would be that the Canadians are sitting there with a pipeline they cannot use and our situation would be that the Middle West or the part of the country being served by the pipeline would not have the gas. But that seems to be—

Secretary SCHLESINGER. There are two possibilities there.

Mr. BROWN [continuing]. A radical kind of step to take, to try to get the NEB's price to come down a little. Then you recommend or suggest the other possibility, that the NEB could come into American courts to upend the Federal Power Commission refusal to certificate.

Secretary SCHLESINGER. It is not a question of certificating at that point. Presumably the NEB has belatedly, after the operations have commenced, raised the tariffs, or attempted to raise the tariffs.

Those tariffs would be inconsistent with the tariffs filed with the FPC. The FPC would tell the American customers not to pay the charges which are inconsistent with the tariffs filed. It is at that juncture that the NEB, if it were to pursue this hypothetical trail, would have to come into U.S. courts.

It is also possible, the second part of your question, that if we fail to do that, that the Canadians would terminate or interrupt service on the line. But that gets back to the kinds of issues that I was discussing with Mr. Collins, our general relationships with the Canadians.

We have pipelines going through Canada, or there are Canadian pipelines that serve us. There are Canadian pipelines in the United States serving Canada.

I don't think, given the mutual interests involved, that we are going to get into this kind of game of retaliation.

Mr. BROWN. I would hope not. But I would be a lot more comfortable if it were more clearly spelled out in the treaty.

Mr. RONCALIO. The time of the gentleman is expired. I recognize the staff for 5 minutes.

Mr. BRAUN. Secretary Schlesinger, let's assume that pipeline X is a U.S. shipper who has contracted with the Alcan system for transportation service. Under the President's decision, is pipeline X required to pay a portion for the cost of service of the Alcan system if for any reason none of pipeline X's Alaskan natural gas is actually being transported through the Alcan system?

Secretary SCHLESINGER. That question cannot be answered in the abstract. It would depend upon the specific contracts, and what the FPC has allowed.

Mr. BRAUN. This is the section in Canada, so the FPC would not be involved in the tariff situation there.

Secretary SCHLESINGER. Then it would depend upon the contracts, and what the NEB did.

Mr. BRAUN. Is this situation covered in the agreement between the United States and Canada?

Secretary SCHLESINGER. I am going to allow Mr. Smith to answer some of these technical questions.

Mr. SMITH. Not specifically, sir.

Mr. BRAUN. Turn to page 57 of your decision, please. At the bottom of the page, the agreement with Canada says that the "cost of service to each shipper in each zone will be determined on the basis of volumes as set forth in transportation contracts."

Mr. SMITH. That is correct.

Mr. BRAUN. Doesn't that mean that if a pipeline company has a contract for a fixed volume to be transported through Canada, that that pipeline will pay regardless of the volumes transported?

Mr. SMITH. It is implicit in that statement that the contract had been approved by the National Energy Board at the time that the project went forward. I think the answer is yes, that insofar as allocation between United States and Canadian shippers is concerned, it would be on the basis of contracted volumes. That is not to say that those contracts might not change from time to time.

Mr. BRAUN. So, this section of the decision states that the cost of service will be based on the contracted volumes between the U.S. shippers and the Canadian pipeline that is going to transport that volume, right?

Mr. SMITH. In the event that cost allocation is required—that is, the Canadian gas is flowing with U.S. gas—the allocation would be on the basis essentially of the contracted volumes.

Mr. BRAUN. Contracted volumes?

Mr. SMITH. Yes, sir.

Mr. BRAUN. What kind of tariff does that mean we will have on the Canadian portion of the system?

Mr. SMITH. I assume that it means that there will be a cost-of-service type tariff in which the actual volumes would not be determinative, would not be the divisor, but rather the contracted volumes would be the divisor into the actual cost of service. That is true for any pipeline in this country as well.

Mr. BRAUN. Would you turn to page 254 of your decision, please?

Here we have a statement, and I quote;

Cost of service to each shipper in each zone will be determined by allocating the total costs of constructing and operating the pipeline in that zone among the shippers transporting gas through it in proportion to the volumes of gas transported for every shipper.

It doesn't say contracted for, but it says transported. This indicates that you are not going on the basis of contractual volume, but on the basis of actual volumes.

Now, Mr. Smith, which is it?

Mr. SMITH. Page 254 is just a brief summary of the agreement. But the agreement is phrased in terms of contracted volumes. I think transport was used loosely.

Mr. BRAUN. Is your summary incorrect then?

Mr. SMITH. I would say it is misleading, perhaps, in the sense of suggesting that transportation or actual volumes would be controlling.

Mr. BRAUN. Then we should rely on page 57 and 58.

Mr. SMITH. Yes.

Mr. BRAUN. To understand what kind of tariff will be imposed?

Mr. SMITH. That is correct.

Mr. BRAUN. And we may imply from the statement here that since it is on the basis of contractual volumes, not actual volumes, that, going back to my original question, under the President's decision pipeline X will be required to pay a portion of the cost of service of the Alcan system even if none of pipeline X's Alaskan natural gas is actually being transported through the system?

Mr. SMITH. That does not necessarily follow. The allocation that you refer to, the agreement pertains only to the allocation between U.S. shippers and Canadian shippers, each as a group. The Federal Power Commission presumably could change the allocation among U.S. shippers to reflect actual volume relationships.

Mr. BRAUN. But, Mr. Smith, I would like you to look at the language, please. It says the cost of service to each shipper—it says “to each shipper.”

Mr. SMITH. That is correct.

Mr. BRAUN. It does not say to the U.S. shippers as a group and the Canadian shippers as a group.

Mr. SMITH. But there is no reason why the Federal Power Commission could not reallocate the border on the basis of a different method of allocation. This is within Canada, insofar as the agreement is concerned.

Mr. BRAUN. Are you saying this agreement does not bind each shipper to pay the cost of service based upon the volumes set forth in the transportation contracts?

Mr. SMITH. It does, unless the Federal Power Commission should determine that at the border a different allocation should occur.

Mr. RONCALIO. Thank you very much, gentlemen.

Mr. DINGELL. I have a few more questions, Mr. Chairman.

Mr. RONCALIO. First, I would like to throw this out. I have been awaiting an hour or so to do it. I don't know if any of you can answer it. Perhaps somebody from El Paso. Perhaps somebody from the Canadian companies.

It was with sadness last week I read in the paper that tens of millions of dollars of equipment, pipeline construction draglines, tractors, trucks, construction camp equipment, was being auctioned at a fraction of its cost in Washington, having been transported all the way back from Anchorage, back down to the lower 48, when we are facing the construction of an identical paralleling pipeline in Alaska.

Why was that permitted? Because we have built-in obsolescence in our system, which Dr. Schumacher gave his life to try to fight, and was unsuccessful in doing? Do we have to buy all new equipment so the ratepayers can pay a fancy \$3 for the gas that might have been \$2 if the thing had been built with the same equipment?

Maybe I have answered my own question. Who could have stopped those individual private enterprise contractors from doing what they want to with their own equipment? They own it, they finish their function, they want to sell it. Who can stop them?

Secretary SCHLESINGER. Nobody can stop them, Mr. Chairman. I thought your question was addressed to Mr. McMillian or to Mr. Gibson.

Mr. RONCALIO. I would like to hear from anybody who thinks they can throw some light on this problem.

Secretary SCHLESINGER. I think there is always a possibility of alertness for these kinds of opportunities. But there is no guarantee that companies will take advantage of such opportunities. They have every incentive to do so.

In this case, they would have additional incentive because of the variable rate of return.

There is still much equipment in Alaska, and I think that your question does underscore the advantages of moving expeditiously, so that no more of that equipment than what you have referred to will be moved out of Alaska at added cost to the American consumer.

Mr. RONCALIO. Thank you very much.

Mr. Dingell?

Mr. DINGELL. Gentlemen, I have some more questions regarding some things we are troubled with. Can you tell us how the \$30 million payment was negotiated with the Canadians? What was the basis on which that was done?

Secretary SCHLESINGER. It is comparable to the Alaskan rate. What we have is—

Mr. DINGELL. I don't mean to differ with you on a matter of this importance, where your knowledge is probably superior to mine, but Mr. Lysyk did a little bit of figuring on this matter, and he said as follows:

These tax revenues per mile are less than three-quarters of the revenues per mile that would accrue to the Alaskan government for property taxes on the Alaska section of the pipeline.

He was referring to the figure which would indicate that the comparable tax in the Yukon would be approximately \$15 million, not \$30 million. We had an extensive discussion on that yesterday, and his assumption was that if those figures were \$11 million in the Yukon it would come out to about \$15 million in the other relationship.

Now, Doctor, can you tell me how you and Mr. Lysyk can differ on a matter of this importance?

Secretary SCHLESINGER. Mr. Lysyk was off on his own. Judge Lysyk or Profesor Lysyk was writing his report. It had, I think, limited bearing on the position taken by the Canadian Government.

One aspect of it is that when he used those figures of \$15 million, he was talking about current prices—dollars at the present value, 1976, 1977. The \$30 million payment is in 1983 dollars, Canadian. A substantial part of that difference occurs from that.

Mr. DINGELL. That is 2-to-1 inflation.

Secretary SCHLESINGER. I said some substantial part of the difference. I don't think that it accounts for all.

Let us put in the record, Mr. Chairman, a note which provides a reconciliation between the Yukon tax regime and the Alaskan tax regime, plus a note that deals with the issues raised by Dean Lysyk in his report.

[The following material was received for the record:]

COMPARISON OF ALASKA AND YUKON TAXATION

property taxation practice in Alaska is to apply the extant mill rate to "full and true value", which is replacement cost less depreciation. As the current mill rate is 20, property taxes in Alaska are currently assessed at 2 percent of the defined value of the property annually. In theory at least, an asset would be revalued each year, to account for appreciation due to inflation and for depreciation.

Taxation practice in Canada, on the other hand, is to use some fraction of full value for the assessed valuation for property tax purposes. A fraction of full value is used to compensate for depreciation of the asset, and the assessed value is consequently not often changed. Mill levies in Canada tend to be higher than those in Alaska. In both jurisdictions, increased revenue requirements, beyond those provided for by the normal increase in taxable assets located within the jurisdiction of the taxing authorities, would be provided for by increasing applicable mill rates.

The current mill levy in the Yukon Territory is 38 mills. The Lysyk Commission recommended an assessed valuation for an Alaska Highway pipeline of 30 percent of construction cost. Thus, the effective taxation rate recommended by the Lysyk Commission was 1.12 percent of construction cost annually. Construction cost could effectively be the same as "full and true value" for the first few years of operation of the pipeline.

We spoke with the Lysyk Commission staff regarding the meaning of the statement referred to on page 75 of the report of the Alaska Highway Pipeline Inquiry (Lysyk Commission). The staff explained that the reference in the report simply meant that revenue generation by an effective taxation rate of 1.12 percent per annum of the construction cost of the pipeline was less than three-fourths of the revenue generation of an annual taxation rate of 2 percent of a declining valuation. The tax assessment in Canada would be applied to a constant proportion of the initial value of the asset, depreciation having been taken into account by the use of partial value of the pipeline as the assessed value. In Alaska, on the other hand, the value against which the tax assessment is applied would depreciate over time. Therefore, a more precise statement of what was intended by the Commission staff would be that per mile revenues under the Lysyk taxation formula would be less than three-fourths of the revenues per mile that would accrue to the Alaska state government from property taxes on the Alaskan section of the pipeline over the life of the pipeline.

The taxation regime suggested by the Lysyk Commission was in addition to a \$200 million socio-economic impact assistant payment. As the annual cost of that extra capital would likely be at least \$25 million, the total annual compensation package recommended by the Lysyk Commission would be closer to \$40 million.

The table below gives a comparison of per mile tax revenues in Alaska and those in the Yukon Territory under the formula agreed to by the U. S. and Canada.

COMPOSITION OF ESTIMATED PER-MILE
PROPERTY TAX REVENUE FOR 1983
IN ALASKA AND THE YUKON TERRITORY

ALASKA

- | | |
|--|-------------------|
| 1. Constant (1975) dollar estimate of construction cost, including expected cost overruns but excluding interest during construction. 1/ | \$ 2.057 Billion |
| 2. Escalated to 1983 dollars at 5 percent per year. | \$ 2.744 Billion |
| 3. Property tax at 20 mills. | \$54.884 Million |
| 4. Divide by 731 miles of pipeline in Alaska. | \$75,081 Per mile |

YUKON

- | | |
|--|------------------------|
| 1. Property tax in 1983 Canadian dollars | Canadian \$30 Million |
| 2. Convert to U.S. dollars at U.S. \$0.93 = Canadian \$1.00. | U.S. \$27.9 Million |
| 3. Divide by 478 miles of pipeline in the Yukon. | U.S. \$58,368 Per mile |

COMPARISON

Yukon tax as proportion of U.S. tax	$58,368/75,081 = 0.777$ or 77.7 percent
-------------------------------------	--

- 1/ Alaska taxes only the direct costs of the facilities, not including any allowance for interest during construction.

Mr. DINGELL. Any explanatory information that you could give would be appreciated because there is a difference, as I figure, of about two to one here. That is a large difference.

Can you tell us what the possibilities are that the Dempster line will be in service after the main line is no longer moving Alaskan gas?

Secretary SCHLESINGER. Could you repeat that?

Mr. DINGELL. If this were to occur, would the United States or U.S. shippers be in any way liable for the cost of service on the Dawson spur even though they were not taking gas and even though they never contracted for any of the gas in question?

Secretary SCHLESINGER. Could you repeat the first part of the question, Mr. Chairman?

Mr. DINGELL. The first part of the question is, is there a possibility that the Dempster line would be in service after the main line is no longer moving Alaskan gas?

Secretary SCHLESINGER. I would think that is most implausible. I cannot conceive of circumstances of that sort, unless suddenly there is a metropolis created at Dawson or Whitehorse to absorb that gas.

The gas will be coming out of the Mackenzie Delta presumably directed toward Toronto, Montreal or possibly American purchasers. It is not going to stop there in Dawson.

Mr. DINGELL. If this were to occur, wouldn't the United States or U.S. shippers then be liable for the cost of service on the Dawson spur, even though they are not taking any gas on that spur, and indeed even though they have not even contracted for any gas on that spur.

Secretary SCHLESINGER. I think that it is quite correct that if the main line were to shut down and if the Dempster lateral were to continue, that in principle the U.S. consumer is responsible for the cost of service on the Dawson spur.

As I have indicated, those are circumstances that are almost unimaginable. There is no substantial market to absorb the gas from the Mackenzie Delta in Dawson or Whitehorse, and in addition we anticipate—we cannot conceive of the circumstances in which the main line would be shut down. That is the purpose of the line, to bring gas from Alaska.

Mr. DINGELL. Am I in error in assuming we could have a contingent liability to pay the Canadians a portion of the cost of the delivery of that gas to Canadian markets, if the first assumption is correct?

Secretary SCHLESINGER. If one speaks entirely in the abstract, one can logically conceptualize such a contingent liability. But, there is no pragmatic liability associated with it, simply because there is no market for delta gas in Whitehorse and Dawson to permit that line to go, and the main purpose of the line is to bring gas down from Alaska.

Mr. DINGELL. But it is going to bring Canadian gas down to Canadian markets in eastern Canada, too. The Canadians could still have gas up there, after we have exhausted ours.

Secretary SCHLESINGER. I am sorry.

Mr. DINGELL. They are going to bring that gas down and move it someplace. If they move it to Canadian markets, doesn't this con-

tract subject us to some liability for paying part of the cost of the delivery?

Secretary SCHLESINGER. I am sorry, Mr. Chairman. I thought that your question applied to termination of the shipment of gas at Dawson. I understand now you are just shutting off the U.S. line, as it were, beyond Dawson to Prudhoe Bay.

Mr. DINGELL. Yes.

Secretary SCHLESINGER. Under those circumstances, indeed there would be a contingent liability.

Mr. DINGELL. Can you give us an idea of the magnitude of our liability and possibly some suggestion as to what we are going to do about that?

Secretary SCHLESINGER. If there is no gas flowing, Mr. Chairman, we have no liability.

Mr. DINGELL. Can you support that statement on some portion of either the agreement with the Canadians, or the treaty? As I read the agreement, it says we pay two-thirds of the cost of service.

Now, maybe, Mr. Secretary, I am in error on that. If you want to let your associate answer this, I don't have any objection.

Mr. SMITH. Mr. Chairman, that is an extremely technical question. My offhand reaction is that if there was no cost of service owing on the main line, then there would be nothing to allocate to Dempster. But, I could be in error with respect to that.

Mr. DINGELL. Could you check into it and give us your response?

Mr. SMITH. Surely.

[The following material was received for the record:]

The question is the liability of U.S. shippers for the share of Dawson spur cost of service in circumstances in which no U.S. gas is flowing in the mainline. There are two basic situations.

The first is where the contracts of all U.S. shippers in relation to the mainline have expired and are not extended or renewed. The Section 6(b) of the Agreement on Principles relates to Dawson spur cost of service, and is prefaced by the statement "the following principles apply for purposes of cost allocation used in determining cost of service applicable shippers". If the transportation contracts have expired and no U.S. gas is being transported through the mainline, no U.S. company would be liable for a cost of service and no U.S. company any longer would be a "shipper" in relation to the system. There would be no "U.S. shippers" for purposes of Section 6(b). Thus it is my opinion that in this circumstance there would be no U.S. liability for the Dawson spur.

The second circumstance is where the Alaska natural gas production unexpectedly has declined or ceased, but U.S. shippers still have contractual obligations for mainline cost of service. In this instance they would be "U.S. shippers" under the Agreement and the liability for the Dawson spur cost of service also would continue.

In any event, the Agreement on Principles could be terminated by either country pursuant to Section 15, after 35 years.

Mr. DINGELL. Mr. Secretary, I am not trying to set you up. I am just curious about these little matters.

Mr. BROWN. Are you predicating this on the theory that perhaps the Prudhoe Bay field plays out, and the Mackenzie, the Canadian field, is still producing? Is that the idea?

Mr. DINGELL. That is the thesis.

Mr. Chairman, I had a couple of more questions that I wanted to have Mr. Braun ask for me. They concern things a little more technical than I like to play with.

If I could, I would like to yield to Mr. Braun for some further questions.

Mr. BRAUN. I would like to return to the commitment that the agreement contains regarding the U.S. shippers' obligations to the Canadian transportation pipeline.

This agreement appears to commit U.S. shippers to pay the cost of service to the Canadian Pipeline Co. on the basis of the volumes set forth in the transportation contracts between them.

Mr. SMITH. I think that is a correct reading.

Mr. BRAUN. That is. All right.

Then any refusal therefore of the U.S. shippers to pay that kind of tariff on the Canadian system would violate this agreement, would it not?

Mr. SMITH. Yes.

Mr. BRAUN. If the U.S. shippers refuse to pay whatever the NEB sets the price at, the U.S. shippers violate this agreement, correct?

Mr. SMITH. Yes. If the contracted volumes at that point were—that is, if we had entered into contracts that went beyond the life of the Prudhoe Bay field; yes. In that situation I would agree with your interpretation.

Mr. DINGELL. Would you limit it to the period after the life of the Prudhoe Bay field, or is that kind of constraint in any fashion embodied in the agreements?

Mr. SMITH. Well, the agreements between the two governments do not deal with the question of the length of transportation contracts. I would suspect that they would not be indeterminate in length, that they would have some relationship to the predicted life of the Prudhoe Bay field.

That would not necessarily prevent the situation from arising in which the Prudhoe Bay field played out.

Mr. DINGELL. First of all, our national judgments on these matters are predicated on the assumption there is a great deal more oil and natural gas up in Alaska.

As a matter of fact, there is a major program not only dealing with natural gas in Prudhoe, and the areas thereabout, but also dealing with the natural gas and petroleum in Petroleum Reserve No. 4, which lies just to the west.

There is considerable discussion about the exploration which has been going on inside the Arctic game range, which lies just to the east of that, and which is immediately adjacent to the fields in the Canadian Mackenzie Delta area.

Now, given this assumption, I think it is fair to assume that we probably are going to see natural gas flowing through this line after the conclusion of the life of the Prudhoe Bay field. So, this does make relevant the question just raised by counsel.

I would appreciate your response to this, in light of the fact that your assumptions in almost every instance go to the idea there is more natural gas up there than that.

Maybe you can respond to that, if you please, sir.

Mr. SMITH. Yes, sir. In reference to agreements made by purchasers of Prudhoe Bay gas, I would expect that they would have some time limitation, 20 or 25 years.

Mr. DINGELL. That still leaves us the question of what we are going to do when the gas gets to the Canadian border. How is our FPC or FERC going to condition that, if the NEB and the shippers and the producers are not going to agree? That is a question Mr.

Braun is addressing. I really do think that it is a very important question.

Secretary SCHLESINGER. OK, Mr. Chairman, we will deal with that question and provide some comments for the record, and pursue it at greater length with your staff.

[The following material was received for the record:]

The FERC will have the power and opportunity to review all terms of contracts and tariffs related to the Alaska Natural Gas Transportation system to determine if the public interest will be served by certification of the U.S. portions of the systems. The FERC can condition its certificates to overall terms that serve the public interest. If, for example, the U.S. shippers should propose contracts in Canada that would extend initial liability for cost of service significantly beyond the projected life of the initial reserves in the Prudhoe Bay field, the FERC could find the unreasonably extended liability contrary to the public interest and condition the U.S. certificates to appropriate reduction in the term of the contracts.

Mr. DINGELL. Can you give us any guidance at this particular time? I will yield back to Mr. Braun here.

Mr. BRAUN. Before we leave the subject matter, I would like to make sure we understand what this agreement does.

What the agreement does is if pipeline X contracts with the Canadian pipeline to transport 100,000 M ft³ per day—all right?

Mr. SMITH. Yes.

Mr. BRAUN. And if at any time that 100,000 M ft³ flow of gas per day ceases, the agreement that you have negotiated with the Canadians commits the U.S. pipeline X to pay for that 100,000 M ft³ per day, whether or not it is delivered.

Mr. SMITH. During the life of the contract, that is correct. But that is not essentially different from the circumstances that prevail in respect to regulated industry generally in the lower 48. The cost of service of the industry is paid even though the necessity for that particular service or pipeline may have diminished in relation to the expected need.

Mr. BRAUN. It is my understanding that the Canadian negotiators wished to put a provision for a full cost of service all-events tariff in the agreement, is that correct?

Mr. GOLDMAN. That is incorrect, Mr. Braun. I think it should be underscored, as Secretary Schlesinger indicated earlier, that the protection that the United States has in this regard a protection that goes to the flexibility of the United States in facing the circumstances upon final completion of the financing of this pipeline, is that the life of the project contracts which must be executed between the shippers and the U.S. distribution company purchasers, will be subject to an approval by the FPC.

There will be no project, there will be no bulldozer that will move 1 ounce of earth until such contracts are approved with all the terms and conditions in those contracts specified under various points that you have raised.

Mr. DINGELL. You are saying that all of these agreements with transporters of gas and with the U.S. pipelines and with the producers up at Prudhoe will all be approved prior to the time that the construction commences?

Mr. GOLDMAN. That is correct, and that is the assurance that the United States has in terms of protecting our interests vis-a-vis our consumers. To have written the kind of specifics into the agreement that you have suggested would have been to foreclose some of

our options in view of circumstances that developed, for instance, in the financing that may have come out differently than we might expect right now.

So, the U.S. consumer has the maximum protection in terms of the mandate to the FPC and its successor organization to protect those interests by reviewing the final terms of the contract at that time. That was a conscious decision made during the negotiations, to protect all of our options, as opposed to writing into the agreement something that we might later on not have the flexibility to work with.

Mr. BRAUN. There is nothing in the agreement, however, which precludes the NEB, following FPC approval, from changing the terms and conditions in their tariffs. But that is not what is disturbing.

Secretary Schlesinger said that in the case of a service interruption—speaking now about a tariff that is applicable to the United States—all costs would be recovered except perhaps there would be a reduction in the rate of return on equity based on throughput.

This disturbing point is that in the agreement with the Canadians you have bound the U.S. shippers to pay a tariff that is more severe than that which you say is to be effective in the lower 48 States.

Mr. GOLDMAN. That is not the case in terms of either the way that language works or in terms of the FPC's review of the final contracts.

Mr. BRAUN. This language says that the pipeline is going to pay according to contract volume. Those volumes do not have to be flowing through that pipeline.

Mr. GOLDMAN. But that is the standard of regulation in the industry.

Mr. BRAUN. Could you supply us further material on that allegation?

Mr. GOLDMAN. We certainly will.

[The following material was received for the record:]

There are several tariffs on file with the Federal Power Commission that involve transportation services analogous to the service that will be provided up by the Alcan system. In each instance, the "contracted volume" is the sole or predominate determinant of cost of service payments and hence the determinant of the allocation between shippers. The most analogous situation is the Stingray Pipeline in the Louisiana Offshore area. Stingray, as will Alcan, provides only transportation service. There presently are three shippers. The T-2 tariff applicable to United Gas Pipeline is typical of all three and provides in Article IV as follows:

"2. The monthly transportation payment by United to Stingray shall be the Transportation Quantity multiplied by Stingray's unit transportation rate.... Stingray's unit transportation rate shall be designed to recover uniformly Stingray's cost of service on the basis of aggregate transportation quantities in effect from time to time." (emphasis added) —

—/ The rates of a public utility are designed to recover no more than the total cost of service. Therefore a mechanism that establishes a rate for a particular customer inherently establishes the allocation of cost of service to that customer.

"Transportation quantity" is defined in Article II of the tariff as the maximum quantity that Stingray is obligated to transport for United, in this case 200,000 Mcfd. / Thus, whether United ships 10 Mcfd or 200,000 Mcfd, the total transportation charge would be the same. "Contracted volumes" control the cost of service to United.

Sea Robin Pipeline Company, another offshore Louisiana pipeline, is similar. / A typical Sea Robin transportation rate schedule is that for Tennessee Gas Pipeline Company. See Vol. 2, sheets 59 et seq of the Sea Robin Rate Schedule. The rate is a demand charge of \$4.43 multiplied by "Contract Demand" plus a Commodity Charge of \$.51 per Mcf of gas actually transported. "Contract Demand" is defined as the maximum daily volume in Mcf of gas that Sea Robin is obligated to accept and transport (35,000 Mcfd). See Sheet 61 of the Sea Robin Rate Schedule. Thus the "contracted quantity" determines about 96.6 percent of the rate to Tennessee.

—/ There are contractual provisions for periodic adjustment of the "Transportation Quantity" after 2 years.

—/ Unlike Stingray, Sea Robin purchases and resells gas and renders transportation service to others. It thus has both sales and transportation tariffs.

Great Lakes Gas Transmission Company, which transports Canadian gas through the U.S. for Trans Canada Pipelines Ltd., has a minimum bill that is 98 percent determined by the "Contract Quantity."

The rate schedules for transportation services by Florida Gas Transmission to Florida Power and Light Co. and Florida Power Co. have a similar effect. The base rate is nominally a "commodity" rate that varies with actual volumes transported; however, there is a minimum monthly bill that is 100 percent of contract demand in case of Florida Power, and 90 percent of contract demand in case of FP&L.

Thus, contract quantities are a common measure of shipper responsibility where transportation services are rendered. This is so because pipelines are designed, financed and constructed for a capacity that is determined by the contracts. It is essential to equitable and complete recovery of cost of service that those contract quantities be the principal determinate of shipper payments.

These principles, somewhat obscured, also are inherent to the typical regulated interstate pipeline that transports its own gas for resale. The resale rates are set to allow

the opportunity for recovery of the full cost of service even though the full capacity of the system is not used.

The prime examples today are the interstate pipelines which currently have a large unused capacity. For example, west of the Permian Basin in Texas, El Paso Natural Gas Company will this coming year deliver approximately 2.7 bcfd; it has the pipeline capacity to deliver 3.8 bcfd, or 46 percent more than expected volumes. Peak day deliveries will be only slightly higher than average day and peak day capacity is about 4.2 bcfd. The excess capacity has led to the proposal to abandon one 30" line so that it could be converted to oil transportation. However, until such time as abandonment occurs, the full capital costs of that 30" line are in the rate base of El Paso and are being paid by El Paso's customers. The same is true for every other pipeline or other utility that has excess capacity.

In some cases, the particular facility will have no prospect for future use and it may be removed from rate base and written off. The effect of the write off is to cause the customer to pay more quickly but probably slightly less in total than if the item was depreciated in the rate base.

Thus, it would be no departure from common practice for the U.S. and Canadian pipeline companies to recover the cost of service determined and allocated upon contracted volumes rather than upon actual volumes. The pipelines will be designed and constructed for a given capacity based upon the total constructed volumes. So long as the companies are ready and able to provide that level of service, there would be nothing unique in providing recovery of the total cost of service, allocated by contracted volumes. /

The above discussion applies to circumstances in which the pipeline stands ready to deliver the contracted volumes. The opposite circumstance is a service interruption in which the shipper is able to tender the contracted volumes but the transporter is unable to carry them because of technical or other failure of the pipeline. The probability of such a failure is extremely low; gas pipelines are the most reliable method of transportation. However, because of the magnitude of this project in relation to the total assets of the

/ The principal variable item in relation to transported volumes is fuel. Under the Agreement on Principles with Canada each shipper will provide its own fuel, which has the effect of "allocation" in relation to actual volumes.

participating sponsors, it is probable that a minimum bill tariff will be required by which at least the debt service of the project would be paid by the purchasers during service interruption. The allocation of costs during such a period also would be on the basis of contracted volumes. / There is little other basis for allocation. By definition, there may be no actual volumes flowing and any proration of available capacity, hence utilization, would likely be determined by contract volumes.

/ The allocation method has no effect on determining the level costs to be allocated. The latter determination will be in accordance with the contracts and tariffs.

Mr. DINGELL. I have a simple question here. It is according to contracted volumes and not delivered volumes. Unless English has changed since I took it, there is a difference between the two. In other words, if you are paying according to contracted volumes, that gas doesn't have to go through the lines.

If you pay according to what the contract says, then you are supposed to pay, whether they in fact deliver that amount or not. That is the point to which I think Mr. Braun addresses himself.

Can you comment as to how either Mr. Braun or I am in error as to our appreciation as to the way this particular portion of the provisions will work?

Mr. GOLDMAN. It is clear this is a very complicated area. We will provide for the record and be glad to sit down with your staff to go through how this pipeline relates to the regulation of all other pipelines in the United States.

Mr. DINGELL. Mr. Goldman, I have great respect for you and your ability.

Let me come to a matter with respect to this Executive Policy Board that troubles me.

Presidential supervision over the Federal inspector will be delegated to an Executive Policy Board. The board would be made up of the Secretaries of Interior, Energy, Transportation, the EPA and the Army Corps of Engineers.

Now, we have two agencies with an incredibly bad track record, the Departments of Interior and Transportation, the Administrator of the Environmental Protection Agency, who as near as I can figure knows very little about these matters, and finally the Chief of the Army Corps of Engineers, and/or their deputies.

Then you say the Federal inspector shall serve as a nonvoting chairman of the board. If you have a bad inspector, you are going to have the fox running the hen roost. How are we to take any comfort from that arrangement?

Mr. GOLDMAN. That is exactly why the Congress in its wisdom required this particular Federal inspector be a Presidential appointee that would be subject to the advice and consent of the Senate.

Mr. DINGELL. The last inspector was a Presidential appointee, and he was either a fool or a knave, and that debate yet goes on.

Mr. GOLDMAN. But he did not have the authority this Federal inspector will, or the advisability in terms of the responsibilities for enforcement, cutting through all levels of the Federal Government, coordinated in one place, where both the applicants and all concerned individuals can apply. We will have one spokesman now, a construction czar as it were, who will make this happen.

Mr. DINGELL. Does he have all the authority that he needs to see to it that things go as they should, or does he need additional statutory authority? Your authority under the Reorganization Act does not include the creation of new authorities and powers, but only provides for the movement of powers from place to place.

Secretary SCHLESINGER. We will examine that question, Mr. Chairman, and if there is any additional need for the statutory authority, we will be back to you.

Mr. DINGELL. I would like a very specific answer to this question. Can you tell me why the Chairman of the Federal Power Commission, or the FERC, is not on this body?

Secretary SCHLESINGER. It is an independent agency, sir, or an independent component of a Department.

Mr. DINGELL. If they are going to do all the regulating shouldn't they be there to give their advice?

Secretary SCHLESINGER. The regulator should be separated from those who are regulated.

Mr. DINGELL. Are you telling me that DOT and Interior and the Department of Energy are not regulatory bodies, also?

Secretary SCHLESINGER. They are not independent in the sense of the statute that you spent a fair amount of time drafting, Mr. Chairman.

Mr. DINGELL. Thank you.

Mr. RONCALIO. I would like to have the record include at this point a letter dated September 22, 1977, from R. Clyde Hargrove, of Shreveport, La., to the chairman, John Dingell, regarding the subject matter.

[The letter referred to follows:]

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September 22, 1977

The Honorable
John D. Dingell
Chairman
Subcommittee on Energy & Power
Committee on Interstate & Foreign Commerce
United States House of Representatives
Room 3204 House Office Building Annex No. 2
Washington, D. C. 20515

Dear Mr. Chairman:

By letter dated September 19, 1977, you addressed the following question to me as counsel for the United States Shippers Group:

"Will any member of the U.S. Shippers Group enter into a transportation contract with the Canadian company or companies that does not prohibit the operation, at any time, of a full cost of service tariff in Canada?"

In an effort to avoid any possible misunderstanding of the meaning and intent of certain terms employed in your letter, and of the scope of my authority to respond thereto on behalf of any U.S. shipper, I must beg your indulgence for some prefatory comments.

First, I do not have, I have not sought, and I would not accept responsibility for committing any shipper to any definitive undertaking such as signing a tariff or

providing any form of financing. Such a commitment could be undertaken only on express authorization of each shipper's individual board of directors, based on definitive documentation and final regulatory orders; there can be no assurance of unanimity of decision by each shipper involved. However, in order to try to assist your subcommittee in addressing the question you have raised, I believe it permissible for me to discuss, and that I am qualified to discuss, the legal/regulatory issues your question raises, and to offer a purely personal opinion on the acceptability in general to shippers of certain forms and provisions of tariffs. Due to time constraints, it has been impossible to clear these personal views with individual shippers, and these personal views are not necessarily the views any particular one of them would advance. My answers, therefore, do not respond to whether "any member of the U.S. Shippers Group" would enter into a particular form or provision of contract, but rather express my opinion of what shippers in general would be likely to do.

Second, it is important to note that all tariffs are literally "full cost of service" tariffs. Regulated companies are legally entitled to an opportunity to recover all costs -- operating and capital, including a reasonable return thereon -- prudently incurred to provide service to customers. Tariffs are the mechanisms by which these costs are sought to be recovered. The efficiency of the tariff mechanisms in achieving that objective varies both with the form of tariff selected and, of course, with the substantive terms and conditions written into any such forms. The forms usually employed may be divided roughly into three categories: (1) a form which directly charges costs as incurred and recorded on the books of account, commonly called a cost of service form; (2) a demand/commodity form stated in

dollars and cents per unit of demand and commodity (sometimes called a "conventional" form for pipeline service), in which fixed rate levels are adjusted periodically to reflect the cost of service experienced over a selected test period; and (3) a pure commodity form (customarily used in producer sales contracts and most distribution company sales to ultimate consumers), which also employs a fixed rate subject to adjustment periodically. The forms are listed in descending order of efficiency in collection of charges equalling the prudently incurred full cost of service; by efficiency I mean the degree of assurance that charges actually billed will neither understate nor overstate the full cost of service prudently incurred in actual operation during a given billing period. Despite its superior efficiency, the cost of service form is less frequently employed by a truly general service pipeline or distribution system, because the FPC historically has indicated a preference for the demand/commodity form for these types of operations. For a pure transportation system with limited input and delivery points, such as any Alaskan gas transportation system, the cost of service form is readily adaptable. A conventional demand/commodity form, however, is entirely feasible as a matter of form for such an operation.

I understand your question first to be addressed to the acceptability to U.S. shippers of a Canadian tariff employing a cost of service form rather than a so-called "conventional" form of tariff to effect recovery of the Canadian cost of service. The answer is: "Yes, that form of tariff would be acceptable;" if the substantive provisions

1

written into that form were reasonable, U.S. shippers in general could be expected to sign it and, in my view, such action clearly would be in the public interest. However, I believe the full thrust of your question does extend to the possible inclusion in that form of certain substantive provisions which would produce what has been called an "all-events" or "almost all-events" tariff. These provisions address: (1) payment during service interruption, total or partial, once service has been commenced; and (2) payments prior to commencement of service, or in the event service never should commence, due to inability to complete the project.

Insofar as service interruptions are concerned, it is imperative that both the Canadian and U.S. project companies which are "project-financed" be able to assure lenders that their debt obligations can be serviced under any circumstances, and since the transportation contracts comprise their only revenue source, those contracts, whatever form of tariff may be employed, must assure collection of at least that amount of revenue (plus operating expenses) if the project is to be financed and built in the first place. However, I do not believe any shipper could prudently undertake an obligation to pay such sums during periods of interruption without assurance satisfactory to that shipper that such payments could be recovered concurrently from his own customers. To take the previous answer one step further, it becomes "Yes, shippers in general will accept a tariff which requires payment of sums sufficient to meet debt service charges and operating expenses during periods of interruption of service, provided they are satisfied they can recover such payments concurrently from their customers". It is my personal view that the public interest

requires such a tariff provision for any Alaska natural gas transportation system, regardless of the form of tariff employed.

A provision which would require payment of tariff charges prior to commencement of service, to continue until such time as service commenced, presents more difficult problems. Any shipper undertaking any such obligation first would require assurance it did not fall within the definitions of debt contained in existing financial indentures and agreements or, if so, that it did not violate such indenture restrictions. Next, such shipper would require firm assurance such charges, if assessed, could be recovered concurrently for the full term over which such charges might be assessed. Without undertaking an extended discussion of these problems, it is clear that affirmative regulatory action assuring such cost recovery by shippers would be required. Shippers would have to appraise the prospects of obtaining adequately assured regulatory rulings; that appraisal would have to be undertaken in the light of governmental attitudes then prevailing. At this time, I am unable to express an opinion whether shippers then would be willing to undertake such an obligation.

I do wish to distinguish between a charge by project companies to shippers prior to commencement of service, and adoption of an appropriate mechanism by which the shippers who also are equity investors may be enabled to generate cash flow from their own customers to cover the carrying cost of the equity investment prior to the time any cash flow may be realized by the equity investor from his investment in the project. This type of rate mechanism is

completely divorced from any commitment by U.S. shippers to Canadian companies (or U.S. project companies, for that matter), since it involves only the rate relationship between the regulated equity investor and his own customers. We do not understand the President's Decision to address this particular issue; it was addressed extensively by evidence introduced in the FPC proceedings, but no decision was required or rendered by the FPC at that time. Formal filings may be made by regulated equity investors with FERC seeking appropriate relief at a later date, when the regulated equity investors and the magnitude of their respective investments can be identified.

I trust these responses will be of assistance to you. If you have further questions, I shall be pleased to attempt to answer them.

Very truly yours,



R. Clyde Hargrove

RCH:prw

Mr. RONCALIO. I recognize the gentleman from Ohio.

Mr. BROWN. Mr. Chairman, I don't intend to pursue this very far. I would like to get as soon as possible from you or your Department some analysis of the discrepancy between what is in the President's report to Congress on the Alaskan natural gas transportation system in which the estimate for processing costs on page 95 are between zero and 30 cents an Mcf, in 1975 delivered dollars, and the testimony that we had yesterday from the commissioner of revenue in the State of Alaska, J. Sterling Gallagher, who said the cost is more likely to be in the 70- to 97-cent range per Mcf of gas for processing.

Now, my concern is that varying prices that are listed in here are somewhere between \$2.25 and \$3.99. That seems to me to be quite a broad range, of almost 100-percent variation.

Secretary SCHLESINGER. I am sorry.

Mr. BROWN. \$3.99, if you add the 97 cents versus 30 cents to the cost to consumer rather than applying it either to the cost of the producer or the cost of transportation.

Now, this is why I am confused, and why I want to know where we are here.

Did I understand you to say that that processing cost, whatever it is, will be an additional cost of a part of either the field price,

\$1.45, or the transportation costs, ranging from 80 cents to \$1.57 or that some part of it will be applied to some of those areas?

Secretary SCHLESINGER. There are a number of possibilities there. It could be independent of the pipeline and to the extent that it is independent of the pipeline, the costs can be allocated to the \$1.45 price, or not allocated to the \$1.45 price, depending on the FPC decision.

The table on page 95, to which you refer, is an assumed case in which something like 30 cents is allocated outside of the \$1.45 price. But, we will pursue this matter in greater detail for the record.

Mr. BROWN. It really is two questions. One is, do you disagree drastically or is the testimony of the Alaskan officials perhaps a matter of some merit that it could be as high as 97 cents? That is one part.

Secretary SCHLESINGER. That is in 1977 dollars, sir, or is that in 1983 dollars?

Mr. BROWN. I believe in 1975 dollars. Let me just read you the paragraph. As I said, there is a great deal more.

Secretary SCHLESINGER. That number is larger than any number I have heard on this subject.

Mr. BROWN. They said:

Traditionally, the cost of conditioning in the lower 48 States is but a few cents, but for every Prudhoe Bay pipeline, due to its unique requirements, the cost will more likely be in the 70 to 90 cent range per M ft³ of gas.

I said in the question and answer that followed that there was an elaborate discussion of the technical nature of why the price would be higher.

I want to go back and ask just one other question.

Secretary SCHLESINGER. There will be some careful consideration given to allocations here. There are certain costs which I believe are included in that statement that are not normally included in processing which are costs chargeable as part of the cost of the producers, such as water flooding, gathering facilities and the like. They would not be additive in the sense that you are applying the term, Mr. Brown.

Mr. BROWN. In other words, they would come out of the \$1.45?

Secretary SCHLESINGER. That is the normal cost of the collection of the gas.

Mr. BROWN. The reason for my concern is multiple

Secretary SCHLESINGER. You want to know what the impact is on price?

Mr. BROWN. If the 97 cents is all additive, then it pushes that price to the consumer up to \$3.99. If it comes out of the producer, then in effect it reduces the producer's return to, say, about 48 cents. It all comes out of that \$1.45, and it seems to me that could discourage further development of the area, and that isn't a result to be desired either.

Secretary SCHLESINGER. That is absolutely correct, and I think that first we must examine their figures to see which of those are not normal processing costs, assess their figures. I think that under the circumstances that you envisage, however, the price of the gas, if you include that 97-cent figure, would come to \$3.45 rather than \$3.99.

Mr. BROWN. Maybe that is an error in my addition. I am always willing to take that possible criticism, particularly from you.

But I would ask, Mr. Chairman, that the record be left open for response from the Secretary—

Secretary SCHLESINGER. Absolutely.

[The following material was received for the record:]

RECONCILIATION OF GAS PROCESSING COSTS

The State of Alaska has indicated conditioning costs in the 70-97cents/mmbtu range. The difference between the State's estimate and the one determined herein (See insert, p. 227) lies primarily in the facilities included. Their cost is based upon a facilities outlay of \$2 billion in 1975 dollars, which includes more than \$1 billion of oil-gas separation and gas gathering facilities that would be required for reinjection, even if no gas is sold. The remaining difference is attributable to the State's "rough" calculations. Those of our Exhibit 2 are more detailed and accurate with respect to tax treatment and timing.

Mr. BROWN [continuing]. Upon that issue and I would like to just ask the Secretary to elaborate on one more point that he made, and that was the prospect that in setting the tariff or the price for the gas that the agreement to be negotiated between the National Energy Board and FERC would be related to whether or not the producing companies were participants in guaranteeing some of the costs of the construction of the line.

Now, did I understand correctly that you would recommend that that be done in order to get the producer companies into the game of guaranteeing those costs of the debt of the line?

Secretary SCHLESINGER. Well, I haven't reached a judgment in my own mind what I would hypothetically recommend, but in any event that decision is one that is left to the FERC. I cannot at this time provide you with my personal judgment on that matter, but I will be prepared to do so—

Mr. BROWN. Would you read the first paragraph on page 38—

Secretary SCHLESINGER [continuing]. At the appropriate stage.

Mr. BROWN [continuing]. (b) Antitrust, and tell me if the decision has really already been made? I mean is it still up in the air? Is it a FERC decision? Is it your decision? Is it the President's decision? Where are we?

Secretary SCHLESINGER. It is an open decision, Mr. Brown. The antitrust section says that the producers may provide guarantees for project debt. The Antitrust Division's recommendation is that they not participate in ownership arrangements, so that that is an open issue.

Mr. BROWN. Mr. Roncalio and I, the chairman, sort of have a concern about this, perhaps for different reasons, but nonetheless if the Congress has any impact on this at this or some future time, I must say frankly to you it would be my suggestion that they not participate in any way.

I think the original recommendation of the Antitrust Division, which has been modified, makes some sense.

Mr. RONCALIO. I think I would be more comfortable. I think you would, too. I think we're going to have a continuing look at this matter, frankly, in the Congress, even if the approval were to be next week, of the President's decision.

I thank all of you very much. Cochairman John Dingell and I have consulted about these proceedings and we feel it is in the best

interests of all of us that we proceed through without a lunch hour break. We intend, of course, to meet one more time in October.

I know Exxon and Arco want that time. We probably will have some of you back then for some more detailed questions from the staff.

I want to thank you very much, Mr. Secretary and your excellent staffs, for your statement and patience this morning in helping to try to find some of the unanswered enigmas within our scenario.

Secretary SCHLESINGER. Thank you.

Mr. DINGELL. I would also like to commend you for your patience and ability and to assure you of my continued affection and high respect.

Secretary SCHLESINGER. Thank you, Mr. Chairman.

Mr. RONCALIO. We would like to have next Mr. Arthur Seder, chairman of the American Natural Resources Co. and Michigan-Wisconsin Pipeline Co., Detroit, Mich.; Mr. H. L. Lepape, president, Pacific Interstate Transmission Co., Los Angeles, Calif.; Seymour Orlofsky, senior vice president, Columbia Gas System Service Corp., Wilmington, Del.—nice to see you here, sir—and Mr. R. Clyde Hargrove, counsel, U.S. Shippers Group, Washington, D.C. Are you here, Mr. Hargrove?

Mr. HARGROVE. Yes, sir.

Mr. RONCALIO. Fine. Good to see you, sir.

STATEMENTS OF ARTHUR R. SEDER, CHAIRMAN, AMERICAN NATURAL RESOURCES CO. AND MICHIGAN-WISCONSIN PIPELINE CO., DETROIT, MICH.; H. L. LEPAPE, PRESIDENT, PACIFIC INTERSTATE TRANSMISSION CO., LOS ANGELES, CALIF.; SEYMOUR ORLOFSKY, SENIOR VICE PRESIDENT, COLUMBIA GAS SYSTEM SERVICE CORP., WILMINGTON, DEL.; AND R. CLYDE HARGROVE, COUNSEL, U.S. SHIPPERS GROUP, SHREVEPORT, LA., AND WASHINGTON, D.C.

Mr. RONCALIO. Gentlemen, welcome and we thank you for your patience in having endured this morning the proceedings so far.

We are interested in hearing from each of you, and you are welcome to read your statement verbatim or you may summarize from it if you wish, and take 5 or 10 minutes each, whatever way you would like to proceed.

Mr. Hargrove, why don't we proceed with you? Would you mind a 10- or 15-minute limit on your presentation?

STATEMENT OF R. CLYDE HARGROVE

Mr. HARGROVE. At this point I prefer simply to introduce the gentlemen for identification. This is Mr. Lepape on my immediate left, from Pacific Interstate Transmission; Mr. Arthur Seder next, from American Natural Resources and Michigan-Wisconsin Pipeline; and, finally, Mr. Seymour Orlofsky from Columbia Gas System.

These gentlemen are here today, Mr. Chairman, on behalf of the aggregation of companies which we have called simply the U.S. Shippers' Group. That comprises eight companies, and so that the committee will have a proper appreciation both of the size of the companies in terms of geographic distribution and also of the per-

centage of total gas supply of the United States, which is represented by those eight companies, I would like to quickly name them:

They include Pacific Gas & Electric Co., which serves substantially all of northern California; the Pacific Lighting Corp. and its subsidiaries, which serve substantially all of southern California; Northern Natural Gas Co., which serves the Great Plains areas and the Twin City major consuming area; Natural Gas Pipeline Co. of America, a subsidiary of Peoples Gas Co., which serves the Midwest and the major consuming area of Chicago; Michigan-Wisconsin Pipeline Co., which serves the Midwest and the major consuming area of Detroit; Panhandle Eastern Pipeline Co., which serves pretty well throughout the Midwest; Texas Eastern Transmission Corp., which renders some service in the South, extensive service in Appalachia and also supplies through sales a very large percentage of the gas in New England; and, finally, Columbia Gas Transmission Co., whose service area extends from the State of Ohio eastward to the seaboard, including, incidentally, the District of Columbia.

Mr. RONCALIO. Very good.

Mr. HARGROVE. At the conclusion of Mr. Seder's statement, which will brief our prepared statement, I would like, with your leave, to make a brief addenda because I think we should try to give you some clarification of our view of a couple of the figures which I have now found in the decision which we just got a look at this morning, but which also have been adverted to in previous testimony, which I trust will clarify some matters for you.

Mr. RONCALIO. Very good. We will look forward to that.

STATEMENT OF ARTHUR R. SEDER

Mr. SEDER. Mr. Chairman, you have an eight-page statement, on behalf of Mr. Orlofsky and Mr. Lepape and myself, attached to a letter from Mr. Hargrove dated September 23, and I would ask that that be copied into the record as though read.

I think that I can summarize it very briefly in this way: The first part of our statement really has to do with the reasons why we as original participants and supporters of the so-called Arctic Gas project, which proposed to build a line down the Mackenzie River Valley, are now supporting the Alcan project which has been recommended by the President.

Briefly, after our project was rejected by the National Energy Board, we took another look at the two remaining projects and concluded that for reasons of the better economics of the Alcan project, the fact that it provided accessibility to the Mackenzie Delta gas reserves, and the fact that the Alcan project proposed deliveries to the West and the Midwest and really to all of the 48 States, it had major advantages over the so-called El Paso project. But in light of the fact that that project has now been withdrawn, I don't think I need to dwell on that.

There are a couple of additional points in the statement, however, to which I would like to address your attention.

First of all, beginning on page 5, we make the point, which we feel very strongly about, that both the western and the eastern legs should be built. There has been some controversy in the past as to whether the western leg had to be built and whether deliveries of

gas to the west coast could not be accomplished by displacement; but we feel very strongly, and the President's recommendation concludes as well, that it is in the public interest that both legs be constructed.

Mr. RONCALIO. The President has come to that conclusion. I am glad you feel that is in the best interests of your company and the consumers.

Mr. SEDER. I should say, Mr. Chairman, after we made our decision to support the Alcan project, we had a number of meetings, discussions, with Mr. McMillian and his associates in the northwest pipeline group which sponsor the Alcan project. They welcomed us to the project as potential sponsors and investors in the project and we are and have been working very cooperatively with them.

We certainly anticipate, assuming that all the financing arrangements can be worked out satisfactorily and the tariff arrangements about which there has been considerable testimony this morning, that we will be both shippers and equity investors in the Alcan project.

[The prepared joint statement follows:]

TESTIMONY OF MESSRS. A. R. SEDER,
H. L. LEPAPE, AND S. ORLOFSKY
ON BEHALF OF U.S. GAS COMPANIES*
SUPPORTING THE ALCAN PROJECT

As these subcommittees know, the group of companies for whom we appear were members of the Arctic Gas consortium for several years. Previously, Arctic Gas was one of the three applicants (and the first applicant) for an Alaskan North Slope gas transportation system. Today we appear in support of the Alcan Pipeline proposal which the President has recommended to the Congress for approval. It was our thought that these subcommittees would be interested in knowing why this group, who had for so long supported Arctic Gas, elected to support Alcan, and their intention for future participation in that project.

On July 4, 1977, the Canadian National Energy Board denied approval of Arctic Gas' Canadian components and issued approval to Alcan's Canadian components. Thereafter, these eight U.S. gas companies jointly undertook a new appraisal of the relative merits of the Alcan and El Paso projects. It was the unanimous view of these companies that they had a responsibility to their customers, and to the

*Pacific Gas and Electric Company serving Northern California; Pacific Lighting Corporation subsidiaries serving Southern California; Northern Natural Gas Company serving the Plains areas; Natural Gas Pipeline Company of America, a subsidiary of Peoples Gas Company, serving Chicago and the Midwest; Michigan-Wisconsin Pipeline Company, a subsidiary of America Natural Resources Company, serving Detroit and the Midwest; Panhandle Eastern Pipeline Company serving throughout the Midwest; Texas Eastern Transmission Corporation serving the South, Appalachia and to New England; Columbia Gas Transmission Company, a subsidiary of the Columbia Gas System, serving from Ohio to the Eastern Seaboard.

public at large, to advise them of their views as to the transportation system which would best serve the needs of the United States to effect delivery of the Prudhoe Bay gas.

The companies, of course, had the advantage of long participation in regulatory proceedings involving all projects proposed, and possessed an extensive body of knowledge and data concerning all details of the rival El Paso and Alcan projects. They had already conducted extensive investigations of those systems and had in place highly sophisticated computer programs to permit rapid evaluation of the economic performance of those systems. As a result of the reappraisal, the eight companies unanimously elected to support Alcan because it far better serves the needs of the gas consuming public than does the El Paso proposal.

Perhaps the primary reason for the decision in favor of Alcan was economic. Rather than simply relying on the figures compiled by the other applicants themselves, or by the agencies of any government, the eight companies reestimated the cost of service of each system on the basis of their own estimates of what they expected those costs to be. This reevaluation indicated significantly lower costs for the Alcan system than for the El Paso proposal. The probable margin of difference was in the order of \$.45 per MMBTU delivered to markets in the lower 48 states on a 20-year national average in 1975 dollars.

A second critical factor was the importance of retaining Canadian gas exports to the United States at the current level of such exports, or at least at the maximum level possible. It is obvious that the prospect of continuing Canadian exports to the U.S. is directly related to a level of gas supply in Canada in excess of Canadian domestic requirements. All the studies available to us indicate that maintenance of such a supply over the long term is dependent upon the addition of so-called "frontier gas" to Canadian supplies. In our view, the only frontier gas presently identifiable which can be brought to market within the needed time frame is the Mackenzie Delta gas.

The Alcan system makes it possible to attach the Mackenzie Delta gas supplies for Canadian use within the near term and on a basis sufficiently economical to be feasible. The El Paso proposal offers no prospect of an economic connection of the Canadian frontier reserves. Approval of El Paso, therefore, would clearly jeopardize the continued maintenance of Canadian exports at present levels, and those levels are now in excess of the volume expected to be received from Prudhoe Bay. Therefore, El Paso's proposal for shipment of Alaskan gas without preservation of Canadian exports could result in a net loss rather than a net addition of gas to U.S. supplies. We deem this situation critical to the United States as a whole, and extremely critical to those areas of the country which rely directly

on Canadian gas for large portions of their supply. Furthermore, Alcan's fuel requirements would be substantially less than those of El Paso. This, too, would provide a further supply margin in favor of the Alcan project.

Another matter of concern with the El Paso project is the problem of receipt and delivery of gas in the lower 48 states. The question of a regasification site in California appeared to us to be largely within the control of the state of California. Even after the siting problem in California is resolved, there are further problems associated with the delivery of that gas from California throughout the remainder of the lower 48 states. The El Paso proposal for construction of certain facilities in Texas and California, and thereafter for use of excess capacity in existing pipelines from Texas through the rest of the 48 states is subject to great uncertainty. While both Arctic Gas and El Paso were able to construct theoretical delivery methods for delivery of this gas to the mid-west and east by use of excess capacity within and from Texas, these theoretical studies necessarily were based on assumptions as to the volumes of gas which would otherwise be moving in such pipelines. It is impossible for anyone to verify today with any degree of accuracy what the actual excess capacity of those pipelines, if any, will prove to be some years hence when the Alaskan gas begins to flow. The recent public announcement of purchase of large quantities of gas from Mexico proves this point. The expected Mexican

gas supply is of such a magnitude that it will completely absorb all the excess capacity now present in those existing lines in south Texas and along the Gulf Coast that El Paso had proposed to use for delivery of Alaskan gas. It would, therefore, be necessary for El Paso to build new facilities different from and in addition to those presently proposed by El Paso in order to move gas from Texas at least as far as Louisiana. It is not possible at this time to determine precisely what facilities would be best suited to this purpose. But it is clear, observing the extensive distance from Texas to points within Louisiana, that large additional sums of money over and above those contemplated by El Paso would be necessary to effect this delivery. The eight companies strongly prefer the more direct form of delivery offered by the Alcan system with its eastern and western legs.

With the enactment of the Alaska Natural Gas Transportation Act of 1976, Congress wisely chose to insist on the certification and construction of the facilities necessary to assure contemporaneous, direct pipeline delivery of Alaskan North Slope gas both east and west of the Rocky Mountains. The Alcan project, with its eastern and western legs, complies with this legal requirement for contemporaneous direct delivery. Both eastern and western legs are integral parts of the Alcan proposal. The elimination of either leg would impair the efficiency of the total transportation

system; without the western leg, for example, the resulting inefficiencies would increase transportation costs, adversely impact the environment and result in the loss to the U.S. consumer of over 480 trillion BTU of natural gas over 20 years; without the midwestern and eastern leg, the same problems posed by the El Paso proposal would be presented.

We are pleased that the President has recommended contemporaneous certification and construction of both the eastern and western legs of the Alcan project. If short term excess supplies of gas in Alberta are made available to U.S. customers on satisfactory terms and conditions, prebuilding of portions of the eastern and western delivery legs, if economically and financially feasible, could provide direct access to this short term supply.

After arriving at our unanimous determination to support the Alcan project, the eight companies approached Alcan to offer their support and cooperation. Despite the highly contested nature of the previous adversary proceedings in which we had been engaged with Alcan, we are pleased to state that we were most cordially received and welcomed by Alcan on a basis contemplating a partnership. Since that time, we have actively worked with Alcan in close liason at multiple executive and technical levels. Through the creation of an executive committee, we have been kept fully advised of Alcan's activities and in turn have advised and counseled Alcan. We foresee no undue difficulty in perpetuating our joint participation with Alcan on a permanent basis as

partners in the operation and ownership of the transportation facilities in Alaska. The facilities in the lower 48 states will be owned and operated by the various members of our group located in the geographical areas to be served. It is our intention to participate, to the extent we are prudently able to do so, in the equity financing of Alcan's Alaskan facilities as well as in the equity financing of lower 48 facilities. Obviously, terms and conditions adequate to attract equity investment must be allowed by the regulatory authorities in order to permit us to make such investments.

One final point: it is quite obvious that no facility to transport Prudhoe Bay gas to the lower 48 states can actually be financed and constructed by anyone until the Prudhoe Bay gas is sold to buyers in the lower 48 states. Financing is completely dependent upon final identification of the buyers and the volumes which will be acquired by each; certain refinements in lower 48 and Canadian facilities will be needed to accommodate precise volumes of gas to be delivered to precise delivery points, and these refinements must await firm identification of all of the purchasers and the volumes purchased. There are obviously limits to the amount of money which any of these companies can justifiably risk before they have obtained contracts for the purchase of gas, and before permanent financing has been committed. Each of these companies individually is not only willing, but anxious to negotiate for the purchase of Prudhoe Bay gas at the earliest opportunity. We trust that opportunity will be afforded to us promptly upon conclusion of Congressional action on the President's recommendation.

Thank you for your consideration. We welcome any questions members of the subcommittees may have.

Mr. RONCALIO. Do you want questions? You are all through?

Mr. SEDER. I would welcome questions.

Mr. RONCALIO. Would you rather see that the producers and the owners of the natural gas not participate in underwriting the cost of construction, leave it only to you folks, to the other money markets of the world?

Mr. SEDER. I think that this is going to be a very difficult financing assignment. It is going to be a massive financing undertaking, so I think that we would welcome financial support from almost any quarter.

I must say, however, that I cannot see the incentives from the standpoint of the producer to invest or to guarantee loans to the pipeline under the conditions that are set out in the President's recommendation.

Mr. RONCALIO. Thank you.

Mr. SEDER. With respect to the question of prebuilding and pre-delivery of gas utilizing Alberta reserves, the statement says on page 6—and I would like to quote this brief sentence—that:

If short-term excess supplies of gas in Alberta are made available to U.S. customers on satisfactory terms and conditions, prebuilding of portions of the eastern and western delivery legs, if economically and financially feasible, could provide direct access to this short-term supply.

What we are trying to say there is that this has real potential for early deliveries of gas but that really the whole project must be brought together and construction assured before the predeliveries can start.

At the end of our statement we simply make the point, which I think is obvious, that one of the requisites for going ahead with the project is our ability to obtain gas purchase contracts from the Prudhoe Bay producers. We have not been able to do so so far and that certainly must be one of the early orders of business.

I have to say in all candor, however, that they have difficulty in negotiating contracts with us now because they don't know what price they will be allowed for the gas they sell, so it is obvious that some further action must be taken at the Federal level to set that matter at rest before the producers can realistically be expected to enter into serious negotiations for the sale of the gas.

I think that that completes a brief summary of this statement, Mr. Chairman.

Mr. RONCALIO. I thank you very much for that.

I would imagine that you followed with great interest the discussion this morning on the particular matter that might indeed delay the beginning of construction due to the fact that there must be this established certainty on tariffs on the part of both NEB and the Federal Power Commission before construction can begin?

Mr. SEDER. There are many, many details of cost and tariff provisions that must be decided before construction can commence.

Mr. RONCALIO. All right, sir. I appreciate that.

Mr. SEDER. I think Mr. Hargrove wanted to make a brief additional statement.

Mr. HARGROVE. Yes, sir; I wanted to make a brief additional statement, to be certain that there is an understanding on the part of the committee as to what the figures which appear on page 95,

to which we just had access, represent, and the methodology by which those figures were obtained.

These figures for the cost of transportation, let me first point out, are 20-year average costs.

On the methodology by which costs are calculated for these purposes, there is a constant decline in the cost by years. Therefore, that figure is by no means representative of what the price is which will be paid when that gas is first turned on and flows out of the tap.

Now, I urgently wish to avoid having to come back before this committee because you say the gas was supposed to cost \$1.04 for transportation and it is costing \$2 or something like that: And what happened to you and why did you do this?

Now, the reason is because it is going to cost something in that range when it is first turned on. Second, this figure which is here is an excellent figure if you are an economist. It is developed on a basis of economics designed to permit comparisons on a totally constant 1975 dollar, with all escalation portions removed, a portrait of a cost which may be compared on an equivalent basis as between projects or with other forms of energy on an equivalent basis as of the same time frame. It does not represent what the cost would be in 1975 dollars if calculated on the customary regulatory methodology for calculating costs.

A range of difference between the two methods for a given system employing exactly the same basic 1975 costs, capital costs and operating costs, you have a range of difference of about 50 percent.

Now, again, the range of difference between a 20-year average cost and the cost in the first year is substantial, so that when you look at this \$1.04 please remember that is a figure of great meaning to the Department of Energy in the performance of its function as an analyst of economic conditions. It is not the figure which will be produced on an escalated basis by standard methodology in the first year when this gas is turned on and comes out of the tap.

I want to be certain that this committee understands that because it is going to be a lot more than that.

Mr. RONCALIO. Mr. Brown?

Mr. BROWN. I appreciate that. I think I understand it. I guess my question to Mr. Schlesinger was not whether it is going to be more, but, rather, specifically what it looks like it is going to be, and I think that apparently has a great deal to do with two factors: One is, who pays for the processing, which I feel is in Mr. Schlesinger's realm of action. It may not be specifically his decision but under the way DOE is set up, he has some influence with FERC, unlike the totally independent Federal Power Commission.

And then the other factor is this indefinable thing about cost overruns and the cost of construction of the pipeline which is going to have a bearing on that last item on page 95, the cost of transportation which you all are involved in.

I don't ask you to tell me what FERC and the Secretary are going to do with processing. I only ask you to agree that that is an important factor and perhaps contributes something as to whether it is going to be more expensive in Alaska than it is in the lower 48, which seems logical, and maybe estimate how much more ex-

pensive it will be. The transportation thing leaves me terribly nervous.

With all due respect—and I announced my affection for the Canadians and the fact that I spent a little money up there on vacation during the August recess and so forth at the end of the meeting yesterday—it is a different matter if the Canadians have a lot of cost overruns and the money goes into Japanese steel and Canadian labor than it is if we have cost overruns of American construction and American labor in an American State for an American company, because some way or another, the money stays in the American economy, and it seems to me that there is a temptation implicit in the Canadian economy for them to maybe get some of those prices up and let our consumer pay for either the cost of the money, borrowed in Toronto, or the cost of the labor bred in Calgary, or the cost of the equipment used in construction of the pipeline perhaps made in Windsor.

That is my concern and it isn't a feeling of mistrust for the Canadians. It is a feeling of perhaps a concern about the ability of the State Department and our own administration, without reference to partisanship, to be good Yankee traders. We seem to have lost that capacity recently.

Could you comment on that?

Mr. HARGROVE. Yes, sir. Let me then address two or three of the points you have raised.

I particularly want to talk about some of these concerns about Canada, rate treatment and construction cost, because I think those concerns are vastly overstated.

First, though, with respect to the processing and the costs, certainly there are going to be some costs associated with that processing. It looks like in the order of \$2 billion or somewhat more dollars than that, and anytime you have to put in that much money, you have to earn something on it; you don't have any choice.

Mr. BROWN. That is a building cost; the operation, too?

Mr. HARGROVE. Yes, sir. The operation is less significant than the capital cost involved in the building. Somebody is going to have to pay for it.

I do emphasize this, that where everything begins in this entire project is in the negotiations for contracts with the shippers. It is the shippers who must first pass judgment and determine what they believe they can prudently sign. They are experienced operators and there are lots of them and they have been in this business for many, many years. We know what things cost and we know what are reasonable terms and conditions, and we know when they are not reasonable terms and conditions. We are fully equipped to negotiate this kind of matter.

Now, only after the contracts are negotiated between the shippers and the various pipeline segments does this move any further to either the FPC or the NEB or the great banking houses, or anybody at all; it has to start with the contract with the shippers.

One of those contracts, and the one which must predate any finalization of any of the other contracts, is a gas purchase contract. Until that is finalized, most of the other matters cannot be finally resolved. Some progress can be made on it; it can be worked

up; we can do lots of things, but we cannot conclude anything until those gas purchase contracts are finished.

One of the items, unless one edict comes down from an appropriate regulatory authority that has jurisdiction to do so, which probably will come up in the course of that negotiation, is this problem of payment for treatment facilities and it will not be an easy negotiation.

I do not imply that any of these negotiations will be easy. On the Canadian side, however, let me say, first, again, that given these experienced, professional companies that we are talking with in Canada, they have been in this business also for many, many years. We understand their needs. They understand our needs. Certainly we are going to have those kinds of differences which arise between any buyer and any seller; but I think it is a great exaggeration to believe that two such groups cannot quite successfully work out the terms of contracts which will be entirely in the public interest.

I think we can and I think we will.

Mr. RONCALIO. We hope so indeed, but our staff and our chairman have some direct questions on that. I will ask them to do that. So go ahead.

Mr. BRAUN. First, we would like to get an idea of what the delivered cost of this gas will be.

Let's assume for the moment that the processing facility is a cost that will be incurred by the producers. That would leave you with a wellhead price, which under the NEA would be \$1.45, plus some portion of approximately 75 cents per M ft³ processing cost, would it not, Mr. Hargrove?

Mr. HARGROVE. Yes, sir; if they stick with the \$1.45 in the bill that would be the wellhead price, and under the bill my recollection is that there is a provision for additional compensation for such things as gathering, treating, transportation, and so forth.

Mr. BRAUN. You participated actively and extensively in the proceeding before the FPC, did you not?

Mr. HARGROVE. Yes, sir.

Mr. BRAUN. What was the figure that the producers gave at the FPC for the M ft³ unit cost for the processing and conditioning of Alaskan gas?

Mr. HARGROVE. Nobody broke that down to any real precise figures. Indeed, the cost estimate, which you have heard of from 1.8 to approximately 2.4 billion, depending on the year in which you are assuming those, is an extremely rudimentary and preliminary study. It is based upon a study which was originally done in an extremely preliminary form as far back as 1970 or 1971. Those figures have roughly escalated to come up with the numbers that now appear.

I would hesitate to place undue reliance upon them. But if you want to take one of those figures and call it \$2 billion and take a cost-of-service approach which would mean approximately between 20 percent and 25 percent a year, to keep it easy, let me make it 20 percent, so that would be 2 percent, \$2 billion, would be \$400 million. Four hundred million dollars divided by approximately three-quarters of a trillion double Mbtu per year would come out, if

I am dividing correctly, about 30 cents a million Btu. That is rough; I may be off on that.

Mr. BRAUN. What is the estimated cost for transportation of Alaskan gas through the Alcan system in 1977 dollars?

Mr. HARGROVE. I don't know that we have it in 1977 dollars. I am certain that Alcan has a comprehensive spread of cost on several bases. I am certain that they do have and could furnish you easily a year-by-year estimate of cost of gas to markets on an escalated basis, if that would be of assistance to you. Not cost of gas; cost of transportation.

Mr. BRAUN. Do you have an approximate figure for the transportation cost for the Alcan system in 1977 dollars? The \$1.04 figure is 1975 dollars; correct?

Mr. HARGROVE. Yes.

Mr. SEDER. Mr. Braun, if you turn to page 162 of the President's report, I think you can get some idea, and while I agree completely with Mr. Hargrove that this study which results in the \$1.04 figure is a 20-year average, you see at the bottom right-hand side of the table, I think for purposes of approximation you can use it. As you will see, the first 5-year average cost of service is about \$1.71 in 1975 dollars, assuming a 40-percent overrun. But I think that the 40-percent overrun equates roughly to the escalation that might be expected, so you are getting up in the range of figures that might be expected.

Mr. BRAUN. After we add in the Alcan transportation costs, what additional costs do we need to add in to deliver this gas to the end user? Do you have an approximate figure on that? I know it depends on distance, but we would like to get an idea. It seems to me if we start with \$1.45 for wellhead price and 30 cents for processing and \$1.71 per M ft³, we are up to \$3.46. What we want to know is how much more do we add to that to get a price to the end user?

Mr. HARGROVE. If you mean by the end user, the householder in his home, I don't believe we have any such figure. You are talking about distribution costs, now, through a multiplicity of distribution systems scattered over the entire United States whose cost of distribution vary widely. I don't think we could come up with a figure that would be representative.

Mr. BRAUN. That cost is not included in the \$1.71; correct?

Mr. HARGROVE. Oh, no, not distribution cost.

Mr. BRAUN. Is \$3.46 the price to the pipeline—say, to Michigan-Wisconsin—picking it up?

Mr. SEDER. Yes; that is the price at which Michigan-Wisconsin, for example, would buy the gas at Dwight, Ill., near Chicago.

Mr. BRAUN. From Dwight to your service area, to the city gate, how much more are you going to add in for transportation?

Mr. SEDER. As Mr. Hargrove suggests, I don't have a precise calculation, but you would have a pipeline cost of transportation; I think, for general purposes, you could say 20 to 25 cents, and then 50 to 75 cents for the distribution spread.

Mr. RONCALIO. Are you saying, gentlemen, you then take the \$3.50 or \$4 gas and blend it with the 50-cent gas under old regulatory requirements that is being produced here and get to the end consumer with some saving because of the blend?

Mr. HARGROVE. The blend would result, of course, in the relatively small additional charge on the total gas supply of a given system, because the increment of gas which would be coming in here would be a small percentage of the total gas supply of the system. I would like to emphasize this, also: Although these costs seem high, the basis of comparison against other sources of energy, particularly of premium energy, such as gas, which the Department of Energy has used, is a valid basis for comparison, and I know of no other comparable supply, certainly in this volume, which you could expect to get for any better price, and I would be very surprised if you got it at this low a price.

Mr. BRAUN. That takes us to the issue of distribution, Mr. Hargrove. You mentioned that this gas would be an insignificant portion of the total gas for each of the pipeline companies that will be purchasing Alaskan gas. What assurance do we have of that, and can you tell us how the U.S. shippers view the entire issue of what is appropriate and proper distribution?

Perhaps each of you gentlemen would care to address that question.

Mr. SEDER. I will take a crack at it. We feel very strongly that the starting point has got to be the negotiation of individual contracts between particular pipeline companies and producers in the Prudhoe Bay field. My own system has been working on this project for about 7 or 8 years. We put a great deal of time and effort into it, and this was one of our major supplemental gas supply projects. Other companies are engaging in liquefied natural gas projects, Mexican gas projects, and so on. So unless there is to be a national allocation system established, it seems to me that the best approach is one in which you start, and unless there are grave discrepancies in the way the gas is distributed, you end with the negotiation of individual contracts between shippers and producers.

I think to engage in a national allocation exercise would be a tremendous, time-consuming, and unproductive exercise, because what you would be doing is conducting today a proceeding to determine what the needs of various systems will be in 1982 or 1983, when this system comes on.

As I say, every major system in the country has multiple programs for acquiring new supplies of gas, and I don't think that you can isolate this particular supplemental supply project from all of the others, the LNG, and the Mexican gas, and so on.

Mr. BRAUN. What percentage of your total supply do you contemplate purchasing from Alaska, 5 percent?

Mr. SEDER. In my system, when we had a preliminary agreement with one of the Prudhoe Bay producers, it would have provided about 10 percent of our total system supply.

Mr. BRAUN. Do you have a position on how much Alaskan gas you should get or how much each pipeline should get and whether there is a consensus of agreement among the U.S. pipelines who will be bidding for this gas, whether or not it should receive a broad nationwide distribution, or whether there are particular areas of the country that should depend heavily on the gas?

Mr. SEDER. I think I have expressed my view that there should not be nationwide allocation of the gas.

Mr. BRAUN. I don't mean Government allocation.

Mr. HARGROVE. I think in the normal course of negotiation, you will find there will be a rather broad distribution of this gas across the country, just as the eight companies who are represented here today span the country from coast to coast, and when you add the Northwest in, and they are certainly going to be part of the same operation in buying gas, that is nine.

Now two companies already have firm commitments by option, or whatever you want to call it, for Prudhoe Bay gas, which they have had for extensive periods of time. They are Mr. Orlofsky's company, Columbia Gas Systems Service, and Northern Natural Gas Co. The balance of the gas, I think you will find, will be distributed pretty well around the country. There will be a lot of people negotiating and producers. I can't quite see the selling all of it in one place.

Mr. BRAUN. Mr. Orlofsky, will you give us the details of that contract?

Mr. ORLOFSKY. It is a complex agreement, but generally what it involves is that in the early 1970's the Columbia Gas System approached Sohio and worked out a contract with Sohio where it would acquire the Sohio gas reserves, rights to purchase the Sohio gas reserves in the Prudhoe Bay field unit or in the Triassic formation which underlies the Prudhoe Bay unit.

At that particular point in time, it wasn't accurately known what the gas reserves were; there were estimates; and it was certainly not known how the reserves would be divided among the producers, both oil and gas reserves, because negotiations had to be conducted to create the operating unit, and who had the rights to certain portions of the field, which has since been done.

To acquire the right to purchase the gas, Columbia advanced \$175 million. This amount in the early 1970's was considered a large sum. Because of the steep period of inflation that followed and the unprecedented increase in the cost to develop the Prudhoe Bay field and construct Alyeska this advance became much smaller in relationship to the total cost of the project. But nevertheless, the contractual obligation by Sohio remains.

The Columbia Gas System does have the rights to substantial portion of the Sohio reserves. The payback of that \$175 million advance with interest is to come out of crude oil production and is now occurring and should be completed within 2 to 3 years. Of course, the repayment will be credited back to the Columbia consumer.

As to the price which Columbia will purchase the gas, that couldn't be decided at that time, and the issue was left open and remains open, and is to be established by the regulatory authority or by negotiations, which will govern.

Mr. BRAUN. Earlier today, with Secretary Schlesinger, Chairman Dingell and I raised the question of the extent to which the agreement between the United States and Canada bound U.S. shippers. I am referring now to the bottom of page 57 of the decision and the top of page 58, where it says, "The cost of service to each shipper in each zone will be determined on the basis of volumes as set forth in transportation contracts."

First, the transportation contracts will be for the right to transport a fixed volume of gas, isn't that right?

Mr. HARGROVE. Yes, sir, I am not familiar with any other basis customarily used, and I certainly would expect it in this case.

Mr. BRAUN. If each of you four gentlemen are willing, I would like you to respond to the commitment that the American negotiators committed the U.S. shippers to in this agreement. I would like your response on the character of that commitment that is placed on you, and the ramifications of that to you and your ratepayers.

Mr. HARGROVE. Let me start off, because I want you to know one thing first, that this particular portion of the agreement right there is an agreement on an allocation method. The U.S. negotiators did a beautiful deal. I am delighted to see it. There are other methods of allocation; there are quite a number of different methods that can be used for these purposes, and I would consider the basis which they used here of a straight volumetric basis in each zone through Canada to be distinctly favorable to the United States, assuming that in future years Canadian gas will be introduced into the system.

The reason for that is, a more customary method of allocation is one known as $M \text{ ft}^3/\text{miles}$, which employs, together with a volume factor, a mileage factor, and since the U.S. gas is going to travel more miles from border to border in Canada than Canadian gas, which will be dropped off within the Dominion of Canada, if you put the $M \text{ ft}^3/\text{mile}$ formula in, which is a common formula used pretty much throughout the United States and to a good extent in Canada, we would have had a less attractive allocation formula.

Mr. BRAUN. Isn't this an $M \text{ ft}^3/\text{mile}$ formula in that you pay in each of 11 zones? Isn't that the reason you have 11 zones, to implement that kind of formula?

Mr. HARGROVE. The reasons they have zones there is to facilitate the assignments of cost to zones and, here again, this is a favorable factor, because by isolating the zones, you avoid intermingling except in zones where gas is physically flowing together, with the exception of the spur between Dawson and Whitehorse, on a basis which might be less attractive than the zone basis which is here employed.

Again, I say I assure you that on the allocation methods in this agreement, the U.S. negotiators did a good job for us.

Mr. BRAUN. My understanding of this commitment is that it sets the payment of cost of service not on the physical volumes traveling through the pipeline, but on the amount of capacity that each U.S. pipeline has contracted for.

Now, Mr. Seder, is this kind of tariff that is provided for in the agreement acceptable to you and your customers?

Mr. SEDER. I think it is essential. This simply reflects the requirements of financing the line, and this is the method by which all three of the projects proposed to structure their tariffs. You see, what is required is that the people who put up the capital for the line, both the lenders of debt and the equity owners, have an assurance of return, and whether or not the shipper is putting gas through the line or not, the costs of that line, the capital costs, and operating costs are largely the same, so that in order to service the debt and to have the return on equity to which the owner is entitled, it must be based on an allocation of cost based upon the amount that the shipper has a right to put through the line, not

the amount that he actually puts through at any particular time. He, in effect, buys a share or the right to a share of the 3-foot capacity of the line.

Mr. DINGELL. I think you make a very important point. Isn't that subject, also, to the requirement that those who actually use the line must pay a portion of the fuel cost thereof, so it isn't a straight capacity of the line figure; it is capacity of the line, as well as fuel costs, and so forth; isn't that right?

Mr. SEDER. Yes, sir, Mr. Chairman. I think with respect to fuel, if I am not mistaken, it is based on actual transportation of volumes, not on capacity.

Mr. DINGELL. So you have a mix of the two?

Mr. SEDER. Yes, sir.

Mr. DINGELL. Is this the standard fashion in which pipeline charges are assessed against the different share owners of pipelines which are joint ventures?

Mr. SEDER. Mr. Chairman, this is a unique pipeline. Most pipelines buy gas at the field and sell it at the other end. This will be a transportation pipeline for a number of different shippers, and I am not sure there is a precise precedent, but I think there is general agreement in all three projects and among shipper groups that this is the appropriate way to handle it.

Mr. DINGELL. And is it a conventional way?

Mr. SEDER. Yes, sir.

Mr. DINGELL. Is there any other conventional way or fashion in which costs are assessed against pipeline users or shippers or persons who would own a pipeline as a joint venture?

Mr. SEDER. I can't think of any, Mr. Chairman.

Mr. HARGROVE. For transmission lines, the demand elements, that is the right to a given volume, is, I think, standard throughout whatever particular form of contract may be involved. Now it does not necessarily reflect the total charge, but there is a large component of cost always which is related to the demand elements.

Mr. DINGELL. All right. Now, isn't it fair to say as between pipeline owners who own a pipeline which is a joint venture, the right to larger or lesser throughput of that pipeline is also something which is a negotiable or valuable right which is subject to sale between the parties? Do you understand what I am saying?

Mr. SEDER. Mr. Chairman, I want to emphasize that there is no relationship, legally or contractually, between the role of the pipeline companies as shipper and its role as owner of the equity.

Mr. DINGELL. Except you have pipelines which are owned by two or three different people who all have the right to a certain amount of throughput, do you not?

Mr. SEDER. But the equity investment has nothing to do with the right to throughput capacity. That right will be based entirely upon contractual obligations as between the shipper and the pipeline company as an entity, and his ownership of an equity interest in that pipeline will not relate to that.

Mr. DINGELL. I don't quarrel with that statement. The point I made is that that is a valuable right which is subject to being sold or rented as between parties to the contractual agreement or some other party who might achieve the right to a portion of the throughput of that line. Am I right?

Mr. HARGROVE. Not exactly, Mr. Chairman. Let me distinguish a bit. The only basis on which I can conceive of selling capacity back and forth would be if one transporter had under contract volumes which he came to believe for any reason exceeded what he might need and in order to attempt not to continue to sustain the burden—

Mr. DINGELL. He would sell the right to that unused capacity to some third person.

Mr. HARGROVE. He might undertake to try to find another company which was interested in having the capacity and assign that portion of the capacity to them. This is subject to restrictions on the part of the pipeline company as to consent to approval of such transactions, and it is subject to review by the Federal Power Commission.

Mr. DINGELL. And other regulatory bodies?

Mr. HARGROVE. Yes, sir.

Mr. DINGELL. You have answered my question. Thank you.

Mr. BRAUN. Mr. Seder, referring to the commitment in the United States-Canadian agreement to pay on the basis of the volumes that you have contracted to have transported, would that commitment be acceptable to your pipeline if you were unable to pass all of the total costs associated with that commitment through to your customers?

Mr. SEDER. No.

Mr. BRAUN. That means you would have to have a commitment from the FPC to allow you to pass the costs provided for in this tariff contained in the agreement between United States and Canada, before you would agree to accept gas from Canada. Isn't that right?

Mr. SEDER. Yes, sir. Any contract I would enter into with the Canadian pipeline would be contingent upon the approval of the Federal Power Commission to the passthrough of those costs.

Mr. BRAUN. Your pipeline transports gas for others, does it not?

Mr. SEDER. Yes.

Mr. BRAUN. Does your pipeline transport gas for others under the same terms and conditions as provided for in the agreement between United States and Canada?

Mr. SEDER. Not precisely. They are isolated transportation mostly from the offshore areas of wells which happen to be owned or produced for another company onshore. There are many, many different small segmental transportation agreements, and they are ordinarily negotiated on the basis of a cost-of-service-type approach and approved by the Federal Power Commission.

Mr. BRAUN. So they are handled on a cost-of-service basis?

Mr. SEDER. Oh, yes.

Mr. BRAUN. And do you have any transportation agreements by which the person wishing to have his gas transported pays whether or not you transport the gas for him?

Mr. SEDER. Yes.

Mr. BRAUN. Thank you, Mr. Chairman. That is all I have.

Mr. DINGELL. Mr. Roncalio.

Mr. RONCALIO. Thank you, Mr. Cochairman.

Gentlemen, do any of your companies buy gas from the Davis Oil Company of Denver, Colo.? That is the biggest one-man oil compa-

ny in the world. He has such a cash flow he built his banks so people wouldn't know what he was doing.

Mr. ORLOFSKY. We are aware of them and have had discussions.

Mr. RONCALIO. Do any of you buy contracts for natural gas from any of the producers in the Rocky Mountains?

Mr. SEDER. We are getting into exploration and purchase from Rocky Mountain sources.

Mr. RONCALIO. Fine, because of new costs in the long awaited and recently announced departure from the old 25-cent and 30-cent and 22-cent gas, and the attractions at \$1.50 gas, and more now \$1.75 gas, there are tremendous new areas, geologically speaking, being opened up to drilling. And there are not enough rigs, and they may not have enough time to be extended under the rule of the Department of the Interior to stay as a unit for drilling.

Does your planning provide for the fact that there is going to be a good bit of that available to you in the years to come, providing all goes well?

Mr. SEDER. Mr. Chairman, our company certainly is very active in the Rocky Mountains. I think that we have over a million acres of leases, and we are carrying on a very active drilling program, and within the next several weeks we will be filing with the Federal Power Commission to build a \$60 million pipeline from south-central Wyoming to a connection with the Northwest Pipeline system.

Mr. RONCALIO. You got in early, and you are where the activity is now.

Mr. SEDER. Yes, sir.

Mr. RONCALIO. I wondered about that, because if these figures get as high as Mr. Braun's questions reveal, they might, I cannot see but that that would be of irreparable harm to America unless that is blended with \$1.75 gas and the basic consumer at the lowest end of the economy will have a crack at \$2 gas to survive in the coming decade. Otherwise, I could appreciate the caustic critics who say this Nation has made irreparable harm and insulting things by building an oil pipeline to where it was not needed and now they are going to compound the felony by building a gas pipeline where it is not needed. That can bother a man in our position because once we make a decision next week, it is going to be irrevocable.

Mr. SEDER. The only caveat I would add to that, is that I think we have a tendency, in talking about the cost, to forget we are talking about a period 5 or 6 years from now, and that most of the reasons for the increase in costs are inflationary, and that they can be expected to be true of all sources of energy; so I think it is a mistake to compare the \$4 gas that we are talking about here when this pipeline goes into service with today's oil costs, for example. We should relate them to the oil costs in the middle 1980's.

Mr. RONCALIO. Thank you, gentlemen. Our problem is in trying to be good lawmakers and stem inflation. How can we do this when every time we turn around, United States Steel is taking another cost-of-living increase, or adding another inflationary lock-in. The banks can't lend 6-percent money any more because 5 percent has to be inflationary, and the prime will be back up to 9 percent soon. This goes on and on.

Mr. ORLOFSKY. I hope you take this in the right light, but the Federal Government has to demonstrate financial restraints and responsibility.

Mr. RONCALIO. If you think what you have seen here in the last 2 days indicates a waste of money on the part of staffing or people on the part of the efforts Mr. Dingell and I put in, I would like to know where you think we can save a dollar or two. I don't know where our waste is. I suppose that we are as wasteful as the next outfit, and I appreciate the observation, Mr. Orlofsky, but I guess what comes first, the chicken or the egg? I don't know how it is going to stop if we keep planning and preplanning, locking in inflation; I see nothing but continuing inflation. How to keep it to 2 or 3 percent is a problem we have to start facing.

Mr. ORLOFSKY. The basic issue is that inflation has caused enormous increases in the costs for exploring for hydrocarbons. And these add to higher prices.

Mr. LEPAPE. I wonder if I could make a comment? The Pacific Lighting System was very active in the Rockies in the early 1970's, and there was a proposed pipeline which we were not able to get certificated at that time. We continued exploring through the 1960's, and we found we were unable to find sufficient quantities of gas at the prices that then existed to cover our cost, and we reduced that program. Now we are reexamining it as far as our system is concerned.

Another one of the west coast companies, the P.G. & E. system, has a very active program in the overthrust area, and we intended, and I know they intended, to vigorously pursue that. We think that the pricing and higher prices will help bring on the additional quantities of gas that are available. We certainly do not feel, as would be suggested in the Wall Street Journal article, that there is going to be sufficient quantities of gas in the time that we need it in order to solve our problems.

Mr. RONCALIO. We are happy to have that in the record, and we appreciate that.

Mr. Ruppe has just come in, and you are welcome to come up and take a chair, if you wish to participate in these hearings.

Thank you.

Mr. DINGELL. Gentlemen, as I understand it, all of you are familiar with the pipeline business. How many of you in your companies procure natural gas which is bought at the borders, from foreign countries or foreign suppliers?

Mr. SEDER. Our system does.

Mr. DINGELL. Yours does, Mr. Seder, I know. Do the others of you gentlemen?

Mr. ORLOFSKY. We will be purchasing LNG from Algeria, so there is a border; there are a couple of borders.

Mr. DINGELL. That is a border transaction, and has some of the characteristics to which we want to address ourselves.

Mr. LEPAPE. The P.G. & E. system, which is one of our eight groups of companies, is currently purchasing Canadian gas.

Mr. DINGELL. Do you purchase it at the end of your own line, or at the end of somebody else's line and then bring it down into your system?

Mr. LEPAPE. They are purchasing, the P.G. & E. system, is currently purchasing gas at the Canadian border, and they have the Pacific Gas Transmission Pipeline system, which will be augmented in the western leg. That transports the gas down south, to the California border, where the P.G. & E. system line moves it on down into the San Francisco Bay area.

Mr. HARGROVE. One you might be interested in specifically is Northern Natural Gas Co.; I don't know that they purchase gas from Canada, but Northern Natural exports gas into Canada from Montana. It is carried across Canada just as we are talking about here, and brought back into the United States. That is a transportation arrangement, transiting Canada, which in principle is exactly what this project is about.

Mr. DINGELL. You all present very interesting comparisons. Mr. Hargrove, your situation most directly relates to the situation which confronts us here. What do you pay for the gas when it comes back into the United States at the border?

Mr. HARGROVE. Northern's contractual arrangement is they pay a transportation fee to the transporter of the gas, and other than that, they pay for what the gas costs them in Montana, where they acquired it.

Mr. DINGELL. That plus transportation fee?

Mr. HARGROVE. That plus the transportation. That charge on the transit gas, now, as distinguished from the purchase of Canadian gas, has never been changed to the border price. They pay TransCanada for transporting that gas a transportation fee which is equivalent to that part of the TransCanada charges which related to transportation.

Mr. DINGELL. What say does the Federal Power Commission have over the Canadian transportation charges? They simply say we approve or disapprove?

Mr. HARGROVE. I know of no way that the Federal Power Commission could obtain jurisdiction over decisions of the National Energy Board on Canadian charges.

Now, what the Commission, of course, can do, is look at the matter before it decides to authorize the purchase or transportation in Canada in the first place, and satisfy itself that that appears reasonable. But this is a very important point, and I want to make it clear that we, the shippers, would buy this gas, have a full right to be heard before the NEB, as parties in any proceedings affecting our rates in Canada.

Now, in those proceedings, if there are rate proposals in Canada at which we are heard, you must remember, please, that the NEB regulates a lot of pipelines in Canada.

Now, if they institute a type or method of charge on our transportation in Canada, they have set a precedent, and other Canadian pipeline companies in Canada thereupon have the opportunity to say you have set a precedent. The treaty says nondiscriminatory rate treatment, so if you gave it to Foothills, you give it to us. Now, that is going to cost the Canadians themselves money, if they adopt unreasonable rate treatments with respect to our gas.

Mr. DINGELL. You make a very valuable point. Canadian pipelines do not fix a particular rate arbitrarily, but they lay it down on the basis of capital costs, fuel costs, transportation costs, inter-

est, fixed charges, labor, and all of the other things that go into the cost, do they not?

Mr. HARGROVE. Yes, sir. Almost all pipeline charges are based on what we call the cost of service, whatever the form of contract maybe, the basic determinant is the cost of service.

Mr. SEDER. Mr. Chairman, if I may add a footnote, as you know, I am sure, our system and TransCanada are joint owners of the so-called Great Lakes Gas Transmission Pipeline that brings Canadian gas through the United States from the Minnesota border, lower Michigan, and out to Canada just above Detroit. That has always been subject to Federal Power Commission jurisdiction and regulation, so that TransCanada has been transporting large volumes of gas through this pipeline for a number of years now, subject to rate regulation by the Federal Power Commission. So that there is a precise analogy for the kind of thing in reverse that we are seeking here.

Mr. DINGELL. Yes. I am trying to figure out how this is going to work, and whether we have a full appreciation of how the charges will work in Canada, and how the antidiscrimination clauses will function, and also to find out what happens with respect to the FPC's power with regard to gas which enters the United States from Canada.

As I understand, the Federal Power Commission can tell domestic pipelines that would be buying gas at the border, that it approves in its entirety the charges which the pipeline wishes to assert against its buyers for purposes of inclusion in the rates of the pipeline. Alternatively, the FPC can approve them as to so much, either fixing a dollar amount or fixing the particular charges that might be included as being just and reasonable.

Am I correct in that understanding?

Mr. HARGROVE. The Federal Power Commission could issue such an order, so long as it was prepared to face the fact that if the company purchasing gas from Canada then was subjected to a charge in excess of what the Commission had stated it would recognize as being recoverable in that company's own rates, the company then, to avoid serious financial injury or even bankruptcy, in some cases, would have no option but to have reserved the right to cancel the contract and to do so. So that we would lose the gas.

Mr. DINGELL. They don't have the power, however, to tinker with the terms of the contract.

Mr. HARGROVE. No, sir. The Federal Power Commission cannot tinker with the terms of a Canadian contract.

Mr. DINGELL. All right. Now, I am going to yield to Mr. Braun here.

Mr. BRAUN. Did you gentlemen understand Secretary Schlesinger's comments this morning to indicate that in case of service interruption all costs would be recovered except that there would be a variable rate of return on equity based on throughput, and that he was addressing himself specifically to a U.S. tariff that constrained the Federal Power Commission?

Mr. HARGROVE. The provision to which I believe he refers is provision which was contained in the record before the Federal Power Commission and its understanding that the Canadians

would be quite willing to perpetuate this in any final agreement. That provision provides that in the event the Canadians, by reason of force majeure or whatever, are unable to transport the volumes of gas tendered to them for transport across Canada, that there is an abatement of the equity rate of return.

Now, this would mean that their equity, which is what the company is making, because other capital charges they are just paying to lenders, that abatement would drop off the equity return proportionately to the failure to transport the gas. So that if they only transported half of the gas, then, for the period of the interruption, they would lose half of their equity return. If they didn't transport any gas, they would lose their entire equity return during that period in which service was interrupted.

Mr. BRAUN. Mr. Hargrove, the reference we were making earlier to page 57, of the President's decision, which commits the U.S. shippers to pay the cost of service in each zone on the basis of volumes as set forth in the transportation contracts, doesn't make provision for a variable rate of return of equity in Canada in the event of service interruption; is that right?

Mr. HARGROVE. I don't care what the agreement said, that is what the tariff is going to say before we sign it.

Mr. SEDER. This was a part of the tariff arrangements that our project proposed, and I think also the Alcan project. As Mr. Hargrove has suggested, we will have a continuing obligation in the event of an outage in Canada to pay enough to maintain that company's debt service, and some operating costs, but we will not continue to pay an amount that would reflect a return on equity to the owners of that pipeline.

The reason for that obligation is the fact that that pipeline, the Canadian pipeline, will continue to have an obligation to pay interest on the debt, and the only way we can conclude that this line could be financed, and the debt issued, would be if there were assurances that debt service would continue even in the event of an outage.

Mr. RONCALIO. You don't care whether it's equity or anything; you want the debt service returned so they can stay in business?

Mr. SEDER. Exactly.

Mr. HARGROVE. Let me say, too, that abatement provision, in the event of interruption in Canada, was voluntarily offered by the Canadian companies. We didn't have to trade with them for it; they offered it.

Mr. DINGELL. Of course, I think there are several points here. Apparently you good folks were not in on the negotiations here; were you consulted, any of you?

Mr. LEPAPE. No, sir, Mr. Chairman. We were handed this at the time, just a matter of, Mr. Braun handed me a copy about 2 or 3 hours ago, and I haven't had a chance to read this.

Mr. DINGELL. We received it yesterday.

Mr. LEPAPE. Mr. Chairman, looking at the language right here, it doesn't appear to me, then, and I hope that the negotiators have not endeavored to negotiate our transportation agreement—

Mr. DINGELL. I get the distinct impression that they have. And I get the distinct impression you are indicating to me at this moment that regardless of what they have negotiated, you good folks don't

propose to include in your understandings all of the things that they had in their understandings.

Now, am I correct or in error?

Mr. LEPAPE. With respect, Mr. Chairman, let me just complete a sentence.

Mr. DINGELL. Differ with me if you do.

Mr. LEPAPE. I may be misreading it, but what I am seeing here is a statement that says these are the principles that are to be taken into consideration by the shippers when they have their private negotiations with the pipeline company.

Mr. DINGELL. You are saying it doesn't bind you?

Mr. LEPAPE. Excuse me. I think it gives the flexibility, on one particular issue that Mr. Braun raised is this variable equity, as I read this language which sets forth the principles, it would not preclude in the writing of the transportation agreement provision respecting the proportionate reduction of equity for failure to perform. Many of these other particular items that as individual shippers we will have to be very certain we have protected our companies and our customers before we would finalize the agreement, and I think I am reading the language that Mr. Braun has been referring to more in a general sense, in a generic sense, and not considering that this by itself is meant to be a substitute for the detailed terms and provisions of the tariff which I would expect would be quite similar to the types of tariffs which we have all been working with now for quite a number of years in these various alternatives for moving the North Slope gas to market.

Mr. BRAUN. The agreement does not prohibit the U.S. shippers from entering into tariffs and contracts with the Canadian transporting pipeline, which would provide for a reduction in the return on equity associated with a reduction in the throughput of the Canadian transporting pipeline. However, that is not the problem.

Mr. Seder said that he could only accept this kind of tariff if he were able to pass it on through. The problem is that, given this agreement, the Canadian authorities could implement the kind of charge that is specified here, that is, that the cost of service to each shipper in each zone would be determined on the basis of volumes as set forth in the transportation contracts. Sometime in the future the shippers could be paying according to this agreement, whether or not you negotiated a different agreement and whether or not at that time the NEB approved it. Against that eventuality, Mr. Seder, I would submit that you do not have protection. Should this ever occur it would be up to the FPC whether or not your obligation to pay these Canadian charges would be tracked and flowed through to your customers.

Mr. HARGROVE. Mr. Braun, with all due respect, that provision does not address the point of your concern. That is an allocation provision. This says how costs are going to be allocated. It does not control such conditions as abatement of charges. What this did was to give us an allocation formula which was favorable, for which we otherwise would have had to negotiate, and we might not have been successful in obtaining a formula as favorable as this that they gave us. This is purely an allocation provision, and it's a good allocation provision, and they gave us a lot of protection to negotiate.

Mr. SEDER. Mr. Braun, while Mr. Hargrove is right, of course, I think your question is a broader one. Quite apart from the question of zonal allocation, the question is whether, even though we enter into a contract with the Canadian company, approved by the National Energy Board and in turn by the Federal Power Commission, in the sense that they permit us to pass it through to our customers, can the National Energy Board then, in effect, change the rules of the game at some point?

The answer is, yes, I think that they can. At that time, the question then would be whether we could, in the first place, whether we would ask the Federal Power Commission to let us pass through these higher costs, if that is what it turned out to be; and, secondly, whether they would approve that. If they would not approve it or if we decided it was not in the best interests of our customers, I assume that our alternative would be to cease to use that pipeline as a means of transporting gas.

I must say that alternative is not a very happy one, in view of the fact that we would still have obligations to the Alaskan part of the project, so, I think that as Dr. Schlesinger pointed out on two or three occasions, our chief reliance must be on the fact that our two countries do have to get along together, that they have similar regulatory procedures and policies, and that we have substantial facilities in the United States and under U.S. jurisdiction through which Canadian gas and oil is being moved. I don't think either country is going to take precipitous action or action that cannot be defended in the light of that interdependence.

Mr. DINGELL. Mr. Lepape, I guess you had a comment.

Mr. LEPAPE. I just wanted to agree with Mr. Hargrove's interpretation of this provision. You recall when the National Energy Board recommendation came out there was much concern that there was no provision for guidelines on how the tariff would be handled from the point where the Canadian gas joined the United States gas south, and I am reading this paragraph, just now having seen it today, as a successful effort by the U.S. negotiating team to set up these principles here of allocation, within which we will sit down and attempt with the pipeline companies to negotiate the detailed tariffs.

One of the points you raised with Mr. Seder, and I think probably each of the U.S. companies are in, that our agreements, our transportation agreements, will be subject to our ability to pass those costs on down through, and the subsequent regulatory approval from the U.S. authorities. So we will not be signing transportation agreements without having the total package, all the way down through the regulatory processes to pass these costs on to our customers. Nor will we be putting equity into the pipeline and making investments until we have that full package.

Mr. DINGELL. Gentlemen, the committee thanks you. You have been most helpful.

We appreciate your kindness, and we appreciate your assistance.

The Chair observes we have one more witness, and then we have our good friend and colleague, Hon. Philip Ruppe. Do you have a long statement, Phil?

Mr. RUPPE. Three minutes.

Mr. DINGELL. Can you do it in two and a half?

Mr. RUPPE. Two minutes.

Mr. DINGELL. All right, we will recognize you then. Come on up.

STATEMENT OF HON. PHILIP E. RUPPE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. RUPPE. Thank you very much, Mr. Chairman, and our colleague from Wyoming.

I would just take a brief moment to condense a short statement to a 2-minute paragraph, and simply say that I was very pleased that President Carter made a decision as to the routing of the gas pipeline and support of the Alcan proposal, and I do hope that the committee and the Congress will undertake such action, as is necessary, to implement that decision.

I don't think I can tell you, Mr. Chairman, that the decision is an important one for the State of Michigan, because I believe that something like 80 percent of our energy comes through interstate pipelines, and I think we produce at this time about 12 percent of our natural gas supply.

We import about 15 percent of it from Canada, and it's my understanding that Canada is very likely to terminate these gas exports by 1985. The State of Michigan, really, is very dependent and will be dependent upon a transportation system which will deliver Alaskan gas directly to Michigan markets in the most reliable and economical manner, and certainly at the earliest stage reasonably achievable.

I think the decision of the President follows along an amendment I offered in the Alaskan Gas Transportation Act of 1976, and this amendment, which I introduced and which was passed by the full Interior Committee, states that the direct pipeline delivery of Alaskan natural gas must be to points both east and west of the Rocky Mountains in the lower Continental United States.

The purpose of this amendment at the time it was offered and accepted by the committee was to insure delivery of Alaskan natural gas to midwestern and eastern markets. Let me say, in summary, I think that the decision to come down on the side of the Alcan project certainly does satisfy the very specific congressional attempt that was the focus of my amendment, and I believe the focus of the legislation that was passed.

I simply want to say I am very pleased that the President made the decision he did, and I hope that those Members of the Congress who have the expertise and most certainly the responsibility, will take action on that proposal as is necessary, and, hopefully, as expeditiously as we can.

Mr. RONCALIO. Thank you very much; we are happy to have your statement. We will have one more day of hearings, and hopefully have a report for the full Members and to the floor by, I suspect, within 20 days. We have to wait 20 days from yesterday for the Federal Power Commission to act. I suspect in about 20 days.

Mr. RUPPE. If we can take action in this session of Congress, we can have a pretty good chance of construction scheduling to be undertaken in 1981 and completion by 1983, so we will have the gas in a pretty reasonable period.

Mr. RONCALIO. We hope that that is the case.

Thank you very much.

Mr. DINGELL. Thank you very much, Mr. Ruppe.

We appreciate your most helpful testimony.

Our last witness is Ms. Barbara B. Graham, representing the Sierra Club, the Wilderness Society, National Audubon Society, and Alaska Conservation Society.

We are very pleased to have you with us, and if you will identify yourself fully for purposes of the record, we will recognize you for your statement.

STATEMENT OF MS. BARBARA B. GRAHAM, ATTORNEY, REPRESENTING THE SIERRA CLUB, THE WILDERNESS SOCIETY, NATIONAL AUDUBON SOCIETY, AND ALASKA CONSERVATION SOCIETY

Ms. GRAHAM. Thank you.

Mr. Chairman and members of the committee, my name is Barbara B. Graham, and I am here representing the Sierra Club, the Wilderness Society, the National Audubon Society and the Alaska Conservation Society.

I am also authorized to say that Friends of the Earth concurs fully with the statement that I am giving this afternoon.

The question of how, if at all, to transport North Slope natural gas is before the Congress once again, this time pursuant to the provisions of the Alaska Natural Gas Transportation Act. If you approve the President's decision, you will move this project from the stage of contemplation and decisionmaking, which has lasted for years, to the new stage of implementation. The conservation groups who have been active, and we hope useful, in this matter in the past offer these comments in the expectation that we will continue our productive participation as the project is implemented.

As many of you know, the conservation groups have been active in this case for a long time. We spent years in proceedings before the Federal Power Commission and we have made presentations to many of the Federal agencies that were considering this matter pursuant to the Alaska Natural Gas Transportation Act.

By now we have acquired a good understanding of many issues that are involved here, and, of course, we have our own perspectives. We believe that we have a lot to offer in the next phase of this project, the final design and construction. The pipeline will be a better one if the groups that are here represented have a chance to make suggestions, and to help integrate them into the planning process from the beginning.

Our aim since we began working on this case in January 1974, has been twofold. First, and by far the most important to us, was the protection of the Arctic National Wildlife Range in Alaska and the ecologically connected North Slope of the Yukon. These areas were threatened by the first applicant in this case, the Arctic Gas project. We have long sought wilderness status for the Arctic Wildlife Range, because it is the last opportunity to preserve a stretch of U.S. Arctic coastal plain from hydrocarbon development, and it is the only place in this Nation where an unbroken sweep of land forms, from mountains and foothills to broad coastal plain and the sea, can be preserved.

Its scenic grandeur and scientific value is beyond measure. The range is also important because its large size permits it to be a self-sustaining ecosystem in the Arctic, where vegetation grows slowly and vast acreages are required to support viable wildlife populations.

Because the Arctic Gas proposal has since dropped out of the competition, this Nation now has a clear opportunity to protect this unique area as a wilderness. In fact, in his report of the Mackenzie Valley pipeline inquiry, Justice Thomas Berger suggested an agreement on this issue between the United States and Canada. He said the United States should agree to grant wilderness status to the range, and Canada would afford similar protection to both the North Slope of the Yukon, in order to fully protect the great international porcupine caribou herd, and a white whale sanctuary off the Yukon North Slope. We believe such an agreement should be pursued.

But we had, and still have, a second goal here, and that is to promote sensible land use planning in Alaska. Alaska is our last chance to learn to plan for development instead of letting it just happen. It is very important that undisturbed territory be invaded only where absolutely necessary, so that a balance may be achieved between resource development and preservation of the great reservoir of wilderness that the State contains.

For any remaining wilderness will be of inestimable value long after the hydrocarbons and minerals are gone and the pipelines are empty. Thus, we have always believed that if a gas pipeline must be built, the route chosen should be the one which causes the least possible damage to the renewable resources of the State of Alaska, and which uses existing utility and transportation routes, so that it does not invade Alaska's large but diminishing reserves of wilderness.

Therefore, we advocated from the beginning serious consideration of a pipeline route along the Trans-Alaska oil pipeline through Fairbanks, and from there along the Alcan Highway and existing pipeline corridors in Canada.

In a classic and heartening example of the way NEPA should work, the staff of the Federal Power Commission studied this route and concluded in the environmental impact statements that such a route was environmentally preferable to the two projects already applied for and the several alternatives. As a result, an industry group came forward to file an application for the Fairbanks route, and that was the birth of the Alcan project.

As you know, this proposal has since been recommended by the President, and it is now before you, pursuant to the Alaska Natural Gas Transportation Act.

Our position on this decision has been stated many times. If a pipeline is to be built, the Alcan project presents the most rational approach. It is likely to be the least harmful to the environment if it is properly constructed. Therefore, we believe it offers a better solution to the transportation of North Slope natural gas than the El Paso project.

We need not detail our reasons for preferring Alcan over El Paso, since they have withdrawn, but briefly, we want to mention that we approve of the fact that Alcan is an all-pipeline project,

which is a cheaper and more efficient transportation method, and that the siting problems that El Paso would present are avoided by use of the Alcan system.

This is not to say that there are no problems with the Alcan project. There are, and they will be discussed below. But on the whole Alcan offers the best available solution if a pipeline is to be built.

The decision on whether any pipeline should be built at all is a fundamentally economic one, although environmental costs and benefits must be part of the equation. We approve of the portion of the President's decision which would require private financing of this project. For if it can attract private investors, that will be a much more reliable indicator than a Government decision would be that it makes economic sense.

In general, the Northwest pipeline and Alcan management are making a sincere effort to design this project so as to minimize damage to natural values and undisturbed territory in Alaska, and they have invited comments from many outside interests.

For example, they plan to identify those sections of the pipeline on which construction must be avoided during critical periods of the year for the benefit of certain wildlife populations. They will then design their construction schedule accordingly.

But since the proposal is still relatively new, much scientific and engineering work must be done to insure that this ideal can be accomplished. For example, the pipeline route itself cannot be fixed in detail until walking surveys have been carried out, including identification of sensitive areas, such as marshes, habitat of rare or easily disturbed species, and areas with high present or potential recreational values. Since the preliminary routing was selected without this information, many changes will be needed, including in some areas repositioning of compressor sites or work camps. Also the site specific studies, which have not yet been done, may reveal some additional trouble spots.

In Canada, many such problems must be dealt with since a large portion of the pipeline will diverge from the highway or other corridors, and several important recreation areas would be crossed or skirted. We understand that further discussions will be held between the applicants and residents and conservation groups in affected areas, to work out a suitable route.

We would hope and expect that the project sponsors will continue their efforts to accommodate the needs of fish and wildlife populations, which are so important to the character and economy of these regions, as well as the concerns of people who will be affected by this pipeline.

We want to emphasize what many involved in this project already know, that site specific studies to determine precise routing, design, scheduling, construction techniques and mitigation measures, must begin as soon as possible. For only with good data can this pipeline be built the way we hope it will. Thus, this next year will be the critical time for gathering the information upon which the construction techniques and plans will depend.

Several problems with routing exist with regard to the northern border section of the route reaching across Montana, the Dakotas, Minnesota, Iowa, and into Illinois. These specific objections have

already been pointed out at the FPC. The route may threaten several wildlife refuges, recreation areas, and important scenic rivers, especially two crossings of the Missouri River in North Dakota.

Mr. RONCALIO. I can't believe that. How can the crossing of pipeline on the Missouri River in South Dakota possibly do any ecological damage? You will have to ask whoever did that. That is a little too far.

Ms. GRAHAM. I talked to the fellow who made the specific objections, and he stated one of them had to do with the fact that there is, I believe it's called a floodplain forest or a riverplain forest with very rare trees, as far as North Dakota is concerned; that a large part would have to be leveled where the crossing is. But the crossing can be moved. We anticipate that after final decisions have been made, and the routing is actually picked out, that it may well be solved.

Mr. RONCALIO. Fine.

Ms. GRAHAM. In addition, the exceedingly valuable waterfowl habitat of the prairie pothole region in the Dakotas would be invaded by the pipeline. This area consists of small water-filled basins which are critical for waterfowl breeding. It has been called the Dakota "duck factory," but many other species of birds and animals depend on the potholes. Several hundred of these basins would be crossed by the proposed Northern Border right-of-way.

A route passing farther north and east in North Dakota would avoid these problems. And even some minor route changes could reduce damage to this region. In addition, careful resealing and restoring of any potholes that must be crossed could reduce wildlife habitat and population losses. We anticipate that many of the conflicts over these areas can be resolved, and we would like to begin to work on them right away.

In general, construction of any project of this size will disrupt and destroy land, habitat, water courses, and wildlife, and will have a more or less temporary negative impact on the towns and villages which must absorb the great influx of workers, machinery, traffic, and noise. Our hope is, however, that because of good intentions on all sides, every effort will be made to plan and carry out this project with as little disruption and lasting damage as possible.

We view the congressional role now and in the future as more active than simply approving the President's decision. We believe that it is appropriate for Congress to describe in fairly specific terms in the report accompanying its approval resolution, how it expects the Executive to proceed in planning, monitoring, and enforcing the terms and conditions to be imposed upon the builders of the pipeline. Therefore, we suggest here for your consideration some measures which we believe would contribute to a more successful construction project than the oil pipeline proved to be.

We have just this morning seen the President's decision and so it's a bit difficult to tell what is in it and what is not, but we hope that the decision contains or would allow for the following elements:

(1) It is crucial that there be a balance between the engineering and environmental staffs of the Federal inspector, and that there

be a similar balance in the backgrounds of the authorized officers and their staffs. They must be equal in authority and access to the decisionmaker, not just equal in number. We cannot accept a repeat of the Alyeska situation in which the biologists were merely advisers, and only the engineers had authority to issue and enforce notices to proceed. Because biologists and engineers see the world through different eyes, both views must be equally represented to the decisionmaker.

We might suggest a new tack here, that each of the engineers be required to take courses in biology and vice versa, and perhaps this should apply to the Government people as well as the pipeline engineers. If this does not occur, these two groups will not understand each other, and all of the promises of environmental protection may be sacrificed for the sake of construction efficiency. Certainly the balance must not tip the other way either, for we must all concede that some wildlife, terrain, and habitat damage is inevitable.

But it is our expectation that proper construction techniques are no more expensive than sloppy, damaging ones, and they may indeed be cheaper. And delays are not needed in order to take precautions for the benefit of fish and wildlife if the planners have sufficient data beforehand, and plan to schedule each procedure when it will cause the least damage. The key is to build the proper measures into the plan from the beginning, and for this to occur, the environmental experts must have an equal voice in the planning process.

(2) Similarly, one of the most important functions of the Federal inspector must be to tightly coordinate the actions and objectives of the authorized officers of the various agencies. The authorized officers must not only know what the others are doing, but also work together, to avoid conflicting requirements.

Furthermore, interdisciplinary review by this group, of the various permits and conditions to be imposed, would go a long way toward the required balance between environmental protection and engineering efficiency.

With regard to the subject of interdisciplinary review of permits, stipulations and terms and conditions, the committees may wish to hear the views of two experienced monitors of the Alyeska project. We would suggest your calling on the expertise of Al Carson, the head of the State arm of the Joint Fish and Wildlife Advisory Team, and that of Jackie Campbell, with the U.S. Fish and Wildlife Service. We would hope that Secretary Andrus and Governor Hammond would make these people available as witnesses here.

(3) Clearly the enforcement of stipulations, terms and conditions must be coordinated through the Federal inspector. He must be ultimately responsible for seeing that enforcement is carried out and a removal mechanism must be provided if he should fail to carry out his duty.

(4) It has been a cliché in this case that the mistakes of Alyeska should not be repeated. And I have some specific suggestions that are based on that project.

(a) One lesson of the Alyeska experience is that the quality control program of the pipeline builders must be fully acceptable and in operation before construction begins. On the Alyeska proj-

ect, that program was inadequate or unready for the whole first year. Thus, the Federal and State monitoring staff was forced to attempt the quality control of the whole line. This required many more inspectors than were available and the inevitable result was that quality control was almost nonexistent.

(b) Another Alyeska lesson is that the environmental monitors must have clear authority to continue in operation through cleanup and revegetation stages of the project. Uncertainty surrounding JFWAT's continuing existence is currently hampering its efforts in prodding the last stages of cleanup and mitigation of damage on the Alyeska line.

(c) Another point, as noted above, the biological teams must begin work immediately, surveying streams for appropriate crossings, and marking sensitive habitat to be avoided. Unless adequate data is available so the route and construction plans can be properly designed beforehand, the conflicts, inefficient late changes, and unnecessary damage that occurred on Alyeska will be repeated.

(d) Finally, in one of the most important changes from the Alyeska project, we believe there must be an independent citizen's council to oversee and advise the Federal inspector on the environmental, social, and economic aspects of the project in Alaska.

We would suggest that the council consist of five members: two should be Alaskan natives, one representing the North Slope Borough and one representing Doyon, both of whose lands will be affected; two members should be selected by interested environmental groups, and one by a group such as the Alaska League of Women Voters. A set of several candidates nominated by these groups would be put before the Federal inspector and the Executive Policy Board for ultimate selection.

Mr. RONCALIO. Do you propose to make those suggestions known to the Secretary of the Interior?

Ms. GRAHAM. We do, indeed, sir.

Mr. RONCALIO. I would think it's a good idea.

Ms. GRAHAM. The council must have a professional staff consisting of perhaps one engineer and one environmental specialist, and a coordinator, who should have either a managerial or legal background. The council should have its headquarters in Alaska.

Such a council and its staff must have access to all relevant Federal and State documents and reports during project planning and construction design, and guaranteed independent and unannounced access to the project including use of runways by private airplane during all phases of construction. This access will preclude the hostility and misunderstanding that occurred during construction of the Alyeska line.

Many of the so-called citizen monitors on that project were bumped for weeks at a time from any access to the project during peak construction. This council will also reduce the possibility of public frustration that might lead to litigation over enforcement or other aspects of the project. Our objective is that the council participate constructively in the implementation of the project, not hold it up.

With the above assurances of access, the council could be funded by the project builders if that is otherwise appropriate.

It is important that this council and its staff be involved in planning from the beginning, so that public views can be efficiently channeled into the very heart of the project. This will reduce the possibility of friction later on.

We believe that the Alcan management would not only accept but endorse these ideas, as formalizing the type of cooperation that they hope to realize in any event. We believe they agree with us that such measures can only improve the project. We hope that you agree as well.

Thank you.

Mr. DINGELL. Ms. Graham, we thank you for your very helpful testimony.

One of the things that the subcommittee Chair has tried to do during its career has been to see to it that an honest job was done of monitoring the affairs of the trans-Alaska pipeline by the governmental agencies. I must confess that we were a striking failure, as were the monitors. We will try and do better on those matters as things go forward.

Do you have any questions?

Mr. RONCALIO. I have none.

Mr. DINGELL. We thank you for your very helpful testimony, and we appreciate your courtesy and your time and patience, and we thank you for being here.

Ms. GRAHAM. Thank you.

Mr. DINGELL. The Chair notes that we will stand in adjournment pending the call of the Chair of the two subcommittees to continue these hearings at a time in the not too distant future.

The committee will stand in adjournment.

[Whereupon, at 2:45 the subcommittees adjourned, to reconvene on October 14, 1977.]

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research. It also provides a brief overview of the methodology used in the study.

2. The second part of the report is a detailed description of the methodology used in the study. It discusses the data sources, the data collection methods, and the data analysis methods. It also provides a detailed description of the research design and the experimental procedures.

3. The third part of the report is a detailed description of the results of the study. It discusses the findings of the study and the conclusions drawn from the results. It also provides a detailed description of the statistical analysis and the interpretation of the results.

4. The fourth part of the report is a detailed description of the conclusions of the study. It discusses the implications of the findings and the recommendations for future research. It also provides a detailed description of the limitations of the study and the strengths of the research.

NATURAL GAS PIPELINE FROM ALASKA

FRIDAY, OCTOBER 14, 1977

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
AND THE
SUBCOMMITTEE ON INDIAN AFFAIRS AND PUBLIC LANDS,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittees met at 10:25 a.m., pursuant to notice, in room 2322, Rayburn House Office Building, Hon. John D. Dingell, chairman, Subcommittee on Energy and Power, and Hon. Teno Roncalio, chairman, Subcommittee on Indian Affairs and Public Lands, presiding.

Mr. DINGELL. The subcommittees will come to order.

The Chair apologizes for the delay in starting the hearing. The bells and the lights indicate that a vote has occurred, and our colleagues, I am sure, will be here as soon as they respond to the call of the roll.

This morning's hearing is a continuation of the joint hearings conducted by the Energy and Power Subcommittee of the Commerce Committee and the Indian Affairs and Public Lands Subcommittee of the Interior Committee.

Today's hearing is the third and last day of hearings on the President's "Decision on an Alaskan Natural Gas Transportation System." During the first 2 days of hearings, the subcommittees heard witnesses representing the administration, Alcan, El Paso, a panel of financial experts, the State Department, the State of Alaska, the U.S. Shippers and a coalition of environmental groups.

Today we will hear from the Federal Energy Regulatory Commission with respect to its report on the President's decision; the Executive Policy Board regarding its proposals to avoid a repetition of the abuses that occurred on the Alyeska line; three producers of Alaskan natural gas; and finally, the Council on Environmental Quality with regard to the factual and legal sufficiency of the environmental impact statements.

We are most pleased to hear from an old friend and associate as our first witness, the Honorable Charles B. Curtis, Acting Chairman of the Federal Energy Regulatory Commission.

Mr. Curtis, I notice you are accompanied by Commissioner Smith, for whom the committee has a great deal of respect, and two other associates, and if you would each identify yourselves for purposes of the record, we will be delighted to receive your statements.

STATEMENT OF HON. CHARLES B. CURTIS, ACTING CHAIRMAN, FEDERAL ENERGY REGULATORY COMMISSION, ACCOMPANIED BY DON S. SMITH, ACTING COMMISSIONER; KENNETH WILLIAMS, ACTING CHIEF, BUREAU OF NATURAL GAS; AND WADE SEWELL, ACTING DEPUTY CHIEF, OFFICE OF POLICY ANALYSIS

Mr. SEWELL. Wade Sewell, Acting Deputy Chief, Office of Policy Analysis.

Mr. DINGELL. Thank you, sir.

Mr. WILLIAMS. Kenneth Williams, Acting Chief, Bureau of Natural Gas.

Mr. DINGELL. And, of course, Chairman Curtis and Commissioner Smith.

We closed our business yesterday with you before us, Mr. Curtis, and, Mr. Smith, we are pleased to see you back with us again, gentlemen.

Mr. CURTIS. Thank you.

Mr. Chairman and members of the subcommittees: I appreciate this opportunity to appear before you to present introductory remarks regarding the Federal Energy Regulatory Commission's comments on the "Decision and Report to Congress on the Alaska Natural Gas Transportation System" issued by the President, September 22, 1977. The FERC's comments were submitted to the Congress on October 12, 1977, and I believe copies were delivered to each member's office and copies are also here with us today in abundance.

Mr. DINGELL. Mr. Chairman, do you feel that the comments of FERC should be included in the record, or portions thereof?

Mr. CURTIS. I would ask that they be so included.

Mr. DINGELL. I think that is appropriate.

Without objections, the comments will appear in the record in full.

Mr. CURTIS. My fellow Commissioner on the Federal Energy Regulatory Commission, Don Smith, is here to present further details, as well as to comment further on the President's initiative.

The FERC prepared its comments on the President's report pursuant to the mandate of section 8(f) of the Alaska Natural Gas Transportation Act, 15 U.S.C. section 719(f). This section requires the Federal Power Commission to:

submit to the Congress a report commenting on the decision and including any information with regard to that decision which the Commission considers appropriate * * *.

The Federal Energy Regulatory Commission submitted these comments, since it is the component of the newly activated Department of Energy to which the Secretary has delegated, or the Department of Energy Organization Act has transferred, the former responsibilities of the Federal Power Commission with regard to section 8(f) of the Alaska Natural Gas Transportation Act as well as several relevant sections of the Natural Gas Act, as they apply to this matter.

The FERC concurs with the President's decision that a certificate be issued permitting Alcan and related applicants to construct and operate an overland gas transmission pipeline from Prudhoe Bay,

Alaska through Canada and back into the United States. The decision offered by the President for your approval is consistent with the findings of the FPC as expressed in its "Recommendation to the President" of May 2, 1977. Of course, the President has appropriately modified some of the FPC's recommendations to reflect the accords reached between the United States and Canada, as embodied in the "Agreement on Principles," which is incorporated in the President's decision which lies before you.

Since the agreement was only recently consummated between the two Governments, the FPC had not addressed it in its "Recommendation to the President." The FERC has concluded that the terms of the agreement are consistent with the public interest and further enhance the prospects that an economically feasible pipeline can be constructed and operated to deliver northern gas to the lower 48 States. The FERC has reiterated in its comments that the Alcan project, as described in the President's decision, is in the public interest and warrants certification.

Since the first filings for certificates were made with the FPC in March 1974, lengthy hearings have been held and extensive studies have already been made. Many competing considerations have thus been brought into focus to permit a more reasoned decision of the important issues embraced in the undertaking of this massive project by private enterprise.

The FERC comments deliberately have not attempted to restate the President's decision or the earlier FPC recommendation. Moreover, in light of the exhaustive record developed in these proceedings to date—by both governmental agencies and private entities—we have not reiterated the extensive discussions offered in support of the President's and the FPC's similar pronouncements.

The fact that they are so similar, however, lends strength in itself to their findings and conclusions. Nonetheless, the FERC, in following the mandates of section 8(f) of ANGTA, has offered some additional comments on several matters with which it is directly concerned. These comments are designed to assist the committees and the Congress in evaluating the decision of the President.

At this juncture there is a series of very important, fundamental decisions which remain to be made. These decisions include, but are not limited to, the establishment of a wellhead price for Alaskan gas in the event Congress does not undertake this task through amendment of the Natural Gas Act; the approval of producer contracts for the sale of the Alaskan gas; the allocation of processing costs between the producers and the gas consumers; the establishment of an approved tariff which will include, among other things, a variable rate of return and some type of tracking methodology for flowing-through costs associated with the purchase and transportation of the gas; and, additional site specific terms and conditions as required to protect the public interest.

The jurisdiction for these decisions now rests in the FERC. Therefore, the Commission has necessarily spoken in general terms in order to avoid prejudgment of any of these issues and to retain as much flexibility in our approach to these matters as is possible.

As I mentioned earlier, Commissioner Don Smith also is with me today. The Commissioner was, prior to his most recent appointment as an Acting Commissioner of the FERC, a member of the

FPC—since 1973. While serving in that capacity, Commissioner Smith was present during the formative stages of the record; has reviewed carefully Judge Nahum Litt's initial decision in the FPC proceeding; and participated in drafting the FPC's Recommendation to the President.

Consequently, he brings to this forum greater experience and familiarity with these complex issues than I. The Commissioner's comments should be of further help to you as he reviews, in response to your questions, the Alcan proposal and the President's decision in greater detail.

I think it should also be noted for the record that Commissioner Smith, at the invitation of the President, participated in the direct negotiations with the Government of Canada, in an advisory capacity, and in my opinion, the agreement was much improved because of that effort. He also brings to us the knowledge of the intricacies of that agreement.

With this, I believe, Mr. Chairman, Commissioner Smith may have some comments to further flesh in the details.

Mr. DINGELL. Very well, I think that would be quite appropriate.

Gentlemen, I think it is incumbent on the Chair to make certain observations here, and that is to make it plain that the Chair is keenly aware of the *Pillsbury* decision, as I am sure are all of you good gentlemen down there at the table, and I wish to make it very plain that the purpose of our hearing is to gather information to make the necessary judgments on congressional approval.

It is not our intention to intrude into the process of the Commission under the prohibitions of the *Pillsbury* case with which, I reiterate, we are all far too familiar to require recitation here.

In any event, it is the wish of the Chair that if questions would in any fashion transgress responsibilities of the Commission to make judicial or quasi-judicial decisions, we would like to have the Commission reserve its independence of judgement and so note, so that we might proceed with appropriate respect for the mandates of that particular decision.

With those comments, Commissioner, we are delighted to hear your comments.

Mr. SMITH. Thank you, Mr. Chairman. I am most pleased to be allowed to make comments to you as we draw near to the final decision, that of Congress, on whether this project will go forward or not. I appreciate the exhaustive consideration the subcommittee has given to the matter. The quality of work that we have come to associate with the subcommittee's efforts has been performed here.

As an interested observer of the proceedings before this committee and the Senate, I have noted considerable interest in the role of and the relationship between the regulatory authorities of the United States and in Canada, which will come into play prior to completion and operation of the selected project, and will doubtless be maintained for the life thereof.

Production of the Prudhoe Bay oil and gas reserves will be subject to decisions made by the State of Alaska, which must be satisfied that the proposals of the operators of the field that the manner and rate of hydrocarbon production comport with sound conservation principles and resource economics.

The price that will be paid for natural gas produced as well as the allocation of conditioning costs will be determined by FERC in the absence of congressional action disposing of the matter.

The rate for the transportation of natural gas from Prudhoe Bay to the Alaska-Yukon Territory border, since this is transportation for interstate commerce, will be determined by FERC, the successor to the FPC's mandate to establish just and reasonable rates for this service. FERC presently has no tariffs before it to approve, disapprove, modify, or condition. When such tariffs are filed, it will act thereon, subject to those limitations placed on its power to accept and approve, set out in the President's decision as they may be accepted by Congress.

The tariff for the transportation of natural gas from the Alaska-Yukon Territory border through one Canadian Territory and several Provinces to the lower United States-Canada border, which will be at two points, will be set by the National Energy Board of Canada, which is responsible for determining rates and charges by interprovincial pipelines.

Like the FERC, the NEB does not yet have before it tariffs for examination and approval. NEB will accept, reject, or conditionally accept such rates when they are filed. NEB will exercise its discretion within the context of its regulatory tradition, which is similar to that familiar to U.S. regulatory institutions, and which includes therein the concepts of the observation of regularity and predictability with which we are familiar.

This tradition has enabled Canada to join the United States in developing utility systems unique in the world, in that we have privately owned utilities subject to close regulation in the public interest as opposed to governmentally owned systems.

Indispensable to that system is investor confidence in the continuation of basic regulatory attitudes and consumer confidence that their interests remain paramount to the regulatory institution.

In addition to this most important constraint, NEB decisions on tariffs filed before it will be circumscribed further by the bilateral agreement entered into between components of the two countries which will be before the Canadian Parliament for approval. This agreement places important limitations on the kinds of charges that may be imposed on the transportation of natural gas through Canada. These charges relate primarily to taxes and other assessments on the pipeline, and to the calculation of the cost of service on that portion of the completed project through which no U.S. gas will flow, that is, zone 11, the agreement also deals with the calculation of and assignment to respective Canadian-United States purchasers of transportation costs through the joint use facilities. Shortly I will comment on those limitations and the relationship of the U.S. regulators to the Canadian process.

For the transportation of gas from the Canadian border through the eastern and western legs of the system, a rate will be determined and tariff approved by FERC. It will also set the charges for natural gas to be transported through the existing interstate systems. The gas will leave the interstate system and be sold to distributors who will pay the charge which FERC has determined to be appropriate. Thereafter, the gas will be marketed to end

users, subject to rates and charges deemed lawful by the respective State public service commissions.

In forthcoming proceedings before FERC and the NEB, certificate applications and rate filings will be consolidated, and all parts of the regulatory aspects of the project will be before each body for examination, including the finalization of the financing commitments.

Another matter that must be dealt with is the resolution of marketability questions, which in the final analysis will be determined by the commitments to purchase made by pipelines, distributors, and end-users in the lower 48 States. These commitments to purchase and sell cannot be made absent a determination that the State commissions believe the terms serve the interests of the consumers of the States, for without that determination, costs could not be passed through to the ultimate consumer.

Other questions must be answered. Paramount among these is the price of gas, be it at the wellhead, the field, or at the tailgate of the conditioning plant. The contacts between shippers and the pipeline will likewise be spread before the regulatory bodies. These agreements will detail the rates and charges for transportation through the Canadian sections of the line and will be reviewed for compliance with the decision of the President and the Congress on those points set out in the President's recommendation.

Unique to the Alaskan natural gas transportation system is the regulatory relationship which is set out in the United States-Canada Agreement on Principles Applicable to a Northern Natural Gas Pipeline. This is set out in its entirety in the President's report.

Article 9 of the bilateral agreement deals with consultation between the respective regulatory authorities of the two Governments on matters arising under paragraphs 4, 5, and 6 of that agreement. The designated paragraphs deal with the understandings reached between the United States and Canada on financing, which is paragraph 5.

Paragraph 6 is taxation and provincial undertakings, and paragraph 7 is tariffs and cost allocations.

The finance section acknowledges that both governments have an interest in the extent to which investors require protection against noncompletion and service interruptions, and illustrates Canadian recognition that such provisions be fair to U.S. consumers. That section also sets out the variable rate of return understanding as an integral feature of the project.

In addition, it sets out by annex some of the base capital costs which were utilized for this determination for the Canadian section.

The apparatus through which regulatory consultations will be carried forward has yet to be finalized.

I would anticipate, Mr. Chairman, that probably the first consultative role or action that would be taken would be arriving at an understanding with the National Energy Board as to the manner in which bookkeeping records will be kept during the construction phase of the pipeline, for that system of records will determine the variable rate of return operation, which in turn will deal with the allocation of service in zone 11.

Thank you, Mr. Chairman. I have attempted to be brief.

[The testimony resumes on p. 406.]

[The FERC comments on the Decision and Report to Congress follow:]

COMMENTS ON THE

"DECISION AND REPORT TO CONGRESS
ON THE ALASKA NATURAL GAS
TRANSPORTATION SYSTEM"

ISSUED BY THE PRESIDENT
SEPTEMBER 22, 1977



FEDERAL ENERGY REGULATORY COMMISSION

OCTOBER 1977

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D. C. 20426

October 12, 1977

TO THE CONGRESS OF THE UNITED STATES:

Pursuant to Section 8(f) of the Alaska Natural Gas Transportation Act, 15 U.S.C. §719f(f), the Federal Energy Regulatory Commission (FERC), having been delegated or having had transferred to it the authority which previously resided in the Federal Power Commission with respect to this matter, herewith submits to the Congress its comments on the "Decision and Report to Congress on the Alaska Natural Gas Transportation System", issued by the President on September 22, 1977.

We have reviewed the decision and support the President's determination that the completion of the Alcan project will benefit the public interest. In these comments FERC attempts to clarify and augment the discussion presented in the President's report and to outline for the Congress the additional procedural steps remaining to be taken by FERC prior to the actual commencement of

-2-

construction of the pipeline - assuming the Congress acts affirmatively on the President's recommendation.

Charles B. Curtis

Charles B. Curtis *
Acting Chairman

Don S. Smith

Don S. Smith
Acting Commissioner

Georgiana Sheldon

Georgiana Sheldon
Acting Commissioner

- * The Chairman did not participate in either the preparation of or the discussion of the Commission's comments on Chapter IX, "Western Leg." The Chairman sat on the Commission during consideration of this section of the Comments solely for the purposes of a quorum.

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SUMMARY AND OVERVIEWI. Legal Requirements

Section 8(f) of the Alaska Natural Gas Transportation Act, 15 U.S.C. §719f(f), provides:

Within 20 days of the transmittal of the President's decision to the Congress under section 719e(b) of this title or under subsection (b) of this section, (1) the Commission shall submit to the Congress a report commenting on the decision and including any information with regard to that decision which the Commission considers appropriate

Pursuant to that direction, the Federal Energy Regulatory Commission (FERC or the Commission), having been delegated or having had transferred to it the authority which previously resided in the Federal Power Commission (FPC) with respect to this matter, 1/ herewith submits to the Congress its comments on the President's "Decision and Report to Congress on the Alaska Natural Gas Transportation System", issued September 22, 1977.

II. Contents

The President has recommended that a certificate be issued permitting Alcan and related applicants to construct

1/ Subsection 705(b) (1), Department of Energy Organization Act, Pub. L. No. 95-91 (August 4, 1977).

and operate an overland pipeline from Prudhoe Bay, Alaska through Canada and back into the United States. The President's decision is consistent with the original findings of the FPC expressed in its May 1977 Recommendation to the President, with appropriate modification to conform to the accord reached between the United States and Canada, as expressed in the "Agreement on Principles." For this reason FERC has confined its comments to those matters of concern to the Commission and for the purpose of providing further amplification or explanation where it appeared necessary.

In these comments the Commission has neither restated the President's decision nor reiterated the extended discussion offered in support thereof. Procedurally, this report sets forth comments on Chapters I-VII, and IX of the Report, plus an additional section dealing with relevant matters not discussed in these chapters.

III. Recommendation

The Commission concurs in the President's choice of the Alcan project and agrees with the terms and conditions set forth by the President. These terms and conditions

will serve the public convenience and necessity and are necessary adjuncts to any certificate issued pursuant to the Natural Gas Act. 2/ To the extent the President has indicated that further action is required by FERC, and assuming that the Congress approves the President's choice, the Commission is committed to ensuring an expeditious resolution of the certificate issues with which it must deal.

Several decisions with respect to final certification of the Alcan project remain within the jurisdictional responsibility of FERC. For example, the Commission must approve a tariff for the operation of the United States' portion of the pipeline system. This tariff will contain a variable rate of return provision, as the President required, but the exact parameters of that device, plus the other necessary components of a pipeline tariff, must be determined so that the applicants for certificates can arrange the necessary financing commitments. Moreover, the financing plan itself will be subject to Commission scrutiny and approval.

2/ 15 U.S.C. §§ 717, et seq.

In addition to tariff and financing issues, a wellhead rate for producer sales must be set either by the Congress through amendment to the Natural Gas Act or, failing that, by FERC. The costs of separating and processing the casing-head gas must be identified and allocated. There are additional technical and legal considerations that will require resolution. Furthermore, the organization and commencement of operation of the various intergovernmental and international relationships called for by the President's Report must be implemented.

COMMENTS ON CHAPTER I
"Desirability of an Alaska Gas Project"

A. Gas Supply and Demand

1. Introduction

The Report reaches several fundamental conclusions with respect to Alaska gas:

- (1) The addition of Alaska gas to domestic production will make a substantial contribution toward closing the gap between natural gas supply and demand;
- (2) The principal impact of Alaska gas on U.S. natural gas supply and demand will be to help reduce natural gas shortages; and
- (3) Even with Alaska gas, the United States may need additional supplemental sources of gas supply to meet demand.

The Federal Energy Regulatory Commission fully agrees with and supports these conclusions. There are, however,

certain portions of the Alaska gas supply discussion which we believe may benefit from further elaboration.

Also discussed is the Report's suggested "pre-delivery" plan for Alaska gas, which was not considered in the proceedings before the FPC. The plan is an outgrowth of a proposed gas pipeline to the Mackenzie Delta, as discussed in the Canadian National Energy Board (NEB) decision of July 4, 1977. This plan was also one of the subjects of the recent negotiations between the United States and Canada relating to the gas pipeline project.

Under the "pre-delivery" plan for Alaska gas, early construction of the southern portion of the Alcan system would be required. According to the Report, the probable benefits of the plan would be increased exploration activity in Canada, resulting in early increased gas exports and possible long-term increased exports from Canada. The "pre-deliveries" of Alaska gas would be repaid to Canada by reduced export commitments in the late 1980's or by time-swaps for Alaska gas. We endorse the "pre-delivery" plan conceptually, noting, however, that many details remain to be finalized.

The "pre-delivery" plan has the benefit of expediting the time at which northern gas could be made available to the markets in the lower 48 states. It also has the advantage of encouraging increased exploration and development activities in Canada, with the possibility of increased exports. Of course, care must be taken to insure that the short-term availability of these increased supplies does not diminish incentives for needed conservation or reduce the speed with which low priority users shift away from natural gas. The desirability of the "pre-delivery" plan will depend on the arrangements made with Canada, the distribution of the gas among pipelines and end-users, a determination of which types of pricing methodology will be employed, and the future burdens repayment may impose.

The Commission also offers clarifying comments on the level of gas deliveries to be expected from the Mackenzie Delta, infra pp. 11-13. Even with increased exploration in Canada's frontier regions, other measures will also be required to improve the energy resource bases of our two countries.

2. Prudhoe Bay Field

The Report states that "proved saleable gas reserves in the Main Pool" of the Prudhoe Bay Field are 20.6 to 22.8 Tcf (Rep. 89). Review of information made available subsequent to the FPC's Recommendation supports this conclusion. These levels of saleable reserves are predicated upon estimated gas-in-place volumes of 40.4 Tcf and 42.8 Tcf respectively, 3/ reflect a twenty-four percent "shrinkage factor", 4/ and rely on the assumption that seventy percent of the gas reserves can be produced during the first

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- 3/ The 40.4 Tcf (Trillion Cubic Feet) is based upon a study prepared by H. K. Van Poollen and Associates for the Division of Oil and Gas Conservation (DOGC), Department of Natural Resources, State of Alaska. The 42.8 Tcf is based upon data presented by the three largest field operators (ARCO, BP, and EXXON) at the Prudhoe Bay Unit Hearings held before DOGC in Anchorage on May 3, 5, and 6, 1977.
- 4/ The FPC Recommendation estimated the gas "shrinkage factor" to be 26%. This factor was also adopted by the State of Alaska, infra note 5. The shrinkage factor reduces the volume of gas produced to account for CO₂ removal, field use, and conditioning gas for transportation. See FPC Recommendation, pp. III-14, III-15. See also, "Report of the Working Group on Supply, Demand, and Energy Policy Impacts of Alaska Gas," July 1, 1977, pp. 10-11. This report was developed by FEA, ERDA, USGS, and the Departments of Commerce, Transportation, and Treasury.

twenty years a gas pipeline from Prudhoe Bay Field is available. This estimate of "proved saleable gas reserves" is appropriate and consistent with Commission calculations. Indeed, the potential may be greater if one looks to the representations made by the producers to the State of Alaska.

The Prudhoe Bay Field operators received approval from the State of Alaska for their proposed reservoir management plan. 5/ This plan is predicated upon a gas-in-place volume of approximately 42.8 Tcf. The producers also project that seventy-five to eighty percent of the in-place gas may ultimately be recovered.

Assuming the reservoir can be managed to allow seventy-five to eighty percent gas recovery efficiency, the total saleable gas reserves to be realized from the Prudhoe Bay Field could be approximately 25 Tcf (42.8 Tcf x 80% recovery efficiency x 74% after shrinkage).

5/ "Conservation Order Number 145, Prudhoe Bay Field, Prudhoe Bay Oil Pool," July 1, 1977, issued by Division of Oil and Gas Conservation, Department of Natural Resources, State of Alaska.

The Report also states that "Prudhoe Bay production at 2.4 Bcfd (billion cubic feet per day) will include production from other reservoirs which have been identified in the field, the Kuparuk and Lisburne" (Rep. 89). The reservoir management plan approved by the State of Alaska contemplates that 2.0 Bcfd and possibly as much as 2.5 Bcfd will be delivered from only the Main Area Sadlerochit reservoir. 6/ Production from the "West" or "Eileen Area" of the Prudhoe Bay Oil Pool, which Pool includes the Sag River and Shublik reservoirs in addition to the Sadlerochit reservoir, and from the Kuparuk River Oil Pool and the Lisburne Oil Pool could result in additional gas deliveries. 7/

6/ See FPC Recommendation, pp. III-19 to III-21. See "Report of the Working Group on Supply, Demand and Energy Policy Impacts of Alaska Gas," July 1, 1977, pp. 17-18. The Prudhoe Bay Field is divided into what is referred to as "The Main Area" and the "West" or "Eileen Area." The Main Area portion of the Sadlerochit reservoir contains approximately 84 percent and 93 percent of the total field's gas cap and oil zone hydrocarbons, respectively.

7/ See FPC Recommendation, pp. III-8 to III-10 for description of various pools and reservoirs in the Prudhoe Bay Field.

These additional deliveries will most likely be small, however, in comparison to the deliveries from the Main Area Sadlerochit reservoir.

3. Canadian Gas

The Report discusses two sources of Canadian gas supply: (1) the projected deliveries of gas from the Mackenzie Delta area and future exploration and development in the Mackenzie Delta, and (2) the increased level of gas exports from the traditional gas supply sources in Alberta. The Report concludes that construction of the Alcan project will stimulate exploration in both the Mackenzie Delta area and Alberta. As a result of the expected exploration, the "possibility of obtaining additional volumes of Canadian gas in future years will be enhanced." (Rep. 93).

Subsequent to submission on May 2, 1977, of the FPC's Recommendation to the President, the Canadian National Energy Board (NEB) issued on July 4, 1977, its decision on the northern pipeline project. The NEB found that absent

a project which provided Canadians access to their frontier gas reserves, Canada might not have sufficient gas supplies to fulfill existing gas export licenses to the United States. Access to frontier gas reserves would permit gas exports to continue at least at their present level.

During negotiations between the United States and Canada concerning a gas pipeline project, the possibility was discussed of effectively making Alaska gas available to the United States through pre-delivery of Canadian gas under existing export licenses. The Report discusses this possible arrangement as follows:

...The southern portions of the Alcan project could be constructed first, and deliveries of excess gas from Alberta could reach as much as 1.1 Bcfd by the winter of 1979-1980. As currently proposed, the pre-deliveries would be repaid by reduced export commitment in the late 1980's, or by time-swaps for Alaska gas. (Rep. 92).

...pre-delivery would make extra gas available over the next few years when the Nation faces serious and immediate natural gas shortages, prior to the time when supply stimulation and demand reduction measures under the National Energy Plan have had any effect in helping bring natural gas supply and demand back into balance. (Rep. 93).

Details remain to be worked out, of course, between producers and purchasers in Canada, as well as export-import agreements between the United States and Canadian companies.

The Report also states that "a project which brings a major pipeline effectively within 500 miles of the Mackenzie Delta region should stimulate further exploration activity there." (Rep. 93). In its Recommendation, the FPC found:

...The Mackenzie Delta area has not been fully explored, and many of the known deposits of oil and gas have not yet been fully developed. Additional exploration will most likely result in new discoveries. Future development drilling will better delineate existing fields and should result in reserve additions to the existing fields. However, exploration and development activities to date have not been totally encouraging, and the magnitude and timing of future reserves is uncertain.

The FERC concurs that the Alcan project should provide increased exploration incentives in both the Mackenzie Delta area and Alberta. Benefits should accrue to both the United States and Canada as a result of any increased exploration in Canada. Through continued exports under existing contracts and possible "pre-deliveries" of Alaska gas as a result of early construction of the southern portions of the Alcan project, the United States would be assured maximum availability of Canadian gas in the near future. The development and export of gas should provide a stimulus for the Canadian economy, as well as for the United States economy. Increased exploration could also result in long-term improvement in Canada's energy resource base, which should increase the likelihood of longer-term gas supplies being made available to the United States. The availability of these supplies should not, however, be used to forestall efforts to increase energy conservation, as well as to encourage low priority users to shift away from the use of natural gas.

4. Other Gas Supply Supplements

The Report discusses, in addition to gas to be delivered through the Alcan system, two other "economically attractive means to supplement traditional domestic supplies by 1985." (Rep. 89) The first is to accelerate Outer Continental Shelf leasing in the Gulf of Mexico, and the second is to import gas from Mexico. Accelerated leasing offers the potential for early increases in gas supplies. As to possible Mexican imports, there is presently pending before FERC 8/ a recently filed application to import substantial quantities of gas from Mexico. Deliveries of approximately 50,000 Mcfd (thousand cubic feet per day) through existing facilities could commence as early as late 1977. After completion of new pipeline facilities in the Republic of Mexico and in the United States, imports from Mexico could increase as follows:

<u>Year</u>	<u>Volumes (Bcfd)</u>
1979	0.7
1980	1.3
1981	1.4
1982	1.5
1983	1.6
1984	1.7
1985	1.8
1986	2.0

8/ Under the Department of Energy Organization Act, Public Law No. 95-91 (August 4, 1977), jurisdiction over natural gas imports under Section 3 of the Natural Gas Act is transferred to the Secretary of Energy (§402(f)).

This projection of deliveries from Mexico is slightly different from the projection of 1.0 Bcfd not before 1980 and 2 Bcfd by about 1982 stated in the Report. (Rep. 227) The projection stated above is based upon information recently filed with FERC. 9/ These differences should not affect the conclusions reached in the Report, and they are not controlling in our concurrence and support of the overall conclusions of the Report.

FERC is in full support of the Report's conclusion that, in addition to Alaskan gas, the United States may increasingly need supplemental sources of gas supply to meet demand. As the Report points out, supplemental sources include:

- geopressurized aquifers containing methane
- Devonian shale
- deeper, tighter formations
- coal gasification
- imports of liquefied natural gas (LNG)
- synthetic natural gas (SNG) 10/

9/ The above projection of imports is based upon data contained in applications filed with FERC to construct facilities to handle the subject imports. The projections of possible imports from Mexico of "as much as 0.5 Tcf per year by 1985 and 0.7 Tcf per year by 1990" (Rep. 89) may be too low, based upon information available to us. This should not be viewed, however, as a prejudgment of any issues involved in proceedings before FERC.

10/ Given the present imbalance between domestic crude oil production and total demand for products derived from crude oil, the feedstock to most domestic SNG plants would very likely require imported crude oil or oil products.

5. Summary and Conclusion

Most of the comments in the preceding discussion are offered as clarification to assist in analyzing the Report. Other comments have been made on proposals which have surfaced subsequent to the FPC's May 2, 1977, Recommendation to the President. Neither newly available information nor events occurring subsequent to our submission of the Recommendation change the central gas supply conclusion reached therein:

- The Alaska North Slope proved gas reserves and future gas potential justify a gas transportation system.

We support the Alaska gas "pre-delivery" plan conceptually. We note, however, that many details remain to be worked out between Canadian producers and purchasers and between Canadian exporting and United States importing companies.

We concur with the views expressed in the Report that, even with Alaska gas, the United States may need additional supplemental sources of gas.

We also concur in and support the views and conclusions related to gas supply and demand expressed in the Report:

The most optimistic 1985 projection for U.S. domestic production of gas is 17.5 Tcf without Prudhoe Bay gas. This is 15 percent less production than in 1970. Yet during this same period - 1970 to 1985 - it is estimated that total energy demand will increase by over 40 percent. Further, a more pessimistic but still plausible estimate of the domestic resource base would reduce 1985 production of gas by an additional 0.9 Tcf per year.

On the demand side, it is apparent that this Nation could use all the reasonably priced natural gas it can produce. Even with the ambitious coal conversion program proposed earlier this year by the Administration, projections indicate that Alaska natural gas will be needed to meet demand in the coming decade. (Rep. 88)

B. Gas Processing Costs

1. Introduction

Gas processing will be required at the Prudhoe Bay Field to condition the gas for transportation. This process involves removal of CO₂, removal of liquefiable hydrocarbons as required for dew point control, removal of moisture, and compression and cooling of the gas to pipeline pressure and temperature specifications. The following comments discuss the need for processing the gas, the requirement for water injection to maintain reservoir pressure if gas is sold rather than utilized for pressure maintenance, and processing cost considerations.

2. Need for Gas Processing

Chapter III of the FPC Recommendation to the President contains a detailed discussion of the Prudhoe Bay Field, its geology, reservoir content, and the reservoir management plan to be implemented. ^{11/} There is no need to repeat that detailed discussion. However, the following discussion should assist in relating the gas processing operation to other aspects of the field.

^{11/} The reservoir management plan discussed in the Recommendation has been approved by the State of Alaska, supra notes 4 and 5.

The Prudhoe Bay Field is the largest petroleum accumulation discovered on the North American Continent. The field contains several oil reservoirs in which over 20 Bcf of saleable gas reserves and over 9 billion barrels of recoverable oil reserves exist. Some of the gas is in solution with the oil. Gas in excess of the solution capacity of oil has accumulated in the higher elevation of the reservoir and forms a "gas-cap."

The gas produced during at least the early years of oil production can be advantageously utilized for reinjection in order to maintain reservoir pressure and thus sustain oil production. Moderate expansion of the gas cap into the oil zone during the early years of oil production will eliminate or greatly minimize oil migration into the gas cap after gas sales commence.^{12/}

^{12/} A large portion of any oil that migrates to the gas cap would be unrecoverable. For detailed discussion, see FPC Recommendation, pp. III-4 to III-24. See also, "Report of the Working Group on Supply, Demand and Energy Policy Impacts of Alaska Gas", pp. 11-13.

Therefore, from a production standpoint, the gas should not be viewed as a by-product which must be sold either during the initial years of oil production or thereafter.

The "Report of the Working Group on Supply, Demand and Energy Policy Impacts of Alaska Gas"^{13/} estimated that "about 80% of gross income from Prudhoe Bay's Main Pool will be derived from oil production, dependent obviously, on oil and gas well head prices." This estimated relationship between the gross value of oil to total production from the Prudhoe Bay Field is highly speculative at this time, as the statement indicates. The estimate does, however, give an indication of the weight that considerations affecting principally oil production could have on the operations of the field.

In the initial years of the Prudhoe Bay Field, the gas produced will be associated gas. Gas will not be produced initially from the gas cap. Prior to the

^{13/} Supra, note 4.

commencement of gas sales, the produced gas will be processed to remove liquefiable hydrocarbons to the extent necessary to make the gas available for field use and to allow compression of the gas for reinjection into the reservoir.

After gas sales commence, further processing of the gas will be required. The produced gas contains approximately twelve percent CO₂. Carbon dioxide has no value as a fuel. Its removal on the North Slope is required so that only useful ingredients are shipped through the pipeline system. Furthermore, operational problems could occur in the transportation of gas if CO₂ were present.^{14/}

Conditioning the gas for transportation will also include removal of liquefiable hydrocarbons as required for dew point control (i.e., removal of hydrocarbons which may condense in the transportation system and cause operating problems). Compression and cooling of gas would also be required to meet pipeline pressure and temperature specifications.^{15/}

^{14/} CO₂ could form "dry-ice." Also, CO₂ could combine with water to form carbonic acid, a mildly corrosive agent.

^{15/} The first compression station on the Alcan pipeline system would be at Milepost 75. See Report p. 17. Also, the gas has to be chilled below 32° F to prevent degradation of the permafrost. See Decision, pp. 14-15.

The amount of liquids to be recovered from the produced gas is substantial, useful, and valuable. A technical report filed with the State of Alaska by the major interest owners in the Prudhoe Bay Field (ARCO, BP, EXXON, and Sohio) in support of their proposed reservoir management plan states:

A gas cap gas condensate yield of about 35 barrels per million cubic feet of separator outlet gas is expected initially from the separator facilities located at the flow stations (gathering centers). In addition, it is expected that once gas sales begin, 10-15 barrels of gas liquids per million cubic feet of separator outlet gas will be extracted at the gas sales conditioning plant to make the gas acceptable for delivery into the gas pipeline.

Gas pipeline specifications are not currently known and final specifications may increase or decrease the volume of liquids which must be extracted from the gas to prevent condensation in the pipeline. Regardless of the final gas conditioning requirements, all liquid extracted will be used without waste; either to displace fuel gas or to be transported through the oil pipeline.^{16/}

^{16/} Exhibit ALA-33 filed in proceedings before FPC, p. 16.

3. Water Injection Facilities

Another important feature in analyzing the gas processing operation is the possible requirement of large-scale facilities for water injection. If gas is sold and not reinjected into the reservoir, injection of water from an extraneous source, in addition to reinjecting produced water, may be required. The producers estimate that the cost of large-scale extraneous water injection facilities could exceed one billion dollars.

The producing mechanisms available to the Prudhoe Bay Field (i.e., depletion drive in the oil zone, gas cap expansion, gravity drainage, and water drive) were discussed in detail in the FPC Recommendation to the President. ^{17/} A strong, efficient natural water drive may not occur in the Main Area Sadlerochit reservoir. Without a strong natural water drive, the rate at which gas is produced and sold, as opposed to reinjected, will determine the depletion rate of reservoir energy needed to produce the oil.

^{17/} See especially pp. III-15 to III-21 of the Recommendation.

In order to make sufficient gas available over the long-term to support a gas pipeline project, large expenditures by the producers may be necessary to implement an extraneous source water injection program. Three to five years of actual production history will be required to analyze the performance of the petroleum reservoir and to quantify the effect of the aquifer on production performance. Based upon such production history, the producers may implement an extraneous source water injection program when the additional recovery prediction of 3% to 7% of the original oil in place from such operation is verified. It has been estimated that such an extraneous source water injection program could cost over \$1 billion. 18/

We are unable at this time to describe precisely how the costs of water injection facilities should be balanced against the costs of gas processing facilities, but some consideration is required. This view is expressed, however, in the context of not yet knowing the final course of reservoir management, the extent of the facilities required

18/ Exhibit ALA-33 in FPC Proceedings, pp. 6, 29.

to implement the required operations, and the provisions of the purchase gas contracts. 19/

4. Costs of Processing Gas

Various estimates of the costs of processing the gas have been made. The Report indicates that processing costs that may be assignable to gas and not to extracted liquids are in the range of 0¢ to 30¢ per Mcf. The upper limit of this range represents the assignment of 100% of the processing costs to the processed gas stream, while the lower limit assumes that all of the processing costs should be borne by the extracted liquids.

In commenting on the processing costs, we discuss first the total costs of the gas processing operations, and second the considerations affecting the portion of processing costs that should be borne by gas consumers.

19/ These expressed views should not be construed as prejudging any proper showing made in a proceeding before FERC.

The estimated cost of the facilities required for separating the produced fluids into liquids and gas, gathering the gas, and conditioning the gas for transportation were presented in the FPC proceedings.^{20/} The costs estimated by the producers were:

<u>Facilities</u>	<u>Estimated Costs</u> <u>1975 Dollars (Million)</u>			
	<u>Capital</u>			
	<u>Costs</u>	<u>IDC</u>	<u>21/</u>	<u>Total</u>
Gas Facilities at Gas-Oil Separation Centers	429	98		527
Gas Gathering Facilities	49	8		57
Gas Conditioning Plant	966	286		1252

^{20/} Transcript p. 19,497.

^{21/} Interest During Construction.

Caution must be exercised in responding to any of the above costs, since they were made without the benefit of the final pipeline specifications. Additionally, the costs were also estimated without the benefit of producer/purchaser gas sales contracts. In the absence of definitive gas purchase contracts, uncertainties still remain as to whether the purchasers will have any obligations for the gas gathering and processing costs. Uncertainties also remain as to the handling of revenues attributable to the extracted liquids. Furthermore, it is still unclear whether the gas purchase contracts would provide additional gas processing rights after the gas leaves the North Slope of Alaska. The gas purchase contracts to be negotiated between the producers and gas purchasers should address these issues.

Gas/oil separation facilities are required to make the oil saleable, and they would be required whether the gas were sold, used for field operations, or reinjected into the reservoir to sustain oil production. Based upon the information available to us at the present time, it appears that the costs of gas/oil separation facilities would not be borne by the gas consumer. 22/

22/ The producers submitted only limited cost information in the FPC proceedings. The nature and function of the "gas facilities at gas-oil separation centers" are not entirely clear from the data available to us at this time.

We make this statement in the context of gas/oil separation facilities used in a normal oil production operation, recognizing that at least a portion of the gas-liquid separation facilities that will be necessary to handle fluids from the gas cap may be properly allocable to gas.

A portion of the gas gathering facilities may properly be borne by the gas consumer.^{23/} In some cases, where the gas is processed by producers subsequent to gathering by a pipeline company, the FPC allocated field compression and gathering costs between residue gas ultimately reaching the pipeline and extracted liquids retained by the producers. In other arrangements, where the producers process the gas subsequent to gathering and/or transportation by a pipeline company a transportation charge to the producer by the pipeline was approved.

Many of the gas purchase and transportation arrangements have become complex in recent years, largely because of the extensive facilities required to tap some of the

^{23/} In past producer rate proceedings the FPC approved methodologies for non-associated gas which permitted allowances for gas gathering facilities. See, for example: Opinion No. 699, issued June 21, 1974, Docket No. R-389-B, mimeo pp. 93-94. FPC. See also, Opinion No. 699-H, issued December 4, 1974, Docket No. R-389-B, mimeo pp. 36-38. FPC.

offshore and more remote onshore gas supplies. Most arrangements, by necessity, have to be reviewed individually. Therefore, we would have to review the specific producer/purchaser gas sales contracts before an informed judgement as to the level of Prudhoe Bay Field gas gathering costs that should be borne by the gas consumers can be made.

In producer rate proceedings before the FPC the gathering and conditioning costs have been small in relation to other costs. Gas gathering and conditioning costs for the Prudhoe Bay Field, however, will be larger. A final determination of processing costs must consider that the gathering and conditioning operations and costs for the Prudhoe Bay Field may not be comparable to the operations and costs in the lower 48 states. Producers point to the unusually high delivery pressure required at the Prudhoe Bay Field. This high pressure is reflected in the fact that the first compression station is at Milepost 75 of the Alcan pipeline (Rep. 17), rather than closer to or at the field.

The gas must be chilled to below 32°F to prevent degradation of the permafrost regime. 24/ Operation of
24/ See Decision, pp. 14-15 for discussion of the
occurrence and distribution of permafrost.

the pipeline system in a chilled state also imposes stringent requirements on the inlet gas for low CO₂ content and low hydrocarbon and water dew point levels. We appreciate the size, complexity, and costs (at least based upon available information) of the gas conditioning facilities; however, a significant function of the processing facilities apparently will also be the removal of liquefiable hydrocarbons. Therefore, absent knowledge of the contractual arrangements for disposing of the extracted liquids, we cannot at this time be definitive as to processing costs.

Several other important features should be considered in determining the amount of gas processing costs that should be borne by the gas consumers. Some of the hydrocarbons liquefied at the processing plant may be reinjected into the gas stream. The Alcan system actually contemplates this type of operation, which results in Alcan transporting gas with a heating value of approximately 1138 Btu per cubic foot. This is greater than the typical city-gate gas heating value in the contiguous states of approximately 1030 Btu per cubic foot.

However, it is not clear at this time whether the producer/purchaser gas sales contracts would provide for further processing of gas by the producers after the gas leaves the North Slope of Alaska. Further processing could occur and still allow gas with a heating value slightly in excess of 1000 Btu per cubic foot to be delivered to the ultimate gas consumers. If one of the purposes and results of the processing operation were that relatively high Btu gas would be made available to the pipeline on the North Slope in exchange for the producers retaining further gas processing rights elsewhere on the pipeline system, this arrangement should be considered in determining the level of gas processing costs to be borne by the gas consumers.

5. Summary and Conclusions

The gas conditioning operations to be conducted at the Prudhoe Bay Field are required to make the gas suitable for transportation. These conditioning operations will also make additional liquids available for use or sale.

Based upon information available at this time, it is our view that the cost of the gas-oil separation

facilities probably should not be borne by the gas consumers, since gas-oil separation facilities are a necessary part of the oil production operations and are required in order to make the oil saleable. The facilities would be required, based on our understanding of the proposed field operations, whether or not gas sales were made.

We cannot at this time state definitively our views on gas gathering facilities costs. A portion of these costs may be properly assignable to the liquids extracted in the processing operation; and it is the gas purchase contracts between the purchasers and producers that normally determine the processing rights and obligations and establish the ownership of the extracted products. These contracts have not as yet been executed.

The cost of the gas conditioning plant should be evaluated in the context of the plant's actual operations and the provisions established by the gas purchase contracts. In determining the amount of the gas conditioning plant costs to be borne by gas consumers, considerations should include the quality of the gas made available to the pipeline (particularly the heating value, pressure and temperature), the ownership of extracted products, and whether

further processing of the gas will occur after it leaves the North Slope of Alaska.

If gas is sold rather than reinjected into the reservoir, a large-scale source water injection program may be required to sustain reservoir energy needed for oil production. Several years of actual production history are needed to evaluate the reservoir performance and quantify the extent of natural water drive. The producers estimate the source water injection project would cost over one billion dollars. In determining the amount of processing costs to be borne by the gas consumer, some balancing may be necessary to give consideration to the level of possible expenditures that may be required for a large-scale source water injection project.

C. Wellhead Pricing

The wellhead price applicable to the Alaska sales has not yet been determined. The rate will be set by Congressional action to amend the Natural Gas Act or, failing that, by the FERC. The President's Report recommends that Alaskan gas be priced according to the

proposed National Energy Plan, which calls for a base rate of \$1.45 per million Btu (for old gas under a new contract). The Report indicates that, at a wellhead price of \$2.00 per Mcf or higher, the project may not be capable of being financed. (Rep. 46). While the Commission does not take a position on the proper rate to be employed 25/, the marketability of the gas must be considered in any eventual price consideration.

25/ If Congress does not set the rate, then FERC must convene a ratemaking proceeding that will determine on-the-record a just and reasonable rate pursuant to the dictates of the Natural Gas Act. Thus, if the Commission were to take a position now as to what the proper rate should be, and if FERC were to have set the rate itself, then the Commission would have placed itself in the untenable position of having prejudged the outcome of a proceeding that must be decided solely on the basis of the record evidence adduced.

COMMENTS ON CHAPTER II
"Financial Analysis"

The President's Decision and Report to Congress requires that the Alcan project be financed privately. The risks involved in the project are to be borne by those entities that will directly benefit therefrom, and those entities will be compensated for incurring the risks. In addition, the gas company sponsors, the producers, and the State of Alaska will also be direct financial beneficiaries of the Alcan system, and, since they have the creditworthiness to assist in the successful financing of the Alcan system, as the Report suggests, their participation would be of assistance. FERC concurs in this approach to the financing question, although finalization of the specific financing plan is a matter that must be decided by FERC in the future.

I. Shippers

The President's Decision at page 38 requires that the Alcan Pipeline Company and the Northern Border Pipeline be "... open to ownership participation by all persons without discrimination, except producers of Alaskan natural gas." Nonetheless, it is contemplated that the majority of the equity in Alcan and Northern Border will be held by the shippers. Moreover, the Canadian equity is expected to be provided by the four companies supporting the project in Canada (Rep. 111).

The President's Report states that the equity invested in the project should be at risk and that the sponsor companies would have to honor any equity commitments in the event of noncompletion. Equity investors in business ventures normally incur these risks, and it is appropriate for the sponsor investors in the Alcan project to bear such risks. In addition, the sponsor companies will have to make provision for the equity portion of any funds needed to cover cost overruns.

Potential lenders to the project will analyze the sponsor companies to determine whether or not the sponsors have the financial strength to provide the initial equity capital as well as any additional equity needed to cover potential cost overruns. The Department of Treasury was the lead agency in developing the "Report to the President, Financing an Alaskan Gas Transportation System," which was released on July 1, 1977. The Report concluded that the sponsor gas transmission companies have the financial capability to provide the equity capital, including equity capital which may be needed for cost overruns.

The oil companies that sponsored the Alyeska oil pipeline contributed the equity to that project and, in addition, guaranteed the debt that was incurred to construct the line. A similar debt guarantee may be necessary to secure financing of the Alcan project. For this reason, the President's Decision invites the producers and the State of Alaska to provide debt guarantees during the construction period of this project.

The President's Report states at page 120 that the Alcan financial advisors and sponsors believe that the project could be financed without an "all events" tariff, without consumer noncompletion guarantees, and without Federal financial assistance. All that is contemplated is a tariff that would provide for the maintenance of debt service in the event of a service interruption. This type of provision should provide the lenders with sufficient assurance that the debt would be serviced even in the event of a service interruption.

The "variable rate of return" concept proposed in the President's Decision has a great deal of merit. While the details will have to be worked out respectively by the FERC and the NEB, it appears that an equitable method of

providing the proper incentive to control construction costs would be to arrange accountability on the basis of project segments. In other words, the sponsor investors responsible for constructing various segments (Alcan, Canadian Segments, Northern Border and Western Leg) of the project would be rewarded or penalized in terms of return based on the cost of constructing their segment relative to the estimate for that segment.

To provide a basis for further consideration of this issue, the following illustrative example is offered as to how a variable rate of return may be structured to accomplish the President's objectives. Because the variable rate of return is intended to provide a cost control incentive, the design of a variable rate schedule would begin with the rates allowed on increments of cost. Each increase of 10% over estimated costs would yield a lower rate of return than preceding increments. Naturally, the overall rate declines but the incentive operates through the declining rate on cost increments. The design of the variable rate of return begins, therefore, with the rates

on increments as illustrated in Column 3 of Table I. Selection of an appropriate rate for the case when actual and estimated costs are equal then provides the basis for calculating the overall rate at other cost levels. This rate, if selected according to the usual regulatory principles, should be adequate to attract equity funds for the project. Assume a 15% rate is selected. If the 15% rate can be earned on each increment of costs, there would be no disincentive to hold down costs and, indeed, the open ended availability of a 15% rate of return may actually create economic incentives to increase costs. Therefore, to avoid creating this incentive, the highest incremental rate, 13.5% in the table, should be less than the overall rate, 15%, allowed when actual and estimated costs are equal.

How do these concepts relate to sharing of overruns and underruns by equity investors and rate payers? When the rate of return is variable, the notion of cost sharing can be formulated in several ways. For illustrative purposes, the idea of equivalent rate base is introduced, which is the rate base necessary to earn the total return given by

the next higher overall rate of return. In Table I, for example, when actual costs are 120% of estimated, with a rate of 13.88%, a rate base of 115.2 is necessary to earn the same total return which results from a rate of 14.45% when actual costs are 110% of estimated. The declining rate is equivalent then to losing 4.8 of the rate base increase of 10, the total return remaining the same, and the equity share of the overrun is 48%. With underruns, equivalent rate base is gained, and the equity share of the underrun is proportionate to the gain.

A variable rate of return can be designed in a number of different ways. For example, it can be designed to provide different rates of return for different increments of cost or it can be used to apportion between investors and rate payers varying return depending upon the extent of cost overruns and underruns. The bottom section of the Table on page 42 illustrates the principal alteration that results from this latter approach. If it is desired that equity holders obtain a larger share of larger underruns, then the incremental rates of return decline with larger underruns (greater savings relative to the 100% case), and the overall rate of return increases more rapidly than before.

TABLE I

ILLUSTRATIVE VARIABLE RATE OF RETURN

(1) Costs Actual & Estimated (%)	(2) Equity Rate of Return (%)	(3) Incremental Rate of Return (%)	(4) Equivalent Rate Base (%)	(5) Equity Share of Incremental Overrun (Underrun)
70	16.29			
80	15.94	13.5	71.5	(.15)
90	15.50	12	82.3	(.23)
100	15.00	10.5	93	(.3)
110	14.45	9	106	.4
120	13.88	7.5	115.2	.48
130	13.27	6	124.3	.57
140	12.64	4.5	133.4	.66
150	12.00	3	142.4	.76
160	11.34	1.5	151.2	.88
170	10.68	0	160.1	.99
180	10.08	0	169.9	1.01
190	9.55	0	180	1.0
200	9.08	0	190.2	.98
70	17.88			
80	16.74	6.6	76	(.6)
90	15.50	7.74	85	(.5)
100	15.00	10.5	93	(.3)

The capital cost estimates that will be used as the basis for determining the "variable rate of return" for the U.S. segments of the Alcan project will be those estimates submitted to and accepted by the FERC immediately prior to certification. When comparing these estimates to the capital cost estimates filed by Alcan with the FPC on March 8, 1977, and in deciding whether to issue a certificate, the President's Report requires FERC to determine whether the new estimates, as adjusted, "materially and unreasonably exceed" the old estimates (Rep. 36).

II. Producers and State of Alaska

If producers and the State of Alaska guarantee the debt during the construction period, the risk to the equity holder is reduced. Naturally, this reduced risk must be reflected in a lower allowed return on common equity. There are substantial financial rewards available to the producers and the State from the sale of Alaskan gas (Rep. 117-119), and it is contemplated that these incentives will induce these parties to proffer a debt guarantee program. As of this time, however, there are no such commitments from the producers or the State.

III. Capital Requirements

While the capital requirements for financing the Alcan project are substantial, the capital markets can accommodate the project's needs. The United States capital markets have the capacity to provide the estimated \$8,460 million to be raised in those markets. The amount of capital (\$1,842 million) that the Alcan project plans on obtaining from the Canadian markets is larger in relation to the size of the Canadian markets than the amount of money that is needed from the U.S. markets is in relation to the size of the U.S. markets. If it appears that the capital required from the Canadian markets may not be available in a timely fashion, funds could be obtained from the international or U.S. markets. While it is impossible to determine at this time what the cost of capital will be for the Alcan project, the cost of capital may be higher for those funds obtained from the Canadian markets. Finally, studies conducted by the Department of the Treasury and the FPC staff indicated that the sponsors, the producers, and the State of Alaska have the financial ability to finance the project as outlined in the President's Decision.

IV. Reducing Uncertainties

It is correctly stated in the President's Decision that the uncertainties surrounding the Alcan project should be reduced to a minimum by the Federal Government. One area of uncertainty which must be resolved is the issue of whether FERC will allow customers to make minimum bill payments in the event of lengthy service interruptions.^{26/} Moreover, the Federal Inspector mechanism contemplated in the President's Report, by establishing a method for judging the prudence of costs incurred on a current basis, should provide investors as well as consumers with greater confidence that the Alyeska experience will not be repeated.

V. Conclusion

The Alcan project could be and should be financed privately, without Federal assistance. The sponsor gas companies and their financial advisors have stated that private financing is possible and that they are willing to proceed on that basis. The potential financial benefits to the producers and the State of Alaska should afford sufficient incentive to attract their participation in the financing of the Alcan project.

^{26/} This issue may also present a problem at the state level.

COMMENTS ON CHAPTER III
"Environmental and Socioeconomic Issues"

It is accepted that the Alcan proposal is the superior Alaskan Natural Gas Transportation System from an environmental standpoint. The Commission strongly supports, on environmental grounds, the President's Decision to approve Alcan's route, and concurs with the conclusion of the Council on Environmental Quality that the environmental impact statements are legally and factually sufficient to support the President's choice of an applicant and a route. Moreover, along with our support of Alcan based on environmental concerns, we emphasize that steps can be taken to further minimize environmental impact. These consist primarily of:

- 1) elimination of any unnecessary construction; 2) minor route modifications to avoid environmentally sensitive areas;
- 3) additional special studies to provide guidance on environmental planning, safety and route selection; and 4) use of existing Trans-Alaska Pipeline System (TAPS) right-of-way

and construction areas where prudent and feasible. 27/

All of these steps can be incorporated in the terms and conditions of a final certificate.

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- 27/ One of the principal advantages of the proposed Alcan route is its use of existing utility and transportation rights-of-way -- the utility corridor concept. The Commission wishes to point out, however, that the juxtaposition of transmission facilities is not necessarily without its own problems. Adequate safeguards must be taken along the TAPS right-of way to avoid construction accidents which may have serious consequences, and minor modifications to the route selection may yet be required to minimize environmental and socioeconomical impacts.

COMMENTS ON CHAPTER IV
"Economic Considerations"

I. Construction Cost Estimates

The estimation of costs due to construction delays and overruns is extremely difficult to make. The base from which almost all discussions of construction costs of ANGTS projects start are the same, the July 1975 cost estimates submitted to the FPC by the applicants. Divergence from these estimates results almost exclusively from changing the assumptions utilized.

The factors discussed in the Report (pp. 136-138) have caused overruns in the past and may be expected to do the same to Alcan. While mechanisms, such as a variable rate of return and a strengthened Federal Inspector, will help minimize this potential, it is likely that actual cost experience will exceed the estimated costs of this project. The question, of course, is by how much. Based on our analysis of additional information available to the President, we would agree with his estimate of the overrun potentials of the Alcan project.

II. Tariffs

The President's Report addresses some of the issues involved in designing the tariffs for the gas transportation system, but relies upon the FERC for final approval. Since the specific provisions of the tariff have not been finalized, in order to preserve the Commission's decision-making flexibility, it can only state at this time that the Report sets several general guidelines which the Commission will follow in exercising its regulatory authority to set tariffs.

The President's Report clearly contemplates that an acceptable tariff must include a variable rate of return, keyed to the magnitude of any cost overruns or underruns (Rep. 37, 123). The variable rate of return concept was discussed earlier in our comments. The Commission agrees with the President as to the value of this regulatory device and will incorporate such a provision in the final approved tariffs.

In addition, the tariffs must give effect to the President's conclusion that "[e]xtraordinary consumer guarantees prior to completion of the project are judged to be unnecessary." (Rep. 121). The President, while

not specifically endorsing any tariff provisions, notes that the Alcan financial advisors and sponsors believe the system can be financed without an "all-events" tariff, making equity holders bear the risks of non-completion. (Rep. 120, 124). It is contemplated, however, that once the delivery system has commenced initial operation, consumer charges would be designed to maintain debt service in the event of some service interruptions. The President has clearly stated that the effective date of any tariff or agreement to pay a fee, surcharge, or other payment shall not be prior to the completion of construction and the initiation of service of the system. (Rep. 37). The Commission endorses this condition as necessary to protect the interests of the gas purchasers and the ultimate consumers.

Finally, the Commission recognizes that the President's Report, the Agreement on Principles, and the Applicants anticipate that the gas transportation system tariffs may employ a cost of service formula as opposed to a stated rate. The Commission notes that the accepted regulatory and industry understanding is that a cost of service rate form would be computed according to the same principles as a stated rate. These computations include consideration of operation and maintenance expenses, an allowance for

depreciation and amortization, an allowance for return, income taxes, taxes other than income, and revenue credits.

The Commission recognizes that arranging firm financing for construction of the system can be based only upon FERC approved tariff provisions, but the Commission is not prepared at this time to specify in any more detail those provisions which would be acceptable in designing a tariff for the gas transmission system for the Alaskan gas. To do so now would be impractical and ill-advised without the benefit of having a filed tariff before us.

III. The United States-Canada Agreement

As described in the Report, the U.S. shippers are at a minimum required to pay at least 66-2/3% of the cost of service for the facilities in Zone 11 (Dawson to Whitehorse segment). The Report incorporates the Agreement on Principles governing the computation of the Zone 11 cost of service. It is contemplated that the costs to be recovered will be developed consistent with the tariffs for the overall project.

The Agreement also provides for the allocation of the costs of the joint use facilities, i.e., facilities used to transport Alaskan and northern Canadian gas. This cost allocation is to be based on the following principles:

1. The joint-use facilities will be broken into zones with the costs associated with each zone accounted for separately.
2. The allocation factors are to be contracted volumes adjusted to reflect the effect of commingling on the original thermal content of Alaskan gas for U.S. shippers and northern Canadian gas for Canadian shippers.

3. Line pack will be provided by each shipper based on contracted volumes transported.
4. Fuel will be allocated among shippers on the basis of the content of the gas as it affects fuel usage.

The Commission agrees that the zoning of the system with separate accounting for each zone is a reasonable and equitable method to account for the costs to be allocated. It is reasonable to use the contracted volumes, as adjusted to reflect the effect of commingling on the original thermal content of each shipper's gas, to allocate the transportation costs of the joint-use facilities and to require that each shipper provide its share of line pack and fuel consumption. The content of the gas affects fuel usage in two ways. First, as the specific gravity of the gas increases, the pressure drop between two points on a pipeline increases. This in turn increases the compressor horsepower needed to transport the gas, which increases fuel requirements. Second, the thermal content of the gas directly affects the fuel consumption. The Commission understands that both of these properties of the original gas will be taken into account in determining the amount of fuel to be supplied by a shipper.

IV. Tracking or Flow-Through of Costs

The Report appears to assume that all costs associated with the purchase and transportation of Alaskan gas to markets will be flowed through to consumers on a current basis. However, the specific provisions for accomplishing complete tracking are not described or discussed. The Judge's decision adopted the applicants' proposals for "perfect tracking", i.e., all changes in costs automatically flow through to the end-use consumer. The FPC Recommendation did not uphold the Judge on this issue. Instead, the FPC found, in the context of approving a cost of service form of a tariff, that the purchased gas costs and transportation charges would be included in the cost of service of a jurisdictional pipeline shipper as operating and maintenance expenses. In lieu of a tracking provision, the FPC found that sufficient protection could be provided by simply agreeing to suspend the portion of general rate increases filed by the shipper attributable to operation and maintenance expenses for only one day. A third alternative was supported by staff. Under this method, the guaranteed minimum bill

under the tariffs would be treated as a demand cost and recovered through a shipper's demand charge. The remaining portion of the costs of purchasing and transporting Alaskan gas would be recovered through a shipper's commodity charge. Any changes in the minimum bill for the transportation system would be made in a shipper's general rate increase filing.

The Report did not select the mechanism for flow-through of costs. Therefore, FERC would make this determination based on its evaluation of such proposals as are subsequently filed with it.

V. Marketability of the Alaska Gas

A. Delivered Costs

In the expected cost overrun case, the 20 year average transportation cost of Alaskan gas ^{28/} in 1975 dollars amounts to \$1.04 plus a possible allowance for processing. (Rep. 95). Assuming a wellhead price of \$1.45, the average delivered cost (\$1.04 + \$1.45 + possible processing costs) is below the estimated minimum cost of LNG (\$3.25) and SNG (\$3.75) (Rep. 96). However, these average delivered costs are close to the estimated cost of substitute fuel oil at \$2.60 (Rep. 97).

^{28/} The delivered cost will be higher in the initial years and lower in the later years of service.

The average transportation cost (\$1.04) is not representative of the tariff that would be paid in the early years, unless the tariff were levelized in which event there would be a higher overall cost to consumers. We have examined some additional scenarios regarding the delivered cost in the early years and the possible impact on marketability. Assuming that the Alaskan gas is priced either on a rolled-in basis or pursuant to the pricing provisions of the National Energy Plan, we conclude that the gas would be marketable even in the early years without a levelized tariff. Of course, the final determination in regard to marketability will be made by the purchasers.

The following table shows the impact of the declining cost of service.

Table II

Annual Alcan Cost for Expected Cost Overrun Case

(1975 dollars)

	Transportation Cost	Delivered Cost (Wellhead price = \$1.45; ²⁹	Delivered Cost (Wellhead price = \$2.00) ²⁹
1984	2.00	3.45 - 3.75	4.00 - 4.30
1985	1.81	3.26 - 3.56	3.81 - 4.11
1986	1.71	3.16 - 3.46	3.71 - 4.01
1987	1.57	3.02 - 3.32	3.57 - 3.87
1988	1.43	2.88 - 3.18	3.43 - 3.73
1989	1.30	2.75 - 3.05	3.30 - 3.60
1990	1.19	2.64 - 2.94	3.19 - 3.49
1991	1.10	2.55 - 2.85	3.10 - 3.40
1992	1.02	2.47 - 2.77	3.02 - 3.32
1993	.93	2.39 - 2.69	2.94 - 3.24
1994	.87	2.32 - 2.62	2.87 - 3.17
1995	.81	2.26 - 2.56	2.81 - 3.11
1996	.76	2.21 - 2.51	2.76 - 3.06
1997	.71	2.16 - 2.46	2.71 - 3.01
1998	.67	2.12 - 2.42	2.67 - 2.97
1999	.63	2.08 - 2.38	2.63 - 2.93
2000	.59	2.04 - 2.34	2.59 - 2.89
2001	.57	2.02 - 2.32	2.57 - 2.87
2002	.53	1.98 - 2.28	2.53 - 2.83
2003	.49	1.94 - 2.24	2.49 - 2.79

²⁹/ The variation in the delivered cost component for each year is due to the use of zero or 30¢ per Mcf as the cost of processing. (*Supra*, p. 17).

The values in the table are estimates of the cost of service at an average point of departure from the Pipeline in the Contiguous United States.^{30/} Additional transportation costs within the Contiguous United States and local distribution costs must be added to these figures to obtain estimates of burner-tip prices. Assuming (1) that Alaskan gas will not be transported more than 500 miles once it leaves the Pipeline and (2) a transportation cost of \$.03/Mcf/100 miles, additional transportation costs within the lower 48 states will range from 0 - \$.15. Average distribution costs in 1976 were approximately \$.60/Mcf.^{31/} Thus, adding \$.75 to the delivered costs in the table gives a conservative estimate of the cost of service to the burner tip. In comparison, the cost of

^{30/} These costs will vary slightly depending upon where the gas exits from the Western Leg or the Northern Border system.

^{31/} The average price received by interstate pipeline companies in the 12 months ending in Dec. 1976 was roughly \$1.00/Mcf. (FPC News Release No. 23153 May 23, 1977). The average gas utility price in 1976 was \$1.60/MMBtu. (American Gas Association, Gas Facts 1976 p. 111). Average distribution cost = \$1.60 - \$1.00 = \$.60.

residential heating oil was estimated to range from \$2.88 - \$3.60/MMBtu (1975 dollars) based on estimates of domestic refinery acquisition costs for crude oil in 1984 of \$16 - \$20/bbl.^{32/}

^{32/} According to "Monthly Energy Review," Office of Energy Information and Analysis FEA, August 1977, the average price for residential heating oil during the first 5 months of 1977 was 62% more than the average refinery acquisition cost. Thus, the average price of residential heating oil in 1984 = (\$16/bbl) (1.62) = \$25.92/bbl. Converting to 1975 dollars at a 5% discount rate gives \$16.71/bbl. Assuming 5.8 MMBtu/bbl results in a price of \$2.88/MMBtu. The same sequence of calculations assuming of price of \$20/bbl for crude oil in 1984 gives a price of \$3.60/MMBtu.

B. Wellhead price of \$1.45

If the Alaskan gas were required to be offered at its incremental cost, it might be difficult to market the gas in the early years of the project even with a wellhead price of \$1.45 per Mcf. However, it is not anticipated that the gas would be marketed on an incremental basis. The Report calls for a pricing approach similar to that proposed in the National Energy Plan (Rep. 46). Under that approach low priority users would absorb the cost of higher priced supplies up to the Btu equivalent of substitute fuels (No. 2 fuel oil). Any costs not recovered in this manner would then be rolled-in to both low and high priority customers. If the Alaskan gas is offered in this manner or on a fully rolled-in basis, marketing difficulties probably will not arise.

In order to determine whether Alaskan gas can be marketed on a rolled-in basis beginning in 1984, it is necessary to estimate the composition of the gas supply and the prices of the supply components. This is a speculative venture involving assumptions about the volumes and prices of LNG, SNG, Mexican gas, new domestic supplies, and roll-over gas. Clearly, the more expensive these other sources are, the more difficult it

is to roll-in the Alaskan gas and achieve a weighted average price which is competitive with substitute fuels.

An indication of whether marketability problems are likely to arise can be obtained by calculating a feasible upper limit for the price of non-Alaskan supplies. Assuming that the cost of service for the Alaskan gas is \$4.50 (\$3.75 + \$.75) and that Alaskan gas constitutes 20% of pipeline supplies, the average cost of non-Alaskan supplies could not exceed \$3.38 (1975 dollars) for the rolled-in price of all gas to be less than \$3.60, the high estimate for the cost of substitute fuels. Given continued regulation, it is not likely that the average cost of non-Alaskan gas will exceed \$3.38 by 1984.

C. Wellhead price of \$2.00

Under incremental pricing and perhaps even on a rolled-in basis, marketing of this gas would be questionable. Analogous calculations to those above indicate that if the Alaskan gas constituted 20% of pipeline supplies, the average cost of non-Alaskan gas could not exceed \$3.23 for the rolled-in price to remain competitive. This seems possible even assuming increased availability of high cost supplements such as LNG and SNG.

D. Royalties in-kind

One unresolved issue is whether the State of Alaska is going to take its royalties in-kind. This issue should be resolved prior to certification, because if Alaska chooses to take its royalties in kind, the system should be redesigned and the unit transportation cost probably will rise.

E. Level tariff

The Report raises the question of whether FERC should permit a leveling of the delivered rate (Rep. 159). Without prejudging this matter, we wish to point out that an attempt to levelize rates over the accounting life of the project may have serious implications with respect to the project for the following reasons:

- 1) It will require significant deviations from the requirements of the Uniform System of Account and generally accepted accounting principles with respect to asset valuation, revenue recognition and matching of cost;
- 2) Levelization of a rate will significantly reduce cash flow to the project during the earlier years of the project, thereby impairing the ability to finance by increasing risk to debt holder and delaying payment of dividends to equity holders;

3) Significant increases in total cost to the consumer over the life of the project will be experienced since carrying charges on unrecovered investments will increase significantly;

4) Depending on the extent of levelization, it could impair equity investors' ability to utilize available tax deductions at the earliest time permitted by the Tax Code, thereby increasing the cost to consumers.

Any determination to level payments will require consideration of the above factors. Also, the use of an interim rate for a limited period of time is an option that deserves consideration. It is contemplated that the use of a level rate for the entire period or the use of an interim rate will be considered by FERC in issuing a final certificate.

COMMENTS ON CHAPTER V
"Safety, Reliability, and Expansibility"

In the area of safety and geotechnical feasibility, the President's Report is consistent with the FPC Recommendation issued May 2, 1977. The Commission concurs with the findings and recommendation of the President in this chapter. The only comment which the Commission finds appropriate is that the "technical study group" envisioned in Section 10 of the Agreement on Principles should be implemented as soon as possible in order to test and evaluate the several possible pipe diameters and pressures. Expeditious resolution of pipe selection is of great importance to the Commission because final certification cannot proceed in its absence.

COMMENTS ON CHAPTER VI
"Organization of Federal Government Involvement
After System Selection"

By proposing an executive reorganization under which Agency Authorized Officers of the various agencies involved with the Pipeline would be under the direction of the Federal Inspector, who in turn would be subject to the direction of the Executive Policy Board, the President would take steps to coordinate governmental oversight of construction and management of the Alcan project in order to eliminate government caused construction delays. The Commission endorses this principle of coordinating the various governmental agencies in order to reduce the number of points of contact between the government and the applicants.

It is assumed that FERC, having established terms and conditions for the certificates involved, will be accorded an Agency Authorized Officer as a part of the Alaskan Natural Gas Pipeline Office to ensure that Alcan satisfies its certificated obligations. In addition, utility regulation requires that prior to the inclusion in rate base of an expenditure by the utility, the regulatory body must pass on the prudence of its incurrence. The question then arises as to the role

of FERC's Agency Authorized Officer in auditing and possibly ruling upon the prudence of the applicants' construction expenditures as incurred.

Several different methods of auditing are possible. In the Alaskan gas pipeline proceeding before the FPC, Administrative Law Judge Litt endorsed a construction phase audit scheme employing the FPC's Uniform System of Accounts, and he noted in passing that "if the Alaska Natural Gas Transportation Act of 1976 is in effect, a question is raised as to whether a joint FPC effort with the board or inspector of construction appointed pursuant to that statute would be in order." (Initial Decision, p. 405, n. 1.) Then in its recommendation to the President, the FPC made a similar finding that "a procedure should be adopted whereby Federal regulatory authorities would periodically make a definitive ruling as to whether costs during a given portion of the construction period were prudently incurred." (FPC Recommendation, p. XII-70.) If this ongoing construction phase audit and rate base approval is to be implemented, FERC would have to be in close contact with the construction effort, in the form of an Agency Authorized Officer representing FERC. If this ongoing determination of prudence of construction costs is

to be absolutely final, then it is appropriate to establish some expedited FERC review process before the Agency Authorized Officer rules upon specific construction costs. On the other hand, the Agency Authorized Officer could make an independent decision which would later be treated by FERC as presumptively correct, subject to reversal only if shown to be clearly wrong.

In addition, there may be other methods of handling this problem suggested by the applicants or other interested parties during the certification procedure. A final decision on the most appropriate auditing technique requires further study and added input from the concerned entities.

COMMENTS ON CHAPTER VII

"Impact on Competition in the Natural Gas Industry"

The Report recommends at page 211 that the Commission: should use its approval power of gas purchase contracts, and more generally, over project financing plans, to ensure that any conditions producers impose in exchange for debt guarantees do not create situations which might permit abuse of competition.

The Commission concurs with this recommendation and intends to implement the recommendation. For purposes of illustration, the Commission sets forth the type of conditions which may be required in the certificates and gas purchase contracts to carry out this responsibility.

1. Certificate to construct the transportation system

- a. An open access provision. Example - No person seeking to transport natural gas in the Alaska natural gas transportation system shall be prevented from doing so or be discriminated against in the terms and conditions of service on the basis of degree of ownership, or lack thereof, of the Alaska natural gas transportation system.
- b. The owners of the pipeline shall not attempt to restrict pipeline throughput.

2. Gas Purchase Contracts

- a. Buyer and seller affirm that they have revealed any or all collateral agreements, whether written

or verbal, that relate to the purchase of this gas.

- b. Buyer agrees to provide the Commission with copies of any contracts involving the resale of Alaskan gas and to inform the Commission of any collateral agreements, whether written or verbal, involving the resale of this gas. Buyer agrees that it will not attempt to impose provisions in any resale contracts that would tend to lessen competition.
- c. Seller and buyer agree to inform the Commission of any conversations, negotiations or meetings held with other sellers or buyers (actual or potential) regarding gas reallocation and displacement.

This list is neither exhaustive nor final. The Commission will entertain suggestions from interested parties, especially the Department of Justice.

COMMENTS ON CHAPTER IX
"Western Leg"

The Report approves the construction of a Western Leg consisting of the facilities proposed by Pacific Gas and Electric Company and its affiliate, Pacific Gas Transmission Company, which are described as the "1580" design. These new facilities would provide for the direct delivery of Alaskan gas to the West Coast.

The President's decision was predicated on (a) an indication that there would be a short term increase in the delivery of Canadian gas and the possibility of a continuation of the existing export licenses, and (b) the probability that the projects currently proposed by El Paso Natural Gas Company will commence as scheduled, thus pre-empting the excess capacity in the southwestern systems and precluding the possibility of displacement. More specifically, the President's Report notes that delivery of Alaska gas to California by El Paso Natural Gas Company and Transwestern Pipeline Company through displacement would not be a feasible alternative to construction of the Western Leg if (a) one of El Paso's 30-inch lines is converted from a gas line to an oil

line by the Sohio Project; (b) substantial volumes of Mexican gas become available for transportation to the West Coast; (c) there are any advanced or increased deliveries of Canadian gas to the U.S. which would also have to be moved West by displacement; and (d) the Algeria II LNG import project is completed on schedule. The President's Report finds that all of these events are likely to occur, and concludes that the displacement option would not be a viable alternative to construction of the Western Leg.

The Report also states that prior to FERC certification of the Western Leg, the Secretary of Energy will determine the size and volume of the Western Leg to be certified, as well as review the need for any prebuilding necessary to take gas under a predelivery arrangement (Rep. 233).

It is noted that the FPC's May 2, 1977, Recommendation did not support approval of the Western Leg at that time. However, based upon the additional information available to the President, as discussed above and in the Report, the Commission offers no objection to the President's decision on this issue.

GENERAL COMMENTSI. Future Actions Under The Natural Gas Act

All Federal agencies retain their existing authorities pursuant to Section 9(a) of the ANGTA to issue certificates and other required permits. Thus, the President's Decision recognizes that further action under the Natural Gas Act (NGA), as well as ANGTA, will be required prior to construction and operation of the approved system. The actions should be taken in an orderly fashion to permit construction planning and preconstruction financing to begin at the earliest practicable moment, at the same time assuring that all approvals needed for ultimate operation of the system and distribution of gas are obtained. To accomplish this, conditioned certificates of public convenience and necessity should be issued promptly in accordance with the final selection, upon such terms and conditions as specified in the Decision and under any additional conditions as may be required by the public convenience and necessity under Section 7(e) of the NGA.^{33/} The holders of these certificates will have the power of eminent domain specified in Section 7(h) of the NGA.

^{33/} At a public conference held September 30, 1977, representatives of Alcan suggested that, assuming Congressional approval, they would present to the Commission for review and approval a proposed conditional certificate that listed, in sequence, all the additional procedural steps necessary.

The order issuing these certificates will begin the regulatory approvals needed for the ultimate operation of the system. In accordance with the statutory requirements of the Natural Gas Act, approvals will be needed for producers making sales of natural gas, by pipelines for displacement arrangements, for export or import authority and other actions. ^{34/} Compliance filings will also be required by the conditional certificate. For example, a financing plan must be submitted prior to operation of the system, but the absence of such a plan need not impede preparation of the final design of the principal facilities.

In addition, the Commission may be called upon to assist in the development of construction plans and environmental safeguards as a "concerned agency" (Rep. 34). While ordinarily the Commission does not become involved in site specific planning, its expertise will be available to the Federal Inspector as needed, most likely through the Commission's Agency Authorized Officer.

^{34/} Certain required actions may be under the jurisdiction of entities other than FERC in the future, or actions which are now required may no longer be so, depending on Congressional action on the National Energy Plan.

II. Waiver

The President's Report recognizes that there are two statutory provisions that involve determinations subsumed in the Decision and which will require a waiver under Section 8(g) of ANGTA. Both of these waivers relate to a proposal to serve limited quantities of Alaskan gas in the Yukon and western provinces subject to providing replacement gas downstream in Canada. This transaction will be an export requiring authorization under Section 3 of the NGA^{35/} and Section 103 of the Energy Policy and Conservation Act. The Commission agrees that both of these approvals would be ministerial and unnecessary determinations in light of the President's Decision, and concurs in these waivers.

Other waivers of Section 7 of the Natural Gas Act may also be required. The Decision proposes to give the Federal Inspector field authority to overrule conditions imposed by individual Federal agencies in certificates, permits, and other licenses. In addition, the Decision would also permit the Secretary of Energy to determine the appropriate capacity of the Western Leg. Waivers may be required to the extent that either of these proposals are inconsistent with the determinations made or required to be made in accordance with Sections 7(c) and 7(e) of the NGA.

^{35/} Actually, all gas transiting Canada falls under Section 3 of the NGA.

III. Terms and Conditions

The Commission supports the procedures for enforcement of terms and conditions, which is item I.10 in the President's proposed terms and conditions (December 31). It should be implemented as soon as possible through appointment of a Federal Inspector and agency authorized officers to establish liaison with the successful applicant at the earliest stage in the applicant's planning process.

IV. Canadian Considerations

Canada and the United States have agreed in principle on terms for approval of the transportation project. This agreement supplements the more general hydrocarbon transit treaty initialed earlier by providing specific details on cost allocation, Yukon taxation, and nondiscriminatory treatment. In addition, supporting commitments have been included from provincial governments. The Commission agrees that the assurances provided exceeds the usual level of detail available on similar projects, and this is certainly true of any international gas project of which the Commission is aware.

The Agreement on Principles provides that the respective regulatory authorities (FERC and NEB) will consult where needed on relevant points, particularly with respect to matters concerning financing, taxation, and tariffs.

Mr. DINGELL. Gentlemen, you have been both brief and succinct and the committee thanks you.

The Chair will yield first to my good friend, colleague and co-chairman of this event, Mr. Roncalio.

Mr. RONCALIO. I thank you.

Mr. Smith, I only had a question on your next-to-the-last paragraph regarding a matter that we have tried to make inquiry into. That is the guarantee against noncompletion.

What again does your statement reveal—I am sorry I came late—regarding the assurances that the Canadian and American interests have against the contingent, however remote, of failure of completion?

Mr. SMITH. I think it is contemplated that the first instance in which that issue will be dealt with is in the finalization of the financing plan. The noncompletion eventuality addresses itself first to those who will put up money. It is contemplated that this risk will be placed on the sponsors of the project, not the consumers, except to the extent that FERC-approved tariffs may include provisions which tend to minimize the risk.

The agreement focuses principally upon the understanding that Canada has to review the final financing arrangement and determine, as far as the Canadian investors and the construction of the Canadian segments are concerned, that there is reasonable security that the pipeline will be constructed.

Mr. RONCALIO. Thank you very much. I have no other questions.

Mr. DINGELL. The Chair recognizes the gentleman from Washington.

Mr. MEEDS. No questions. Thank you, Mr. Chairman.

Mr. DINGELL. The Chair thanks the gentleman.

Gentlemen, I have found a situation unique in, I believe, the history of intergovernmental relations. I find that on the entirety of the President's program, there is not a single disagreement within FERC.

Does this indicate the extraordinary perfection of the President's proposal, or does it indicate some of the apprehensions that I held about the independence of your agency may have been realized?

Mr. CURTIS. Mr. Chairman, I think it is well to point out that the President's recommendation very closely parallels the recommendation previously made by the Federal Power Commission, which is grounded on a rather elaborate record developed before that Commission. It is that consistency and near identity of conclusion that allows us to come before the committee and support the President's decision without qualification. This matter was placed before the Commission for a vote and unanimously accepted.

Mr. DINGELL. I want to be very clear, as one of the three authors of the amendment to the Department of Energy Act, which maintained to the utmost degree the independence of your agency. I anticipate that you will not only defend it, but that each time you appear before me you will be prepared to defend that independence, and that you will do the necessary things to maintain your independence from the encroachment of the Executive.

Gentlemen, can you inform me how we know that the Alaskan gas will be marketable when it comes on stream in 1983?

Mr. SMITH. Mr. Chairman, I think one of the indispensable points in determining whether the project should go forward or not was that the public convenience and necessity would be served by the additional Alaskan volumes delivered to the lower 48 States. The record before the FPC, as well as subsequent determinations made by the President, concluded that in all save the worst case cost overrun projection, Alaskan gas could be delivered to end users at a price which made it attractive and competitive with the mix of fuels which will be available to the consumers at that time.

Mr. DINGELL. Let me read.

Your comments here indicate, on page 57, table 2, that in 1984, the delivered cost will be equal to \$3.45 to \$3.75, but when we convert that to nominal figures, we are talking about \$6.34 gas. Am I correct in that?

As near as I can figure, that is when it hits the lower 48. So the question is after it then leaves the delivery point in the lower 48, it will arrive at the entry gates of the different cities at a higher price, and after it goes through the distribution system, it will arrive at still a higher price.

Now how are we to be assured that gas which is going to be that expensive will be marketable, and will be desirable, from the standpoint of a buyer?

I would assume that the end user is going to get it at about a dollar higher figure. That is \$7.34. That tends to lend some credence to the fact that we can anticipate gas prices are going to rise. Whether they are going to rise this much or not is a question that this committee and my colleagues are going to have to consider.

Mr. CURTIS. Mr. Chairman, maybe we can go back over some of those figures. If you look at that table to which you have referred, it indicates a computation, if we do not levelize the rate, of the transportation cost plus the wellhead price. We have indicated a range on the assumption that the wellhead price is \$1.45. The range is to indicate a difference of 30 cents, depending on whether that cost of processing is imposed upon the gas purchaser or on the producer. So we get over \$3 in the most costly year, which is your first year, \$3.45 to \$3.75.

Mr. DINGELL. The 30 cents being the gas processing cost.

Mr. CURTIS. Yes, sir. On the next page we have—

Mr. DINGELL. The producers, however, say it is 90 cents, Mr. Curtis.

Mr. CURTIS. The testimony in the underlying record before the Federal Power Commission on this issue is admittedly incomplete, but at that time the cost estimates ranged up to 30 cents. I know the committee has received testimony in these proceedings which places that cost at a higher range. We have not analyzed that testimony to determine its correctness.

Of course, the cost of processing and the allocation of those costs, if any allocation is to be made, between producers and the gas consumers is a subject for further determination by the Commission. It will be evaluated along with the producer contracts. We have described in this report some of the considerations involved in that decision. But if I may, Mr. Chairman, on the next page, 58, we try to attribute a transportation cost within the lower 48 contiguous States.

Mr. DINGELL. Can you summarize that for us?

Mr. CURTIS. We assume that the transportation cost will end up at 75 cents, so if you then turn back to table 2 and add 75 cents to that figure, you will see we are trying to quantify the delivered cost. The delivered cost in 1975 dollars could therefore range over \$4.

If you turn now to page 61, Mr. Chairman, you will see that we show in the first full paragraph on that page a cost of a service with a maximum assumption of \$4.50 in 1975 dollars.

Now if that were incrementally priced to the end users, we would conclude that marketability would be subject to question.

Mr. DINGELL. If it is rolled in, it would not.

Mr. CURTIS. If it is rolled in or incrementally priced under the President's formula in the National Energy Act, the Commission has concluded, based upon this analysis, that it would be marketable. That is discussed in the following text. If the wellhead price were in the \$2 range, however, there may be a significant question of marketability, and that decision, Mr. Chairman, resides before the Congress at this moment.

Mr. DINGELL. If we deregulate natural gas, that will mean that there will be a substantial question as to marketability of this gas, will it not, particularly if we pass something like Pearson-Bentsen, which would require incremental pricing to industrial users and which would reduce the amount of gas into which this Alaskan gas might be rolled under the rolling process?

Mr. CURTIS. It would depend, Mr. Chairman, on how the deregulation is to occur. It will certainly require reevaluation of these estimates which proceed on different assumptions, but I think the conclusion in the President's report as well as in the comments of the Commission is that if you had that type of pricing structure, it would change the cushion of rolled-in gas, and therefore change the marketability of the Alaskan natural gas as its first expected delivery is received on January 1, 1983. So the short answer is, Yes.

Mr. DINGELL. I observe your friend and colleague, Mr. Smith, appears to have some interest in the subject. Did you have comment you wanted to add to that?

Mr. SMITH. I concur with Chairman Curtis' comments. The high transportation cost in the early years has led to some people raising the issue of whether a levelized billing over the life of the project should be devised. No specific proposal has been yet placed before any of the regulatory bodies which would achieve that, and it does appear to present some substantial problems.

Mr. DINGELL. Regulation could lead us to a situation where the sale of this gas might be at least marginal; am I correct?

Mr. SMITH. The final test obviously will be whether people sign up to buy it.

Mr. DINGELL. The Chair is going to instruct the staff to engage in further communication with you by letter. I don't want to take both your time and the time of the two committees to pursue this matter further, but I am sure that if we direct communications to you, you would respond by communication so that we can include it in the record within a reasonable time.

Gentlemen, there is one thing that piques my curiosity. FERC has the duty of certificating the pipelines that will be involved in Alaska and the United States and so forth; is that correct?

Mr. SMITH. Yes.

Mr. DINGELL. As I must observe, nods do not count. They don't show up on the reporter's machine.

I am curious. In the certification you will impose certain conditions with regard to safety, with regard to environmental concerns and things of that sort; am I correct?

Mr. SMITH. Yes, sir.

Mr. DINGELL. You are not, however, on the Executive Policy Board, are you?

Mr. SMITH. No, sir.

Mr. DINGELL. This has been a matter of some concern to me.

I notice also that the executive agent who will supervise the activities of the pipeline construction may overrule the conditions of the certificate which will be issued by the FERC; is that correct?

Mr. SMITH. Mr. Chairman, the FERC-imposed conditions must be complied with. The interpretation of the conditions might well be dealt with by the inspector, but I do not regard the Federal inspector as having the power to deviate from the general terms and conditions of the certificate.

Mr. DINGELL. Let me read you here. This is the President's decision. This is the Decision and Report to Congress on the Alaska Natural Gas Transportation System, page 41. I read as follows:

In addition to these duties and responsibilities, the President will submit to Congress, upon approval, the Presidential decision, limited to the Executive Reorganization Plan, to transfer to the Federal inspector, field level supervisory authority over enforcement of terms and conditions from those Federal agencies having statutory responsibilities over various aspects of an Alaskan natural gas transportation system. The respective Federal agencies and so forth and so on.

Now, doesn't that say somebody, I guess Mr. Carter, is going to transfer to you good folks down there at FERC the responsibilities to supervise the carrying out of your charter, and confer upon this good individual, whose predecessor did such an intolerably bad job with respect to the Alaska pipeline, the responsibility of overruling your charter conditions?

Mr. SMITH. I think, Mr. Chairman, that the authority of the inspector would be to enforce the terms and conditions set out in the certificate granted. That authority would not include the ability to waive those terms and conditions.

Mr. DINGELL. It would be to enforce them but not waive them.

How will you then supervise his activities to assure that he carries out his responsibilities since you are not going to be on the Executive Policy Board?

Mr. CURTIS. Mr. Chairman, may I make one comment on that?

Mr. DINGELL. I would appreciate comment, yes.

Mr. CURTIS. The contemplation of the President with respect to the operation of the Federal inspector, is that the regulatory authorities who impose terms and conditions pursuant to their generic act authority would do so fully and unqualifiedly.

Mr. DINGELL. But history is against that presumption, Mr. Curtis. You will recall the intolerably bad job that was done by the previous supervisory agent.

Mr. CURTIS. I intended to address the legal authority rather than its implementation. What the President has described on pages 41 and 42 of this report is an intention to submit to the Congress a reorganization plan, which would consolidate in the Federal inspector, broader authorities than existing law would permit.

That, Mr. Chairman, would be a decision that the Congress would have to make in approving the reorganization plan, whether or not it chose to reside the enforcement authorities in the Federal inspector to the exclusion of the Federal Energy Regulatory Commission, for example.

In my opinion, adequate enforcement requires a physical presence and an ongoing continuous relationship with the project. The answer to your original question is yes, it is contemplated that the Federal inspector ultimately would have overriding authority to enforce the terms and conditions or to waive their application. But he would not be able to under existing law, and he would only do so if the Congress agreed to the reorganization plan that will be submitted to you later.

Mr. DINGELL. Who will supervise him under this undertaking? I think of the old saying "When fools and knaves enforce the law, you had better sit by the door with a shotgun." It just occurs to me that that situation might well obtain given a repetition of the distasteful experiences of the trans-Alaskan pipeline and the buffoons they had up there supervising that matter.

Mr. CURTIS. I have some experience to expect that the Federal inspector's activities will be supervised by the oversight committees of the Congress.

Mr. DINGELL. They were supervised last time and you will recall what a mess they made out of it.

Mr. CURTIS, what input will you have under the rather curious situation where FERC is excluded from membership on the Executive Policy Board?

Mr. CURTIS. Initially, Mr. Chairman, as an agency imposing terms and conditions, we would be granted an agency authorized officer, who would serve as the representative of the FERC. It would be someone appointed by us to assure compliance with our terms and conditions.

Mr. DINGELL. Where is that in the plan? That is below the Federal inspector. That is not above the Federal inspector, is it?

Mr. CURTIS. That is correct.

Mr. DINGELL. So the Federal inspector is going to supervise the folks you send over there.

Mr. CURTIS. The Federal inspector will supervise, but does not have the authority to override the Commission. For enforcement purposes, for example, the Federal inspector could not waive enforcement of terms and conditions established by the Commission, unless the Congress resides that authority in the Federal inspector under a reorganization plan.

Mr. DINGELL. The Congress doesn't initiate these reorganization plans, as you well know. We simply have the privilege of saying no, which we rarely do, and the decks are very much stacked against the Congress disapproving these things.

Mr. CURTIS. I understand.

Mr. DINGELL. Something which has led me to believe that we probably ought to terminate the practices of congressional-approved reorganization.

The Chair has transgressed on the time of my colleagues. The Chair is going to recognize other of my colleagues for questions.

Does the gentleman from Texas have questions?

Mr. COLLINS. I certainly do.

Thank you very, very much, Mr. Chairman.

We are delighted to have the new chairman here with us because he knows the field completely, and as our chairman Mr. Dingell said, I know there are some questions that might be in the realm that you couldn't discuss.

In Alaska, are you in a position yet to determine whether or not your views would be that Alaska should be at the same, at a lower, or at a price differential above, in consideration on gas prices for Alaska compared to the normal gas standards? Do we have a firm policy in Alaska?

Mr. SMITH. The production of Alaskan gas was specifically excluded from all nationwide wellhead proceedings before the Federal Power Commission. Consequently no cost examination has to date been made of production costs in Alaska, and as the Congressman knows, it is the cost inquiry that commences a rate determination.

Mr. COLLINS. Would it be Commissioner Smith's view that we would follow exactly the same procedures we followed in establishing gas prices in the States?

Mr. SMITH. Mr. Collins, it would not be possible to do that, for this reason: The gas in Prudhoe Bay is associated gas. The methodology adopted in the last two nationwide rate proceedings is the Permian methodology, which focuses on the cost of producing non-associated gas. Consequently, not only would a new proceeding have to be begun, but a new methodology must be developed tailored to provide a cost based rate for the production of associated gas.

Mr. COLLINS. When do you anticipate that the FERC would have such methodology? You have been on the Commission quite a while, but, of course, Chairman Curtis has worked with this thing many times.

Do you all have any idea when you would have such a methodology?

Mr. SMITH. Judging by past experience, we could not make a firm time commitment that would predict a completion date for such a new procedure as I just outlined.

Mr. COLLINS. Let me ask Chairman Curtis, I wonder how they can get this pipeline financed if people don't know what the price of the gas is going to be?

Mr. CURTIS. You are very right, Mr. Collins. We have got to determine the price at the wellhead as well as the allocation of processing cost at the earliest time. It is essential to financing, and to the entire feasibility of this project. I think we are hopeful that the Congress will make the wellhead price decision in the context of its acting on legislation presently before it, and committed to conference.

Mr. COLLINS. Chairman Curtis, you were talking about what would be a marketable price for gas. You have an economics background, don't you? You are a lawyer, but you have economics too? Of course, you understand this oil thing. You have been over and over it, and so when you would talk about a figure you would have an expert opinion.

Mr. CURTIS. I have been over it and over it. I am not sure I understand it, Mr. Collins.

Mr. COLLINS. What I wanted to know is you said the figure of \$3.60, you said one time a possible price of \$4.30 might not be marketable but \$3.60 would be marketable; is that right?

Mr. CURTIS. In the colloquy with Mr. Dingell, I was referring to a delivered price, a burner tip price.

Mr. COLLINS. \$3.60 would be marketable?

Mr. CURTIS. "It depends", is, I guess, the only answer I can give to you. I think you have to look at this gas in terms of it being a very significant incremental supply to our markets. We are already paying prices in that range for incremental supplies of SNG and LNG, and I think it is reasonable to anticipate that those prices will grow in the mid-1980's along with all of our other prices. So the question of marketability, as Commissioner Smith said, is really whether anyone is willing to purchase it, and that depends upon their need for gas, its unique qualities, and the price of alternatives. If there are cheaper sources of supplemental supplies available in the abundance of Alaskan natural gas, then you may have trouble marketing it.

Mr. COLLINS. You are talking in terms of \$3.60 as a supplemental source of gas. Today in the unregulated open market, gas rose to \$2.25 in the open market.

Does that seem to be too high a price? In other words, it was a strong demand. I would just wonder what would be the basis for regulating gas if at \$2.25 we have a full market.

Mr. CURTIS. I think that is at the heart of the debate on the natural gas pricing, and a most difficult concept. The economy values gas at a higher price by being willing to pay for supplemental supplies, having the ability to roll it in with flowing as at lower prices.

In terms of the value to the economy, it is equivalent to or indeed may be higher than the substitute fuel prices, because of its premium quality. The question is whether the price of \$2.25 or \$3.60 is necessary to maximize incentives for domestic production, or whether there are economic rents involved in the price paid to producers which are unnecessary to elicit and optimize the production level of natural gas in the domestic market. That is really the focus of your debate.

Mr. COLLINS. Coming back to specifics again, if \$3.60 would be a supplemental price that might be established, is there anything excessive about \$2.25 in the regular market as we have it today or does that seem like a fair price?

Mr. CURTIS. In terms of the value of gas to the economy, in general, it is that valuable. But the question is, again, Mr. Collins, whether we need to pay that price in order to maximize the effort for the search and production of gas. That is where the debate lies.

Mr. COLLINS. Do you think that this type line is going to require an endorsement by either the Government or other people in order for it to go?

Mr. CURTIS. Do you mean by endorsement some form of Federal guarantee or assistance?

Mr. COLLINS. Guarantee.

Mr. CURTIS. No, sir. The conclusion of the President, the Treasury Department, and the financial advisors to the Alcan project has been that forms of Federal assistance will not be required and that this project may be financed from the private sector. We are hoping for some loan guarantee support from the State of Alaska and the producers in relation to the value of this transportation system to them.

Mr. COLLINS. Thank you, Mr. Chairman.

Mr. DINGELL. The Chair recognizes the gentleman from Alaska.

Mr. YOUNG. Thank you, Mr. Chairman. Right now I have no questions.

Mr. DINGELL. The Chair recognizes counsel.

Mr. BRAUN. Section 103 of the President's decision refers to rate base. Does the FPC have sufficient resources to audit costs on a timely basis to determine their reasonableness and prudence.

Mr. CURTIS. The answer to that, Mr. Braun, is no. We have a need for the Federal inspector program which contemplates a rather significant staff to carry out the role and the duties of the Federal inspector. As we commented in our report to the Congress, we have to figure out to what extent, if at all, the Commission, which must evaluate the prudence of costs under its regulatory charge, can rely on the work of the Federal inspector and the audit program in which he will have to be engaged. One way to take advantage of this significant staff resource may be to give the Federal inspector's decisions some degree of presumptive weight.

But we do not have the staff resource at the present and there is no contemplation of trying to duplicate the Federal inspector's staff resources.

Mr. BRAUN. The President's decision states that the FERC may not issue a certificate if Alcan's new cost estimates unreasonably exceed the cost estimates filed by Alcan at the FPC in March of 1977. What does "materially" and "unreasonably" translate into in terms of cost overruns?

Mr. SMITH. I cannot answer that quantitatively, Mr. Braun. I would contemplate that if the more recent cost estimates raised the cost of service, and thus the price to the end user, to what we now believe to be the outer limits of marketability, then the need for the pipeline must be reexamined.

Mr. DINGELL. You talk about 30 percent as the answer to the question. Isn't it?

Mr. SMITH. A 30 percent cost overrun was assumed by the President. If cost overruns were estimated to exceed that level, then the FERC would have to review the feasibility of the project.

Mr. DINGELL. That brings us down to something on the order of \$13 billion for construction costs?

Mr. SMITH. Yes, sir.

Mr. CURTIS. Let me try to add one thing to that, if I may. We do not have final design specifications for this system. Those will be

submitted. The standard that Mr. Braun refers to upon which the Commission will adjudge the cost estimates on final filing with us is a standard not otherwise found in regulatory parlance. It is not a quantifiable standard.

What it seeks, I think, is a precautionary check that if the estimated costs filed with us, which control the tariffs in some respects, if those costs would demonstrate that this project is unmarketable or that the cost burdens to the consumers are unacceptable, then the Commission would have the authority to disallow those cost estimates.

We are just going to have to reserve judgment. I know you will insist upon a well-reasoned judgment from us. But it is not a definable standard.

Mr. DINGELL. That brings the further question before us. That is, what will be done with regard to a continuous supervision which was not done in the case of the trans-Alaskan pipeline to assure that cost estimates are not grossly overrun? The trans-Alaskan pipeline went from \$700 million to somewhere in excess of \$7 billion and that is a rather generous overrun.

What supervisory authority exists to assure that somebody is going to be looking at this? We have come to the decision we are going to build it. It is pretty sure that the Congress will pass the legislation and that the Commission will act. Who is going to watch the cost overrun and what mechanism will assure they will be reasonable as opposed to grotesque?

Mr. SMITH. Both the United States and Canada believe that the variable rate of return on equity provisions will be designed to reward efficiency and penalize cost overruns. Inasmuch as return will be dependent primarily on whether the applicant can meet or exceed its cost projections, I can think of nothing that would be more carefully documented than the base case from which overruns and final construction costs will be measured. However, documentation of costs does not mean exercising downward control, but the variable rate of return would have a strong incentive built into it to hold down overruns.

Mr. DINGELL. Do I gather from you that you are telling me there will be no downward controls exercised by FERC in its reviews on this matter? Is that what you just told me?

Mr. SMITH. The ability of FERC to adjudge a particular cost as being imprudently incurred and therefore not subject to being placed in the rate base would continue. I think the Federal inspector would have to be relied upon in the field to make most of the judgments of the kind that you refer to.

Mr. DINGELL. FERC has no control and no participation in the panel which will supervise its Federal inspector. You have representation but your representation is below the Federal inspector. What comfort are we to take from that situation?

Mr. CURTIS. Mr. Chairman, that depends on whether the Congress resides trust in the Federal inspector.

Mr. DINGELL. I am a little like the dog that backed into a hot stove. We did it on the trans-Alaska pipeline and now I am not inclined to back into any stoves now despite the assurances of the temperatures.

Mr. CURTIS. Mr. Chairman, I think you know that I would agree that was a deplorable situation. We have learned our lessons from that.

Mr. DINGELL. I have learned and you have learned. I am wondering how many others have.

Mr. CURTIS. I think Secretary Schlesinger gave this committee the full commitment to strengthen the Federal inspector's role and charge that Federal inspector with the responsibility for assuring that we do not repeat the sad experiences of the Alyeska construction period.

I would like to make a couple of additional comments on that, if I may.

First, as to whether you can come within your cost estimates, the Canadian participants in this project have been unusually successful in meeting or coming in below their cost estimates with respect to the construction of pipelines. They are confident of their abilities to do this.

Moreover, I think you should evaluate the strength, the leverage strength of the variable rate of return. We are convinced that it is a device that will impose a very significant discipline on holding these costs down. Dr. Sewell has developed, which the Commission presented to the committee for illustrative purposes, an example of how a variable rate of return may be structured. There are a number of options for doing this. I don't want to indicate that this example evidences some presumptive acceptance by the Commission. But we thought in light of the questions that were raised in the earlier hearings on this matter back in September that the committee should have before it an example of how a variable rate of return may be structured.

I think it is very significant leverage on holding costs down and imposing the discipline of economic incentive and disincentive upon these economic entities. Dr. Sewell would be happy to answer questions you may have.

Mr. YOUNG. Would you yield?

Mr. DINGELL. Yes.

Mr. YOUNG. I have a question and I have here my good Alaska line browbeat by the chairman, and I submit that cost overruns are a part of not only the construction people involved, but it was also involved by the evolution of the legislation passed by this Congress that I helped pass.

If you really want to have an economic pipeline, you give the incentives to the builder and keep the Government out of it. We had the State of Alaska, we had the Coast Guard, we had the EPA, we had the Interior Department, we had the unions, we had the parent company, we had the two supervising companies and no one knew which dog was wagging what tail.

I think the proposal of having one person, preferably to be the constructor, we would be in good shape. The cost overruns were long and dear, I can tell you. I can remember over 400 pilings driven in over nitrogen fill with nothing wrong and someone having them removed at the cost of \$9 million. That is the kind of thing I hope we can avoid in this pipeline for the consumer and the State of Alaska.

I admit the overruns were there, but I believe it was because of a many-headed monster.

Mr. CURTIS. I believe there are lessons to be learned on all sides. It is for that reason the President would prefer to rely on a single Federal inspector who has the fullest measure of authority so that we do not get multigovernmental agency signals and decisions which are conflicting. It will be by the reorganization plan that he hopes to accomplish this result.

Mr. YOUNG. For that I commend the President if it is possible. I want to believe that when you get this many-headed monster, you have that many kinds of commissions. I would like to see the Government out of it totally, but I know that is impossible in the present climate of our society.

Mr. CURTIS. I think the President has heard you on the economic incentives and disincentives. It is for that reason that the Governments of Canada and the United States have agreed to this variable rate of return so we can use the self-disciplinary aspects of that rate of return which will be a more significant device for holding costs down than anything Government can do.

Mr. DINGELL. The Chair has yielded to the gentleman briefly.

Mr. YOUNG. Could I have another question, please? I didn't use my 5 minutes.

Mr. DINGELL. The Chair recognizes that, and in due course the Chair will recognize the gentleman for questions. I have yielded to him and I have not yielded the floor. I am sure the gentleman will recognize that.

Mr. YOUNG. I can recognize that. Since you have the gavel I can recognize anything.

Mr. DINGELL. The Chair uses the gavel with lightness.

Mr. Commissioner, can you give us an indication of the kinds of tariffs that the U.S. pipelines will use in selling that gas to their customers?

Mr. CURTIS. I cannot as well as Commissioner Smith can.

Mr. DINGELL. Then we will hear from him.

Mr. SMITH. Mr. Chairman, the Commission in its comments attempt to deal with two questions, one being the provisions of an acceptable tariff and the extent to which the FERC could not precommit on the specific provisions of such a tariff.

Another consideration was the knowledge that this area was a most legitimate and perhaps essential question for the Congress to inquire into. Consequently, our report on page 49 attempts to serve both masters to the extent that it is possible to do so. The absolutes, I believe, are set out in the President's report. These include the date at which costs could be collected by virtue of the tariff—

Mr. DINGELL. Commissioner, we are talking about the tariffs that will be charged by U.S. pipelines after the gas enters the lower 48 States and after it leaves the Alcan system.

Mr. SMITH. I understand. The tariffs that will be filed will contain provisions whereby the pipelines seek to recover those costs imposed on the transportation of the gas that it sells from the Alcan system. There will be recovery of all costs that are imposed by the Canadian tariffs.

On the basis of experience, I anticipate from what was put into the proceedings before the Federal Power Commission earlier that

the tariffs will include provisions whereby the costs of the transportation in all its components are flowed through in very short order. In the FPC proceeding this was known as the tracking issue.

Mr. DINGELL. To put the whole thing in simple terms, I think what you told us is that you are going to include the entire Canadian tariff and the entire charges between the time the gas enters Canada and the time that it leaves Canada as just a single item which will probably not be questioned by the Federal Power Commission; correct?

Mr. SMITH. No, sir, it is not. The Canadian tariff, as we contemplate it being developed, will comport with the bilateral agreement between the countries. It will, in accordance with Canadian regulatory practices, set out in considerable detail the components of the cost of service that are being attributed to the Alaskan portion of gas transported across Canada. It will not be a lump sum. It will be, to a very large extent, itemized. We will know what costs are being included.

Mr. DINGELL. Let me read to you something which I found quite interesting. It says:

In short, while the Commission did not find a specific rate unjust, unreasonable, or discriminatory, it did find, as it was obliged to do under the existing facts, that the existing tariff so directly controlled the going rate for purchased gas as to render it unjust and unreasonable in that it permitted any new rate fixed for purchased gas by the Canadian authorities to be passed on automatically to PG&E and thence to the 2 million customers of PG&E in California.

Such a practice, if permitted to continue, would be an abdication of the Commission's statutory duty, making it a rubber stamp for Canadian authority, and inevitably subjecting gas consumers to unjust and unreasonable rates fixed by the Canadian authority ipse dixit. This result the Commission could not permit because it would continue a practice that would not protect the millions of customers of PG&E in California from unjust and unreasonable rates.

That is from an opinion in the U.S. District Court of Appeals for the District of Columbia, 75-2046, *Pacific Gas Transmission Co. v. Federal Power Commission*.

I am not sure that I want you to comment at this particular time on it, but the staff will be communicating with you to ascertain your judgments in this matter in light of the matter that we are now considering and the fact that the two matters, the purchase of gas in the case referred to and the purchase of gas here, fall under seemingly similar, if not identical, principles?

Mr. SMITH. I would welcome the opportunity to continue this discussion with the staff and to submit additional views, Mr. Chairman, but I should point out in the case you referred to the court upheld the Commission's determination that it had to independently review the proposed import rates as to the Alaska pipeline, the scrutiny that would be given the entire project initially, the review of whether the tariffs filed before FERC comported with the President's decision as approved by Congress, if it is approved by Congress, together with the detailed regulatory consultations through the evolution of the Canadian tariff, would not be the type of rubber stamp that the court decried in making its decision upholding FPC rate review procedures in that particular case.

Mr. DINGELL. The Chair is going to yield to my friend from Wyoming and my cochairman, Mr. Roncalio.

Mr. RONCALIO. Chairman Curtis, perhaps you or some of your staff can help me with this question.

On page 57 of the comments, you have two tabulations of the delivery costs at wellhead projected from 1984 to the year 2000. We have heard evidence that the cost of processing at the field can be anywhere from 10 to 70 cents per Mcf. What figure was conditioning costs, was including in your delivery cost wellhead configurations on page 37?

Mr. CURTIS. I believe, that as was pointed out, the Commission had the 30-cent estimate before it as the latest estimate.

Mr. RONCALIO. I thought that was the 30 percent cost overrun. Is it also 30 cents per thousand cubic feet?

Mr. CURTIS. Yes, that is conditioning and that would be included in the wellhead cost columns. That wellhead cost is inclusive of conditioning.

Mr. RONCALIO. If it goes up to higher, to let's assume 60 cents in the next few years, who will absorb that, the consumers ultimately?

Mr. CURTIS. If the full processing cost is allocated to the gas consumer and that processing cost increases, then the increased cost will flow through to the gas consumer if the Commission permits it.

Mr. RONCALIO. What can this Congress do to keep that conditioning price down? What can it do to ask the producers to keep that price down? Will FERC have jurisdiction over that price?

Mr. CURTIS. Under existing law, the FERC would decide the prudence of the processing costs to be allocated to the gas purchase. The facilities themselves will be on State lands and subject to the jurisdiction of the State of Alaska. Hopefully the State of Alaska, through whatever regulatory authority it may exercise with respect to those facilities, will exert some leverage as well.

Mr. RONCALIO. Thank you.

Thank you, Mr. Chairman.

Mr. DINGELL. The Chair was going to recognize the gentleman from Alaska.

Mr. YOUNG. Thank you, Mr. Chairman.

Mr. Curtis, there was a comment made a while ago which I don't understand. Why do you plan a special methodology for Alaska when associated and nonassociated gas are treated the same in other States?

Mr. CURTIS. Let me reconstruct that. There has been to date no attempt made by the Federal Power Commission to determine a just and reasonable price for gas to be produced from the Prudhoe Bay field. In the lower 48 States, and Mr. Williams can comment on this more specifically, the methodology for determining the national area rate looks to nonassociated gas costs in determining the just and reasonableness. Then it applies that determined price to associated gas as well.

Because Prudhoe is all associated gas, that traditional methodology that the Federal Power Commission has applied would not be available to it. Therefore, it would have to, if required to set the price for this gas under the Natural Gas Act, develop a different methodology for the gas produced in the State of Alaska from the Prudhoe field.

We are hopeful, however, that this decision will be made by the Congress in the legislation and that we would not be required to determine a just and reasonable cost-related rate for this gas.

Mr. YOUNG. When you say in legislation, do you mean the energy bill itself?

Mr. CURTIS. Yes, sir, in the National Energy Act.

Mr. YOUNG. Second, when you say Alaskan Prudhoe Bay gas, if we find a disassociated gas field, that Prudhoe Bay price would not apply to that field, right?

Mr. CURTIS. I think I could only speculate and perhaps with some risk of evidencing prejudgment as to what methodology may be developed by the Commission if it is required to fix a price for this gas and its applicability to nonassociated gas. I would prefer not to do that.

Mr. SMITH. If I could add something to that, Mr. Young, the FPC practice was to exclude from its data base both the costs which evolved from Alaskan drilling and producing activities and the accompanying reserves produced. This has been done specifically in all the nationwide proceedings.

As a result, the FPC has never attempted to set a rate for Alaskan gas, either as part of a nationwide proceeding designed to cost nonassociated gas, nor separately in an effort to price associated gas.

Mr. YOUNG. Well, it may be a moot question indirectly because if certain people have their way, there won't be any more gas or oil discovered in Alaska. We will solve the problem of Prudhoe Bay and everything can freeze in the dark down here.

Thank you.

Mr. DINGELL. The Chair thanks the gentleman.

The gentleman from Massachusetts, do you seek recognition?

Mr. MARKEY. I have no questions.

Mr. DINGELL. The Chair wishes to recognize counsel for purposes of getting material that should be included in the record.

Mr. BRAUN. Chairman Curtis, you referred to a variable rate of return study your staff prepared. Do you have that with you today?

Mr. CURTIS. There are advantages in early sessions of the House, I must admit. It is not a study, Mr. Braun. What we did include in our comments was an illustrative example as to how a variable rate of return may be structured. That is contained in the Commission's comments on the President's decision that has been supplied to the committee. Specifically, it is set out on page 42. It contains the table and discussion which precedes it as well as follows it. Dr. Sewell who is with us today developed that illustrative example and he would be prepared to respond to any of your questions.

I want to emphasize again that this should not be considered as presumptively how the Commission come out on this issue.

Mr. BRAUN. Dr. Sewell, could you explain to the committee how the variable rate of return would work with respect to how long it would be in effect, whether it would be in effect only during the construction period or for the life of the project and how that consideration or decision would affect the range of the variable rate of return?

Mr. SEWELL. The illustration contemplates that the rate of return which would go into effect at the time that the pipeline was

completed would be a rate of return that was determined in accordance with what cost overrun or cost underrun was experienced and that that rate of return would continue throughout the life of the project.

Again, that is what the illustration contemplates. As Chairman Curtis says, it does not prejudice what the Commission may do.

Mr. SMITH. Mr. Braun, I would add to that that it is not absolutely clear what the Canadian approach would be. I have reference to the Canadian concern, as expressed in the bilateral agreement, that financing for the later Canadian construction in the Mackenzie Delta, zone II, be forthcoming without too many problems. Consequently, I would not be surprised to see the NEB adopt a limitation on the low end of the variable in the FUDC period.

Mr. DINGELL. The Chair will observe that I think this is a point important enough that we should pursue it further by correspondence. The staff will be submitting some questions to you relating to this matter which I hope that you will find possible to respond to in a timely fashion so that we can include them in the record.

There is a vote on the floor right now. The Chair will recess the hearing and return as quickly as I can to persist.

That completes your appearance this morning. We thank you for your appearance.

[Brief recess.]

Mr. RONCALIO [presiding]. Ladies and gentlemen, I am sure that the other chairman will show up soon. Let's begin and we will save time that way.

Mr. Martin, before he gives us anything today, let me say I am glad to see you again. We had the whole morning together 2 days ago. Although this is unrelated in this subcommittee, I want to quickly express to you the interest we had in the subcommittee in this Congress to resolve the problem relating to the Department of Interior's interpretation of the wilderness section of the BLM Inorganic Act. No oil and gas leasing, no gas to put into the pipes we are planning to build.

We want you to know that we reemphasize our displeasure with BLM's harsh interpretation of the congressional intent as it relates to mining and oil and gas leasing in the BLM wilderness review area. That 40-mile section haunts me and hurts the industry. I understand that you should know how deeply this is felt, a point that would almost bring about statutory change.

I am glad to see you here. Other than that, have a good day.

Take over, Mr. Cochairman.

Mr. DINGELL. I am not sure exactly what my dear friend, the cochairman, said. But, I am sure the Secretary knows.

Gentlemen, if you would please identify yourselves for the purpose of the record. You may commence on your left, so that our reporter knows who is who, and we will then recognize each of you for probably a summary—you have a joint statement. All right.

If you would identify yourselves, we will recognize whoever is going to give the joint statement.

JOINT STATEMENT OF GUY R. MARTIN, ASSISTANT SECRETARY, LAND AND WATER RESOURCES, DEPARTMENT OF THE INTERIOR; JOHN J. FEARNSIDES, ACTING DIRECTOR, MATERIALS TRANSPORTATION BUREAU, DEPARTMENT OF TRANSPORTATION; LESLIE J. GOLDMAN, ACTING DEPUTY ASSISTANT SECRETARY FOR POLICY DEVELOPMENT, DEPARTMENT OF ENERGY; LEE GARRETT, CHIEF OF ENGINEERING, MILITARY CONSTRUCTION DIRECTORATE, ARMY CORPS OF ENGINEERS; AND DONALD DUBOIS, ENVIRONMENTAL PROTECTION AGENCY, REPRESENTING THE EXECUTIVE POLICY BOARD

Mr. DUBOIS. Donald Dubois, Environmental Protection Agency, Seattle, Wash., on behalf of Ms. Blum.

Mr. DINGELL. Very well.

Mr. GOLDMAN. Les Goldman, Alaskan Project Coordinator, Department of Energy.

Mr. DINGELL. We are pleased to see you.

Mr. MARTIN. Guy Martin, Assistant Secretary of Interior for Land and Water Resources.

Mr. FEARNSIDES. Jack Fearnside, Department of Transportation.

Mr. GARRETT. Lee Garrett, from the Army Corps of Engineers.

Mr. DINGELL. Gentlemen, we thank you all for being here.

Mr. Secretary, I guess you are recognized for purposes of a statement. You may either give the statement in full, or you may summarize it briefly, and we will then recognize members for questions.

Mr. MARTIN. Mr. Chairman, I think the statement is brief enough that I can read it as representing all our views at least for preliminary purposes here today.

We are pleased to be here and to make representations to you with regard to the Presidential Decision and Report for oversight and inspection of the Alaskan gas project. These proposals were not an afterthought in the preparation and development of the Presidential decision. The Federal agencies which made these proposals were acutely aware of the cost overruns and management difficulties in construction of the Trans-Alaska Pipeline System (TAPS).

If the overrun experience of the Alyeska project is repeated, then the costs to consumers for Alaskan natural gas will be higher and the project will not be as economically attractive.

Therefore, from the start of the study and decision process, all the Federal agencies have aimed to develop terms and conditions and other measures that would assure cost-effective and quality construction. This effort began with a careful review and analysis of the several official inquiries into the management, planning and construction of TAPS. These official inquiries include the GAO investigation of the cost overrun experience of the TAPS project, and "The Report to the Alaska Pipeline Commission" by the Commission's special counsel, Mr. Terry Lenzner, also known as "The Lenzner Report."

In addition, the Department of the Interior, as well as the Department of Transportation, conducted its own independent investigation into various aspects of the construction of the Alyeska oil pipeline.

At the same time, as required by the Alaska Natural Gas Transportation Act of 1976, 10 Federal interagency task forces were

organized to report, not later than July 1, 1977, on the various impacts and considerations of an Alaska natural gas transportation system.

Two of these task force reports—the task force report on environmental issues and the task force report on cost overruns and schedule delays—were substantially concerned with the problems of project management and Federal oversight.

In August of this year, after the task force reports were submitted, a series of meetings took place among the Federal agencies having statutory responsibilities over various aspects of project construction. These meetings resulted in approval of the general terms and conditions, set forth on pages 27 to 40 of the Presidential decision, and also of a limited reorganization plan to strengthen the field-level supervisory and coordinating authority of the Federal inspector.

To limit the type of cost overruns and delays incurred by the Alyeska pipeline, the Presidential Decision and Report has three significant features:

One, the variable rate of return. The rate of return on common equity for the pipeline company sponsors is tied to the size of cost overruns. Through a variable rate of return, the sponsors will be penalized with a lower rate of return for cost overruns and project inefficiencies.

Two, reliance on private financing. By ruling out Government debt guarantees or an all-events consumer tariff, the Presidential decision will require the sponsors to make the project as economically attractive as possible to private lenders. A project such as this simply cannot be financed unless lenders are satisfied that there will be adequate planning and cost-effective construction.

Three, the general terms and conditions. As set forth on pages 27 to 40 in the Presidential Decision and Report, the general terms and conditions ensure that there will be strong cost and quality controls. These terms and conditions in many cases reflect the specific knowledge and experience gained by the various Federal agencies involved with the Alyeska project.

Among other things, these terms and conditions prohibit the use of cost-plus contracts, except in special circumstances; require a detailed overall management plan and description of cost-control techniques for certain specified matters, submitted in advance; and demand that the applicant submit a design and design-cost estimate for at least 70 percent of the system before the start of construction.

The general terms and conditions do not hold the applicant to a special management approach, but provide minimum standards for cost and quality controls to avoid project delays, breakdowns, and overruns.

Because of these terms and conditions, the Federal inspector will have more responsibilities in more phases of the project than his predecessor did with respect to Alyeska. The Federal inspector will be involved in the planning and design of the project from the outset, including the planning for compliance with terms and conditions, as well as monitoring such compliance after construction has begun.

In other words, compliance with environmental and quality control standards will be an integrated part of project construction, rather than an after-the-fact activity which can be blamed for delays and increased costs.

The Presidential decision also provides for more effective coordination of the enforcement and oversight functions. I will briefly address the component parts of the Federal oversight and monitoring effort, and indicate how that effort has been strengthened and improved.

THE FEDERAL INSPECTOR

When Congress enacted the Alaskan Natural Gas Transportation Act of 1976, it created a new Federal officer, the Federal inspector, and mindful of the Alyeska experience, the Congress expanded the monitoring and oversight authority of this officer. For example, the Federal inspector will have very broad subpoena powers to obtain books and records, and will conduct periodic audits during project construction. In addition, the Federal inspector shall:

Establish a joint surveillance and monitoring agreement with the State of Alaska; keep the President and the Congress informed on compliance matters and issue quarterly reports to the President and Congress on the activities of his offices; and generally monitor compliance by the applicant with all applicable laws and terms and conditions, and monitor all other actions taken to assure timely, cost effective, and quality construction.

In addition to the monitoring functions provided by the statute, the Federal inspector will be given field-level supervisory authority over enforcement of the terms and conditions by the various Federal agencies. Upon approval of this decision, the President will submit a limited reorganization plan to coordinate the enforcement of the terms and conditions at the field level through the Federal inspector. Such increased supervisory authority is consistent with the intent of Congress in ANGTA to improve the quality and administration of Federal oversight.

THE EXECUTIVE POLICY BOARD

The Federal inspector will be subject to the policy direction and supervision of the Executive Policy Board. The board members will be the Secretaries of Interior, Energy, and Transportation, the Administrator of the Environmental Protection Agency, and the Chief of the Army Corps of Engineers or their deputies, or senior officers who have been delegated authority over gas pipeline matters.

Presidential supervision over the Federal inspector will be delegated to the Board. The Board will provide policy guidance through the Federal inspector to the agency authorized officers. It will also act as an appellate body to resolve any differences between the agencies and the Federal inspector, including differences which may arise when the Federal inspector overrules enforcement action of an agency authorized officer.

To summarize simply, we believe the Federal inspector should have the authority in the field and the accountability to the Executive, Congress, and public which was intended by the statute. When major policy level resolution of conflict or executive coordination is

necessary, the Board will provide guidance and support to the Federal inspector.

AGENCY AUTHORIZED OFFICERS

These officers, who will exercise the delegated authorities of their respective agencies, will directly enforce the stipulations and terms and conditions—subject to the field level supervisory direction of the Federal inspector.

The Federal agencies will retain their existing authorities, pursuant to section 9(a) of ANGTA, to issue original certificates, permits, rights-of-way, and other authorizations, and to prescribe any appropriate stipulations and terms and conditions to such authorizations that are permissible under existing law.

The agency authorized officers, however, will be under the field level supervision of the Federal inspector on enforcement matters and be subject to the ultimate policy direction of the Executive Policy Board.

It should be noted that under section 11 of ANGTA these officers will be given supplementary enforcement powers to insure compliance with the terms and conditions administered by their respective agencies.

Section 11 provides that any Federal officer or agency shall issue a compliance order—and thereafter bring a civil action—against any person for any violation of law administered by that officer or agency.

Pursuant to the reorganization plan, the Federal inspector will have field level supervisory authority over the issuance of such a compliance order, which will state the nature of the violation with specificity, and set an appropriate time for compliance not to exceed 30 days. Continued noncompliance would permit the Attorney General, at the request of the Federal inspector and agency authorized officer, to commence a civil action for appropriate relief, including a permanent or temporary injunction or civil penalty not to exceed \$25,000 per day for each day of continued violation.

The coordination of this enforcement authority, with others, through the office of the Federal inspector, is essential to improve the quality of Federal oversight, and minimize the project delays and cost overruns.

The Presidential Decision, the ANGTA statute, and the reorganization plan insure that the office of the Federal inspector will be far stronger than the predecessor office which monitored the Alyeska construction.

This committee should be reassured, however, that in the unlikely event additional powers are needed, the administration will not hesitate to return for the appropriate authorizing legislation.

With that, Mr. Chairman, I would like to close and emphasize to you that we believe in submitting this plan we have achieved a substantially better level of coordination and agreement among the various agencies that are involved, and that we can deliver a substantially more unified level for enforcement.

Thank you very much. We have members of all the various agencies here to answer questions.

Mr. DINGELL. Mr. Secretary, the committee thanks you. I observe we have a vote on the floor. I think our best step would be to recess

the committee briefly, go over and respond to our names as quickly as we can. We are sorry about the inconvenience this occasions you. But we will return as punctually as possible.

The committee will stand in recess until we vote.

[Brief recess.]

Mr. RONCALIO [presiding]. We will resume the hearing.

Mr. MARTIN. Mr. Chairman, that was a joint statement. We are prepared to take your questions.

Mr. RONCALIO. Very good.

Construction of the gas pipeline will involve the granting of permits, the setting of terms, the oversight by several of the agencies you referred to, including, of course, the FERC, the Department of the Interior, Energy, Department of Transportation, the Corps of Engineers, and the EPA.

What will be done to insure that the activity of these agencies is coordinated so the construction will not be unnecessarily delayed?

Mr. MARTIN. I would just say that is the basic tenor of my statement to the committee, initially.

We believe that by vesting the field level supervisory authority in a single Federal inspector, and then by having his actions supervised for policy and conflict resolution purposes by the Policy Board made up of those agencies that have primary responsibilities, we can deliver substantially more coordinated administration of the government services.

Mr. RONCALIO. Who will be responsible for the coordination of these activities?

Mr. MARTIN. The Federal inspector will be primarily responsible in the field. The Policy Committee will be responsible for the policy coordination.

Mr. RONCALIO. Will that person—let's assume you have to move off the Alyeska line 1,500 feet or so into the BLM lines.

Mr. MARTIN. Each agency will carry out their own statutory authorities, and each of the various departments and agencies represented here will have an authorized officer in the field. But, that authorized officer will report to the Federal inspector.

Where there is no conflict, the authorized officers decision will bind. Where there is a conflict or a policy decision that has to be made the Federal inspector will make the call subject to some resolution by the Policy Committee.

Mr. RONCALIO. Are there any precedents you know of for such activity coordination?

Mr. MARTIN. I am not aware of any.

Mr. RONCALIO. On August 23, 1977, a GAO report on construction, of the Alyeska line said Federal officials responsible for enforcement often showed "an unwillingness to use proper authority to assert compliance with applicable regulations." What will be done to insure strong enforcement this time around? What you have already alluded to?

Mr. MARTIN. I think that is a part of it. There is a lot to be said for the fact we are starting with all of the experience of the TAPS project behind us, and increased dedication to avoid those errors.

Mr. RONCALIO. In choosing the Federal inspector, what qualifications will be required—the usual, I expect. Will he be required to have any background in environmental management or biology?

Mr. MARTIN. I would think those would be among the criteria, although we will have to use some balancing because we may not be able to capture every ingredient we want in anyone individual. We are in the process now of putting together a criteria.

Mr. RONCALIO. Will that include the possibility of not penalizing a man who comes out of the private sector who built a similar pipeline once?

Mr. MARTIN. No, sir.

Mr. RONCALIO. What steps will be taken to insure that field personnel have strong enforcement powers and cannot be arbitrarily overruled by their superiors in Washington or other locations from where the action is?

Mr. MARTIN. Yes, sir. We do think we have made provisions for that. First of all, each department or agency that is involved will be delegating their enforcement responsibilities comprehensively to their authorized officer in the field. Those individuals will be supervised by the Federal inspector.

We hope to provide each of our authorized officers with substantially greater authority than any field level representative had during the trans-Alaska pipeline. I might ask Mr. Fearnside from Transportation to comment on that.

Mr. FEARNSIDES. It is hard to see how I can embellish on that. The essence of it is in fact that delegating the authority out there, manning sufficiently to get all the jobs done that are required—and we do intend to submit budget requests, et cetera, to carry out these things as efficiently and effectively and completely as we can—and working together to coordinate with the Federal inspector seems to us to be a very, very efficient way to accomplish it at this time.

Mr. RONCALIO. Gentlemen, construction of the Alaska oil line involved a joint fish and wildlife advisory team. What do you plan similarly here, if anything?

Mr. MARTIN. I think that we would be in general agreement that that experience ought to be continued in one form or another. My personal opinion, and that of the Department, is that that was a valuable component in enforcement. I think that we have to achieve again a better level of coordination, not only with that effort, but with all of them.

With that caveat, we think it was a very valuable component.

Mr. DINGELL. Would the gentleman yield. I regret interrupting you.

My experience was that the joint fish and wildlife State agency teams had very little to say with regard to the construction of the pipeline, preservation of environmental use, and other things when the construction of the trans-Alaska pipeline was going on.

This committee, in its analysis of the activities of the Federal inspectors, and the inspector in particular, documented a whole broad category of disregard and abuses which went on up there.

Now, how are we to be assured that despite your splendid comments today, that these same abuses, same disregard of the responsibilities of the joint fish and wildlife and other teams that were up there, will not persist in the next undertaking?

Mr. MARTIN. My own approach to that—and that is largely a Department of the Interior matter, Mr. Chairman—is that we must

take care in our own designation of an authorized officer from the Department, and the organization that we form within the Department. Under various responsibilities, including those of BLM, Fish and Wildlife Service, we should put together the organization with the State to make sure that the joint fish and wildlife team, if we call the entity that again, is actually rolled into the operation and decisionmaking of our authorized officer; in a sense rolled into our whole procedure better than last time.

If I had a criticism of the way it worked last time, it was that in many cases they were not as much a part of the decision because they were not as much a part of the organization as they ought to be this time.

Mr. DINGELL. Are you giving us this morning a commitment that is the way it is going to be handled this time?

Mr. MARTIN. It is my intention that it is, yes, sir.

Mr. DINGELL. Your intention. You are appearing on behalf of the administration.

Mr. MARTIN. Of course it is our intention.

Mr. DINGELL. Very well. I thank you, Mr. Chairman.

Mr. RONCALIO. They were good questions. Will that include some enforcement? Can they say "Hold here until you respond to the problem"?

Mr. MARTIN. Yes, sir, we outlined the compliance procedures in the testimony, and I would also add that we anticipate a substantially increased level of enforcement through this organization.

Mr. RONCALIO. I was saying to my cochairman your background and where you came from argue well because you will be on your own home ground.

Mr. MARTIN. I appreciate that.

Mr. RONCALIO. We are looking forward with confidence. How much of this preliminary work will be needed before BLM can begin to issue rights-of-way?

Let me strike that. If we adopt the President's recommendation it will be necessary for Alcan to begin field surveys, studies, manage to locate the exact pipeline route and plan for minimizing conflicts in environmentally sensitive areas. How much of that preliminary work will be needed?

Mr. MARTIN. We will submit to the committee a schedule by which the development of specific stipulations and the right-of-way will take place. I might say this is a point where it will be very well to highlight one of the most significant differences between the approach of the Federal administration on this pipeline and that which was taken on TAPS.

In the case of TAPS, the basic alignment of the pipeline and the plan for carrying out the construction was initially brought to the Federal Government for approval. The work of the Federal Government, including all agencies, was an after-the-fact matter, and although disapproval was possible, after the fact review is never as good as participation in the first instance.

On the gasline it is our intention—and I believe we have the agreement of Alcan on this—that we begin immediately working together. This goes to the fish and wildlife aspect as well because we believe it is the setting of the basic terms and conditions, the

specific stipulations, starting from the first day, that will make a difference.

Mr. RONCALIO. OK. Those are excellent responses, what we wanted to hear.

We thank you very much. We have no further questions, Mr. Chairman.

Mr. DINGELL. I am curious. You propose, I understand, on behalf of the administration, to submit to us a reorganization plan which will constitute the duties and functions of the inspector for the pipeline.

Now, the basic reorganization statute under which that reorganization plan would be submitted does not allow the submission from the Executive to the Congress of new powers to be achieved by the administration, simply a relocation of old powers. Is that correct?

Mr. MARTIN. Yes, sir.

Mr. GOLDMAN. That is correct, Mr. Chairman.

The reorganization plan that we are proposing to send to the Congress is a reorganization plan that merely moves around existing authorities in a way we feel will best coordinate the approach. It also addresses some of the concerns that have been brought up in terms of past performance versus the way we hope to have this pipeline built in the future.

There are no new authorities being created. It is for the very limited purpose of transferring to the Federal inspector the enforcement authorities, but only so that those authorities can be coordinated.

That is what the reorganization would do. It doesn't create any new authorities, and it doesn't create any new positions. The inspector is a statutorily created position.

Mr. DINGELL. We found that there was a great paucity of enforcement authorities or a paucity of use of enforcement authorities in connection with the trans-Alaska pipeline. For example, inspectors were threatened, inspectors were run off the job. Records and files and X-rays were either not taken, or forged, or there were fraudulent substitutions.

This question is directed to the Department of Transportation. Are your authorities in law now adequate to prevent that kind of behavior at this time, or do you need additional statutory authorities?

Mr. FEARNSIDES. Mr. Chairman, we feel that our authorities are effective and we don't need any additional powers. There is nothing that a good aggressive enforcement done on our part won't enable us to compensate for previous shortcomings.

Mr. DINGELL. For the record, I would appreciate it if you would submit to us the enforcement authorities and penalties which you can level for the different abuses which transpired in connection with the construction of the trans-Alaska pipeline, which, as we are all agreed, were abundant.

Mr. FEARNSIDES. Mr. Chairman, as you know we have different statutory authority for the two different types of—for liquid pipelines and for natural gas pipelines. We think for the natural gas pipelines we are in pretty good shape.

Mr. DINGELL. You don't mind if I have some doubts on that matter now? I just am a little bit dubious of the whole authority, and quite frankly the performance of the Office of Pipeline Safety.

Mr. GOLDMAN. Mr. Chairman, I just wanted to add that under the Alaskan Natural Gas Transportation Act there are additional authorities which would be conferred on this whole operation, as a unit.

Section 11 of that act provides supplemental enforcement authority that flows from this act. In terms of the potential for using that as a club with regard to compliance, it is a substantial addition to the authorities that already exist in the Department of Interior and Department of Transportation.

Mr. DINGELL. Mr. Goldman, I have some curiosity. The Federal Energy Regulatory Commission will be imposing conditions on the charter of the new pipeline, but they will not sit on the Executive Policy Board. As I gather it, the inspector of the pipeline will be superior to them. How are we then to assure that these will be carried out?

Mr. GOLDMAN. Mr. Chairman, let me say that that is not a question which has been decided yet. We are still looking at how that should be handled. We would like to work with you, and we would appreciate your views on how that ought to unfold.

I think our concerns are twofold. The Congress has made its voice known in terms of maintaining the independence of the FERC. At the same time, we want the best possible coordinated effort in putting this pipeline together.

Balancing those two points, finding the best way to do it, is something we would like to work with you on. No final decision has been made. So, we are open to suggestions on that point.

Mr. DINGELL. My first feeling is that they really should be a member of the Executive Policy Board, because they are going to regulate, they are going to review the costs and all that sort of stuff.

To have the Executive Policy Board, at some time in the future, present them with a pipeline completed without having a chance to supervise the conditions that they put in the license and all that sort of thing raises a real question in my mind as to whether they are going to be able to do anything or not.

Mr. GOLDMAN. That is very helpful to us, and that is why we are still looking at it as it relates to maintaining the independence of the FERC. Certainly if they do sit on the Board, the way the Board would be structured, it is possible that they would be overruled by everybody else—they would be one member of the Board.

So, that is a potential problem, but I think having them on it would be easier. The concern was the independence. Your advice on that is very significant.

Mr. DINGELL. I am troubled on this matter.

Thank you, Mr. Chairman.

Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman.

I want to pursue another area of concern; that is, financing of the pipeline. Could you tell me, Mr. Goldman, how it is going to be financed?

Mr. GOLDMAN. We have specified in the decision that the pipeline would be privately financed. As in any pipeline project, there are a series of things which have to happen.

Mr. BROWN. Privately financed by whom?

Mr. GOLDMAN. Privately financed by those institutions which normally finance major and minor projects: The investors of America.

Mr. BROWN. You are talking about Wall Street or a stock sale?

Mr. GOLDMAN. Talking about basically the institutional investors, yes.

Mr. MARTIN. Mr. Brown, I might add, I think a legitimate source of that initial investment will be the owner companies of the gas in the Prudhoe Bay field.

Mr. BROWN. Why do you say that?

Mr. MARTIN. Simply because they would have an interest in transporting that gas out.

Mr. BROWN. What if they choose not to.

Mr. MARTIN. I would think that would be unfortunate in the national interest.

Mr. BROWN. So there will be pressure put on them by the Federal Government to be participants?

Mr. MARTIN. No, sir, I didn't suggest that. I think it would be unfortunate, though.

Mr. BROWN. Why?

Mr. MARTIN. Because, as we see it now the pipeline is in the national interest, and we hope it can be financed and believe it can be—

Mr. BROWN. Is it the intention of the Federal Government to try to put that pressure on them?

Mr. GOLDMAN. Let me try to answer that.

Mr. BROWN. I mean—

Mr. GOLDMAN. Indicating in the President's decision that it would be preferable to have the beneficiaries of this pipeline participate in the financing—

Mr. BROWN. You are talking about the consumers.

Mr. GOLDMAN. No.

Mr. BROWN. Who are you talking about?

Mr. GOLDMAN. About the producers.

Mr. BROWN. Why are they beneficiaries?

Mr. GOLDMAN. There will be large revenues accruing to them as a result of the sales of gas.

Mr. BROWN. They will be selling their gas.

Mr. GOLDMAN. Right.

Mr. BROWN. At what price.

Mr. GOLDMAN. That is to be determined by the FERC.

Mr. BROWN. Oh. How do you know there will be large revenues accruing to them?

Mr. GOLDMAN. The gas in Prudhoe Bay is basically associated gas. There are certificated costs that are associated with moving the oil. At any of the prices that are considered in the President's decision, our analysis would indicate that the companies will be making a rather healthy profit.

Mr. BROWN. But in effect doesn't the Federal Government set the price of both the oil and the gas?

Mr. GOLDMAN. Either through the current authorities that the FERC uses, or under the national energy plan, the Federal Government will set that price.

Mr. BROWN. How do you know the price is going to be beneficial to the producers?

Mr. GOLDMAN. In planning for any project you have to make some assumptions. The range of assumptions made for the President's decision, because the President had to make some assumptions in order to decide whether to have this pipeline, include prices across the whole range that we considered possible, including prices that would result in handsome returns to the oil companies.

Mr. BROWN. The Federal Government is going to assure handsome returns to the oil companies. Is that right?

Mr. RONCALIO. The gentleman said revenues, not handsome returns.

Mr. BROWN. He did say handsome returns.

Would the reporter read that, please.

[The reporter read the record.]

Mr. BROWN. My question is the Justice Department has said that these producers should not participate in the financing. What do you do if the company——

Mr. GOLDMAN. Let's be accurate on that. The Justice Department has also indicated that that is in an ownership interest. The Justice Department has specifically indicated that it would be all right for the companies to participate in the financing of the project——

Mr. BROWN. They originally said not at all, and then they changed their mind, I guess, later on.

Mr. GOLDMAN. I would differ with that interpretation. It was a clarification. There was nothing inconsistent with their second opinion in terms of their first. It was a clarification. I think——

Mr. BROWN. If I may read, it says:

We have recommended in the report to Congress that an ownership interest or participation in any form in the transportation system by producers of significant amounts of natural gas or their subsidiaries or affiliates should be prohibited—not discouraged or encouraged, but prohibited—in any form.

I don't know what that means. I mean, I don't know how you get a legal interpretation on it or a Department of Energy interpretation on it. But, my interpretation of "participation in any form should be prohibited" means participation in any form should be prohibited.

Mr. GOLDMAN. Is the subject of that sentence the word "ownership"?

Mr. BROWN. No. It is not. It says an ownership or participation in any form. Let me read it again.

We have recommended in the report to Congress than an ownership interest, or participation in any form in the transportation system, by producers of significant amounts of natural gas, or their subsidiaries or affiliates, should be prohibited.

I don't see how you can read that——

Mr. RONCALIO. Mr. Brown, would you yield for a question?

Mr. BROWN. Yes, sir.

Mr. RONCALIO. Does that include loan guarantees?

Mr. BROWN. Participation in any form, it would seem to me, Mr. Chairman, would exclude loan guarantees.

Mr. RONCALIO. In any form of the ownership, it says.

Mr. BROWN. No, it says ownership or participation in any form in the transportation system.

Mr. DINGELL. The Chair observes we have a vote on the floor. I think this is a discussion that ought to be continued without the pressure of a pending vote. So, we will recess to go over and vote and resume as quickly as we can.

Mr. BROWN. Mr. Chairman, I just have one last question.

Mr. DINGELL. The witness has a question pending here, and we have a vote pending. My good friend and cochairman, Mr. Roncalio, indicates he would be willing to sit here and proceed.

Mr. RONCALIO. In lieu of the fact I am not coming back here after the next one, I will be willing to miss that vote and stay.

Mr. BROWN. I am not willing to miss the vote, Mr. Chairman, but I would like to ask one more question, if we have the opportunity, when I return.

Mr. RONCALIO. You are recognized. Please proceed.

Mr. GOLDMAN. I would be glad to respond to the last point.

Mr. BROWN. I would like to get the other question in. What if the charter or the financial situation of a company that is a producer prohibits their participation when the Government encourages it in guaranteeing the loans? Then what?

Mr. GOLDMAN. That is a legal question which I think we will have to take a very close look at. Companies have changed their charters. Oil companies have been known lately for investing in all sorts of endeavors.

Mr. BROWN. You would want them to change their charters. Will you also encourage them to do that?

Mr. GOLDMAN. I was indicating I think each case would have to be looked at separately. I don't know the specifics of what you are referring to, which company, what the exact language is. It is a legal matter that we will have to look at, the companies will have to look at, and the pipeline will have to look at as we try and put this deal together.

Mr. BROWN. But you intend to use the look from the government, I guess, rather significantly from what you said.

Mr. GOLDMAN. I was simply indicating the extent, in terms of your first question about putting pressure. To the extent it suggests in the decision that beneficiaries of the line, such as the companies, should also help bring it about through participation financing, if that constitutes pressure, then I mean one can define that however one wants. But, that is our preference.

Mr. BROWN. How would you feel if the Congress would prohibit that? Where would the financing come from then?

Mr. GOLDMAN. The financing would—

Mr. BROWN. Because I am not sure that I want to make those "war profiteers" participants in this program.

Mr. GOLDMAN. I think that is a policy decision. It certainly is within the prerogative of the Congress to make. I think it would be unfortunate if they so did.

Mr. BROWN. You would encourage us to make it if we feel that way because I think it might go the other way if the administration is allowed to have a free hand, is that right?

Mr. GOLDMAN. I think that prejudices the situation.

Mr. BROWN. I got the very distinct impression that this gentleman thinks it would be very advisable if they did that, and I thought you said that to me, also.

Mr. GOLDMAN. That is what the President's decision says.

Mr. MARTIN. Mr. Brown, since you are characterizing my remarks, I would like to at least characterize my own remarks. You are asking what the potential sources of investment were. I indicated they—the owners of the gas—were a potential source.

Mr. BROWN. And very desirable.

Mr. MARTIN. No, sir. I said they were, along with others—

Mr. BROWN. I hate to ask the reporter to go back and read again.

Mr. MARTIN. You said why would it be desirable. I said because the project would be in the national interest.

I think it is. I don't choose them over other investors. I say the project is in the national interest.

Mr. BROWN. I think we are going to have some testimony that presents some real problems for some of the producers. I would ask, Mr. Chairman, that the witnesses before us comment on the record on the testimony from the producers who are apparently going to be encouraged to participate.

Related to their investors, would you please, in addition to the desirability from the standpoint of the administration, because they are legal entities, as I think you pointed out, that it is a legal question.

So, the question is in what way, if they are going to be encouraged or forced by the Government, does the Government intend to protect the investors of these companies when you encourage them to guarantee the loans of the pipeline company.

Mr. RONCALIO. Does that question include the distribution companies on the receiving end of the gas also or just the producing companies?

Mr. BROWN. I don't know. Do they intend to force them to participate?

Mr. RONCALIO. Nobody is forced to do anything in these proceedings, Mr. Brown. We had testimony this is 5 percent of the total gross national investment per year, or about \$10 billion. The welding company and one other group said this would not be a difficult job.

I would assume that they will be asked to invest if they wish. People's Gas and Consumer's Gas said they would like to.

Mr. BROWN. The other thing I would like to have commented on is whether or not the resolution, as we have it, or anything in any of the predicates of this indicate that the taxpayer will get stuck with this responsibility of guaranteeing the funds.

Mr. GOLDMAN. No; the President's decision makes it perfectly clear that the taxpayers are to be insulated from any noncompletion guarantees.

Mr. BROWN. But the consumers will have that opportunity, I assume, in the way they pay for the gas, if the gas producers are guarantors of the loan for the pipeline. It seems to me there is no way this won't be laid on the consumers.

Mr. GOLDMAN. There are costs associated with financing any project. If the oil companies were participants in the financing, it would be expected that they would get the same kind of remunera-

tion for that participation as any other investor in the project would. I would underscore—

Mr. RONCALIO. His question really is, isn't there a little coercive assurance it will get completed in that event, thereby—

Mr. BROWN. The Federal Government sets the rates.

Mr. GOLDMAN. There may very well be a trade-off there between the concept of an all-events tariff that includes completion guarantees, which the consumer would have to pay, and the other. You just have to make a trade-off. The President said that was the best combination of financing ingredients.

Mr. RONCALIO. Questions by Mr. Braun, counsel.

Mr. BRAUN. Mr. Goldman, how will the Executive Policy Board and the Federal inspector cooperate with the Energy and Power Subcommittee with respect to oversight activities on the pipeline?

Mr. GOLDMAN. The Federal inspector will be an official who will have to be confirmed, No. 1, by the Senate and appointed by the President. He will be most accessible to this committee. I suspect he will not only work closely on a staff basis, but will be up here answering questions and providing you whatever information you need.

Under the statute he is meant to be an accessible figure to the Congress. The Executive Policy Board, to whom the Federal inspector reports, will be available at any time as they are under existing statutes, to answer questions from the committee, and I suspect the Federal inspector on occasion will speak for his bosses in that sense when he is communicating with you.

We anticipate, as we do in each of our departments individually, working very closely with the committee on both the establishment of schedules and the establishment of the processes, and we hope to take your advice and counsel in terms of how best to proceed.

Mr. BRAUN. Now, oversight consists of more than just bringing the Federal inspector in here to testify. It also includes subcommittee staff proceeding into the field. What kinds of access to information will the Federal inspector provide subcommittee staff personnel?

Mr. GOLDMAN. Mr. Braun, answering that question in the abstract is very difficult. I think we will have to develop a working relationship. The Federal inspector will be a figure who will be accessible to you, and who will be open, and who will provide you with whatever you need.

It is hard for me, as we begin this adventure and as we have not begun to put together the materials that will have to be assembled in order to make this pipeline a reality, to comment on every single piece of paper that may or may not be available.

I can pledge to you on behalf of the administration that we will show the maximum amount of cooperation, and wherever possible make whatever you need available to you.

Mr. BRAUN. In creating the monitoring force for the Government in the building of the Alyeska pipeline, the Department of the Interior hired independent contractors to do much of the work. Can you give us an assessment of how well or how poorly that contracting system worked out?

Mr. MARTIN. I don't think that the analysis is so complete at this time that I could give you a final answer, Mr. Braun. I have both

reservations about the way that worked out, and also some belief that using contractors increased our ability to deal with certain technical situations.

The question you just raised about access is perhaps one of the areas where improvement is necessary in that the contractors might not have had the same incentive to be cooperative with outside access as the government employees did themselves.

My own feeling is that for purposes of future pipelines, we will want to do as much of the job as we can ourselves, but in those areas where technical individuals are simply not available within the Federal structure, we will have to continue contracting, and I think it is an acceptable mode to pursue.

Mr. BRAUN. Do you plan to use this same type of contracting work again?

Mr. MARTIN. In specific terms, no, in the sense that it will not be exactly the same relationship. But, I can do no more now than say I expect that contracts will be used to supplement available expertise in the department, and I expect other departments will do the same to some extent.

Mr. BRAUN. One of the problems the Subcommittee on Energy and Power had with the monitoring system, and the use of independent contractors, was that the contractors refused to make their files and their people available for review and interview by the subcommittee staff.

This action by the subcontractors was found by the staff to be an actual interference with the subcommittee's investigations. What steps will be taken to insure that this kind of obstruction will not occur again?

Mr. MARTIN. I can't give you any specific steps that are written into the stipulations at the present time, but I can tell you that I think that those records should be open, and I will undertake a review to see what the difficulty was and see if we can make specific provisions.

Mr. BRAUN. Do you have any proposals now as to how legitimate legislative oversight will be permitted?

Mr. MARTIN. I don't think we have a specific proposal to advance, although I think we all believe that there should be no impairment to legitimate congressional oversight, and stand ready to work with you to set up a system which permits it.

I think I can speak for the administration in saying we would like to facilitate that kind of oversight.

Mr. BRAUN. Do you agree with that, Mr. Goldman?

Mr. GOLDMAN. I agree with it 100 percent. I think that it is the kind of thing that really has to evolve and unfold. As we move forward, as we consult with you, as you begin to get a feel for the kinds of things that you are going to need, and we talk back and forth with each other, I think we will be able to keep the lines of communication open and realize what those things are that you need and be responsive to them.

I don't think it is the kind of thing that sitting where we are right now, we can lay out on a sheet of paper and say this is it. This would be an ongoing process, and it is going to take both of us working with each other.

We are committing to you today our willingness to make that work, and to be open about it, and provide you with what you need.

Mr. BRAUN. I would like to shift from the oversight question on the U.S. portion of the line to what kind of activities either the Executive Policy Board or the Federal inspector will engage in in Canada.

Can one of you gentlemen describe to me what kinds of mechanisms will be in place to assure that the same kinds of activities that you will be engaging in on the U.S. portion of the line are being conducted in Canada?

Mr. GOLDMAN. First off, we have an overview aspect—I think this helps answer that question—which is the built-in incentive for the Canadians to come in below our projected cost overruns. That will benefit them some day if they ever receive gas from that line, in terms of their own cost of service, and it will also benefit them in terms of the percentage that the U.S. consumer will relate to concerning the Dempster Lateral, should that ever be built.

So, No. 1, there is a built-in incentive, providing every reason in the world, when combining the variable rate of return with that sliding scale complex part of our agreement, for the Canadians to build an efficient low-cost pipeline. Their record is such.

The agreement spells out provisions between the two countries in several places for consultation and coordination, and they have pledged to us they will be seeking legislation which they will be submitting when the Parliament comes back into session.

One of the things that that legislation will include will be a monitoring, enforcement, and oversight function, that they currently do not in fact have.

So that package, I think, has led us to believe that through the consultation process, and the initiatives that they are taking, and the built-in incentives in the agreement, there will be a satisfactory pursuit of appropriate enforcement in Canada, just as we hope to have here.

They have, of course, in the process of negotiations asked us the very same questions. They point with pride to their record of both safety and cost performance in building substantial gas pipelines. They have suggested that that record is superior to ours.

Mr. BRAUN. Can you tell us what right of access subcommittee staff or members would have to oversight in Canada?

Mr. GOLDMAN. I think the whole question of the availability of documents of another nation to the legislative branch of this Nation is a very delicate area that I would defer to the State Department on. We can provide you with the response from them after consultations with them, and I am sure they will be glad to talk to you about that.

But, I think that does raise an area that is beyond the scope of any of the people sitting at this table.

Mr. BRAUN. Excluding the lower 48 portion of the pipeline, approximately what percentage of the Alcan system is in Canada? In other words, you have the Alaska portion, the Canadian portion, the lower 48. Excluding the lower 48, what percentage of the line is Canadian?

Mr. GOLDMAN. I think it is about 60 percent, 60 to 70 percent, something in that range. I would suggest that the pipeline will be

relatively meaningless without the lower 48 portion of pipe because the gas won't be able to go. But, if that is a relevant figure to come up with, that is what the number would be.

Mr. BRAUN. In the agreement with Canada, there is a section 7 entitled, "Supply of Goods and Services."

Is it the Executive Policy Board that will be responsible for determining that Canadian materials are secured on generally competitive terms?

Mr. GOLDMAN. That is a function that could potentially come through a couple of different places. One would expect that the Federal inspector, working with the pipeline company, would become aware of any complaints that the pipeline company might have in that regard, or might uncover through the monitoring of problems in that regard. He would then, through the consultative processes established in the agreement, have that raised with the Canadians, and any correcting actions that would be needed would be taken.

Mr. BRAUN. Have the Canadians committed to make all documents that are relevant to the construction and operation of this pipeline available to you under this section?

Mr. GOLDMAN. We have no specific commitment from them about individual documents. The whole tenor of the agreement and the consultative processes established in the agreement lead us to believe that that should not be a problem.

Mr. RONCALIO. The time of the gentleman has expired.

The Chair recognizes Mr. Vlcek.

Mr. VLCEK. Thank you, Mr. Chairman.

I would like to follow up on a couple of responses that you gave to Congressman Brown earlier.

Mr. Goldman, I would also like the answers in the context of your statement, on page 4 of your testimony, where you say:

By ruling out Government debt guarantees or an all-events consumer tariff, the Presidential decision will require the sponsors to make the project as economically attractive as possible to private lenders.

I believe you said, in response to the previous question, that the decision insulated the taxpayer from ever having to provide any financial backing in the case of noncompletion.

I would like to ask you: Does that also extend to the case of cost overruns, that insulation?

Mr. GOLDMAN. The consumer, once the pipeline is in operation, will have to pay a tariff. That tariff will be related to the total cost of the pipeline. The consumer will have to bear some burden through that cost of tariff, of cost overruns on the line.

Mr. VLCEK. Does your decision guarantee that there will be no requirement for government guarantees in the case of cost overruns, or threat thereof?

Mr. GOLDMAN. Could you repeat the question?

Mr. VLCEK. Let me restate it.

You stated in response to Congressman Brown that the President's decision insulated the taxpayer.

Mr. GOLDMAN. From paying noncompletion guarantees.

Mr. VLCEK. Noncompletion guarantees.

Mr. GOLDMAN. Correct.

Mr. VLCEK. What about the possibility that there may be such a threat of cost overrun that Federal guarantees may be required in order to make financing of this project possible?

Mr. GOLDMAN. Again, as I indicated to the Congressman, there is a series of assumptions based on rigorous analysis undertaken by the administration about what the probabilities are with regard to this pipeline, and a whole range of issues. We have looked very carefully at the question of the possibility of cost overruns, and we are satisfied that our expected case of 40 percent is within the framework of making this pipeline financeable. And so my answer would basically be that we don't perceive that as a problem. We are talking about a completely different decision, if that is the way the decision unfolds, because this decision does not allow for and does not provide for Federal guarantees for that contingency because we believe the contingency is so small that it is not within the range of possibilities to be considered as we move ahead in terms of making this pipeline financeable.

Mr. VLCEK. You do not contemplate Federal guarantees in any case then.

Mr. GOLDMAN. No. I mean, yes, that is correct, we do not contemplate any Federal guarantees.

Mr. BROWN. Would you yield?

Is there any way we can put it in the legislation?

Mr. GOLDMAN. As far as I know, the statute calls for either an approval or a disapproval of the President's decision, and there is no way to either change the decision or have the resolution do anything other than that.

Mr. BROWN. Can we get a letter from the President that he does not contemplate any Federal loan guarantees?

Mr. GOLDMAN. It is in the decision.

Mr. BROWN. But the question was——

Mr. GOLDMAN. I would be glad to pursue that. I don't see any reason why he couldn't restate what he has already stated in the decision. That is something that the Congress will be approving, if it so chooses, which I think probably has more force than a letter from the President does.

Mr. VLCEK. I have one other question for the record.

We have asked you to comment on the testimony we are going to have this afternoon from the producers and comment on the financing problems that they see.

Mr. GOLDMAN. That is something we can submit for the record.

Mr. VLCEK. Yes, indeed. And I would also like you to submit along with that, the following: In the letter that Hugh Morrison wrote to you, Mr. Goldman, on August 9, he indicated that "The Department recognizes that if the gas producers were to act as debt guarantors they would have the right to request conditions to protect their financial involvement."

Mr. RONCALIO. The right to what?

Mr. VLCEK. To protect their financial involvement. Their position basically is that they can involve themselves financially, but only to act as debt guarantors.

Mr. GOLDMAN. Correct.

Mr. VLCEK. They go on to say "The Department would not oppose conditions to this effect so long as the conditions would not

give rise to the potential for competitive abuse, including the power to veto procompetitive policies referred to above," and they give the examples of the procompetitive policies.

Could you provide for the record the sorts of terms and conditions that could be allowed by the Justice Department or by the Federal Government as these debt guarantees are made.

Mr. RONCALIO. Will you?

Mr. GOLDMAN. Certainly. There may be further ones as the project unfolds.

Mr. VLCEK. I understand, but your letter gives examples of what they can't do. We would like to have examples of what they can do.

Mr. GOLDMAN. Certainly.

[The following letter was received for the record:]



Department of Energy
Washington, D.C. 20585

RECEIVED

OCT 20 1977

October 18, 1977

Energy & Power Subcommittee

Dear Mr. Chairman:

At the hearing on Friday, October 14, 1977, several general questions were raised concerning the financing of the Alaska Natural Gas Transportation System and the role of the producers therein.

The following questions and answers are submitted to supplement the record and amplify the Administration's position in the matter.

- Q. What general considerations underlie the financing concepts set forth in the President's Decision?
- A. The Decision and Report of the President reflects a belief that the economic risks of an Alaska gas project can and should be borne by the private sector. There has been considerable attention given in the course of the decision process to the risk that the project might not be completed because the borrowing capacity of the sponsoring companies could be inadequate to support cost overruns. Analysis of the experience of financing the Alyeska oil pipeline project supports an opinion that non-completion is not a significant risk and that there is more than enough debt support capacity among the direct beneficiaries of the project to insure that completion financing would be forthcoming. Alyeska was financed essentially through a "project financing." Additional financing on competitive terms was forthcoming for the project even as cost overruns mounted because lenders were convinced of the continued economic viability of the project. In the case of the gas pipeline, the lenders will have the additional assurance that the gas sales will be contracted prior to commencement of construction.

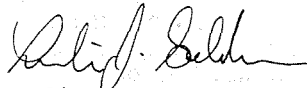
In this context, the President found that the project should be privately financed and that North Slope gas producers, as one of the major direct beneficiaries of the project, might usefully be part of a financing plan.

- Q. What role does the Administration foresee for the producers?
- A. The details of the Alcan financing plan are not yet worked out. The variables include capital supply and demand at the time final financing arrangements are made, the perception of the financial markets regarding project risk, and the sale price of the gas. However, the outlines of the plan presented by the President appear to be achievable and consistent with experience in comparable projects. Some role for the gas producers in the final financing plan clearly would facilitate financing. For example, such a role might consist of a guarantee of a portion of cost overrun financing thereby insuring that the project would be completed. Lenders for the base financing might thereby be willing to rely upon the project, including the gas sales contracts, as adequate assurance. The producer participation, in any event, need not be open-ended in amount and could not be open-ended in time. The Decision requires that the producer liability cease at project completion. In the final analysis, the nature of the producer role, as well as any compensation for it, is a matter which must be left for negotiation among the interested parties and review by appropriate regulatory agencies.
- Q. Is there a realistic likelihood that the producers would be willing to participate in the financing?
- A. The North Slope gas producers from time to time have indicated varying degrees of interest in participating in an Alaska gas project. Sohio and Exxon were members of the study group which was a predecessor of the Gas Arctic Project. Arco has said it would consider participation in some phase of a pipeline project, such as the gas processing plant. In the question and answer period following his testimony on October 14, Claude Goldsmith of Arco expressed the belief that his company would be more willing to participate in financing the pipeline project if the wellhead price were allowed to be deregulated.

- Q. What consideration was given to the financial capability of the producers to participate?
- A. The capacity of the producing companies to participate in financing the project will vary considerably. At one extreme, Sohio's financial position is well known. At the other extreme, no limit on financial capability has ever been suggested as a reason why Exxon might not participate in the financing of a gas pipeline project. As Mr. Goldsmith pointed out in his testimony and answers to questions, Arco's ability to participate is constrained by restrictions in its indentures. The suggestion in the Report that producer participation would be a reasonable method for facilitating financing contained no specific statements on the degree of involvement of any particular company. However, revenues from gas sales will be significant for all three companies. It can be expected that lenders to the producers would take those revenues into consideration when reviewing debt restrictions, as North Slope oil revenues must have been considered for Sohio during its recent financings.
- Q. What control could producers have over cost overruns. Aren't they being asked to sign a "blank check?"
- A. Under the terms of the Decision and the Justice Department report and letter, the producers would be permitted to exercise control of the project directed toward the minimization of cost overruns. For example, their participation in the project could be conditioned upon adherence by the pipeline company to certain contracting procedures, reporting requirements, advance capital arrangements, levels of contingency financing, or such other reasonable conditions that would provide producers with oversight of construction. The Decision does not contemplate that producers would blindly sign "blank checks" or that such would be required for successful financing.

If there are additional questions, please advise me.

Sincerely,



Leslie J. Goldman

The Honorable John Dingell
Chairman
Energy and Power Subcommittee
House Interstate and Foreign Commerce Committee
Washington, D.C. 20515

Mr. RONCALIO. Those wanting to research the matter further, there should be reference to the yellow Federal Power Commission publication of about 4 months ago suggesting financing plans. I think it was 10 or 12 pages. What is it called?

Mr. VLCEK. Financing and Alaskan Natural Gas Transportation System.

Mr. RONCALIO. Can I ask a couple of questions, Mr. Chairman?

Mr. Secretary Martin, a report entitled "The Case Study of Fish and Wildlife Aspects of Pre-Permit and Construction Phases of the Trans-Alaska Pipeline System" is due for release shortly. The Subcommittee on Indian Affairs and Public Lands would like to request that this report, prepared by the University of Alaska under a Fish and Wildlife Service contract, be made available as soon as possible so that its recommendations can be used for setting up procedures for construction of the Alcan line.

The subcommittee would like an advance copy to be provided for the record as soon as possible. May we have them?

Mr. MARTIN. Yes, sir, I am not aware of the schedule but I will see that you get them as soon as it is available.

Mr. DINGELL. I would reiterate that request.

Mr. RONCALIO. Also for John Dingell.

Environmental groups have suggested a citizens advisory council. Many environmental groups feel that they have made something more than a routine contribution, a rather substantial one to the decision between Arctic and Alcan by their objections. Therefore, they would like to have the citizens advisory council be established to advise of their opinions on pipeline construction, routes, and other problems.

Does the administration have a plan for a citizens advisory council?

Mr. MARTIN. We have no objection to such a plan and we felt that that would be involved during the period of time in which the Federal inspector was appointed and be a part of the buildup process. We have no objection to that at all.

Mr. GOLDMAN. That is something that would be within the authority of the board to provide.

Mr. RONCALIO. That concludes all the questions I know of.

Mr. DINGELL. Gentlemen, we thank you.

Mr. GOLDMAN. Thank you very much.

Mr. DINGELL. It is a privilege to have you here. We may have some additional questions, and we thank you.

Mr. RONCALIO. You might stay, however, in deference to Mr. Brown, listening to the subsequent panel of producers.

Mr. GOLDMAN. We will have people here covering it and we will thoroughly analyze the statement.

Mr. DINGELL. Without objection, the record will remain open for the purpose of receiving comments referred to.

The Chair observes that next is a panel of producers: Mr. L. G. Rawl, executive vice president, Exxon Co. U.S.A., P.O. Box 2180, Houston, Tex.; Mr. C. O. Goldsmith, vice president-financing, Atlantic Richfield Co., 515 South Flower, Los Angeles, Calif.; Mr. John R. Miller, vice president-finance and planning, The Standard Oil Co., Ohio, Midland Building, 101 Prospect Ave., Cleveland, Ohio.

Gentlemen, we are pleased that you are with us. If you would each, for purposes of the record, identify yourselves, commencing on your left and my right, we will be most pleased to receive your statements.

STATEMENTS OF L. G. RAWL, EXECUTIVE VICE PRESIDENT, EXXON CO., U.S.A.; CLAUDE O. GOLDSMITH, VICE PRESIDENT—FINANCING AND TAX DIVISION, ATLANTIC RICHFIELD CO., ACCOMPANIED BY KENNETH DICKERSON, COUNSEL; AND JOHN R. MILLER, VICE PRESIDENT—FINANCE AND PLANNING, THE STANDARD OIL CO. (OHIO)

Mr. RAWL. Thank you, Mr. Chairman, members of the subcommittee. I am L. G. Rawl, executive vice president, Exxon Co. U.S.A.

Exxon takes no exception to the President's selection of the Alcan project. We are encouraged by the recent progress of the Governments of Canada and the United States in reaching agreement on a gas pipeline project and firmly believe that it is in the best interests of both countries to implement construction of a gas transmission system.

We are also pleased that the Alcan financial advisors and a representative of the U.S. Treasury have concluded that the system can be financed without producer participation and that they have so testified before these subcommittees. As you are probably aware, Exxon U.S.A. is not in the interstate gas transmission business and does not plan to participate in the financing of the proposed gas transmission system.

SIGNIFICANCE

It is important that the pipeline selection process be completed promptly and construction initiated, since U.S. gas production from known reserves is continuing to decline. Development of this frontier transportation system, in addition to allowing Prudhoe Bay gas to flow to market, will accomplish an even broader national energy objective by stimulating frontier exploration and development.

Although Prudhoe Bay contains enough gas to justify the proposed line—2 Bcf/D—additional production must be developed to fill the line to the ultimate 3.4 Bcf/D design capacity. Completion of the proposed line or initiation of construction will accelerate efforts to explore for and develop additional northern Alaska pro-

duction which will lower pipeline tariffs by filling the pipeline to design capacity.

On an even broader basis, favorable resolution of the Prudhoe Bay gas issue will stimulate exploration and production in all U.S. frontiers. Although remaining U.S. gas potential is believed to be several times known reserves, most of this potential is in frontier areas where exploration and development involves high risk, high costs, and long payouts.

In order to aggressively explore and develop frontier areas under these adversities, producers must have reason to believe that discoveries, if made, can be brought to market in a timely manner at a reasonable profit.

Mr. DINGELL. Just a minute.

The Chair will observe that this is a hearing and those who desire to be present in the room are requested to assume their seats at the earliest moment and maintain the kind of quiet and decorous behavior that will help the committee to get expeditiously through its business with a full understanding of the presentation of the witnesses.

Mr. RAWL. Since the most recent frontier development is Prudhoe Bay, the Government's handling of this development will be the latest industry "data point" for frontier analysis. Prompt approval of a transportation system and reasonable regulation will signal the industry to accelerate frontier exploration and development.

I would now like to discuss two topics that Exxon U.S.A. has been asked to address: Reserves and gas conditioning.

RESERVES

Numerous industry and government studies have confirmed that Prudhoe Bay reserves and expected deliverability are sufficient to justify a gas transmission system. Our estimate of total Prudhoe gas reserves is 26 Tcf; Exxon's share is about one-third. The Prudhoe Bay unit operating plan, which was approved by the State of Alaska on April 1, 1977, anticipates the production of 2.7 Bcf per day, of which 2 Bcf per day will be available for delivery to the pipeline. Our studies indicate that total field development—over 500 additional wells and related gathering and production facilities—will be sufficient to maintain this rate for at least 20 years, thereby providing the threshold volumes required to assure project viability.

CONDITIONING

An integral part of the pipeline system under consideration is the gas conditioning facility. In addition to specifying that carbon dioxide content of the gas be reduced prior to transmission and that the gas be compressed to a high inlet pipeline pressure, the potential pipeline owners have specified several other conditioning requirements which will increase pipeline efficiency.

Specifically, refrigeration facilities will be required to chill the gas so that construction savings can be realized by burying the pipeline in the permafrost. To avoid freezing of liquids in the line, the gas will have to be treated to provide an unusually low water

vapor content and to maintain condensable hydrocarbon content within close tolerances.

These five conditioning steps—lowering carbon dioxide content, providing high pipeline inlet pressure, chilling, providing extremely thorough water removal, and maintaining close control of condensable hydrocarbon content—are all designed to minimize the investment and operating cost of the pipeline. Although such conditioning is costly—estimated at about 90 cents per Mcf, escalated, for Prudhoe Bay gas—the expenditure should be more than offset by savings in pipeline construction and operating costs.

The point that must be kept in mind is that these conditioning facilities are an integral part of the gas transmission facilities—not the production facility. This distinction, which is not unique to Prudhoe Bay gas, has for some time been recognized by the FPC in their certification of gas sales contracts and pipeline projects.

Before concluding my remarks, I would like to mention three specific items that we believe should be referred to the administration for review prior to approval of a final decision.

PRICING

First, as we understand the Alaska Gas Transportation Act, it does not specify that pricing policy be set by this decision. However, section 6 of the Decision includes the statement, and I quote, "This Decision, therefore, calls for enactment of a gas pricing approach similar to that contained in the National Energy Plan." The decision also imposes the condition, and again I quote, "All contracts for sale of Alaska gas * * * shall be submitted for approval of the Federal Power Commission."

Such statement and condition are not necessary or appropriate to the decision, since its purpose under the act is to designate a pipeline system, not determine gas pricing and regulation. Such provisions could conflict with proposed legislation now being considered by Congress, and thus, create uncertainty as to the regulatory status of Alaska gas. Uncertainty in that regard could delay the completion of gas sales contracts. For these reasons, we believe that pricing policy statements should be omitted from the approved decision.

PROJECT DESCRIPTION

Second, in order to expedite the development and review of environmental impact statements, certificate applications, and other required submissions, the gas conditioning facilities, which are an integral part of the gas transmission system, should be defined as such and properly included in the definition of the pipeline system

INDEMNITY

Finally, as an owner of the trans-Alaska pipeline, Exxon is concerned that the decision does not address the subject of indemnification of the oil pipeline owners against damages which might result from construction of the gasline. A similar concern is that the decision is also silent on the subject of providing security for the oil pipeline during gas pipeline construction.

CONCLUSION

In summary, Exxon is encouraged by progress being made toward selection of a gas transmission system for Alaskan gas; the early construction of such a pipeline is certainly in the best interests both of the United States and Canada. We are confident that existing reserves are sufficient to justify a pipeline from Prudhoe Bay and believe that, given sufficient exploration incentive, future northern Alaska discoveries will be sufficient to fill the proposed line to design capacity.

Mr. DINGELL. The attachment, without objection, will be placed in the record at this point.

[The attachment to Mr. Rawl's statement follows:]

ATTACHMENT

TO

TESTIMONY OF L. G. RAWL

Friday, October 14, 1977

PROJECT DESCRIPTION

As stated above, the Act authorizes the President to designate, for Congressional approval, a transportation system for Alaska gas. The Act requires the President to identify in his Decision those facilities of the transportation system which are to be certificated or permitted on an expedited basis by federal officers and agencies. Further, Section 10(c)(3) of the Act provides that Congressional approval of the President's Decision shall be conclusive as to the legal and factual sufficiency of environmental impact statements submitted relative to the approved transportation system and no court shall have jurisdiction to consider questions respecting the sufficiency of such statements under the National Environmental Policy Act. Thus, the Act provides two time-saving features for the facilities designated by the President as part of the transportation system - expedited certification by federal agencies and protection against litigation under the National Environmental Policy Act.

The President's Decision designates the Alcan route and certain facilities in Alaska, including 731 miles of 48-inch pipe and compression and refrigeration facilities at eight stations (AL-1 at milepost 75 through AL-8 at milepost 673.4), but the Decision does not identify the gas conditioning facilities which will be required in the Prudhoe Bay field as part of the transportation facilities. The gas conditioning facilities at Prudhoe Bay are critical to the operation of the transportation system. Without such

conditioning, including dehydration, compression, and refrigeration, the other compression and refrigeration stations along the pipeline in Alaska could not function in accordance with system design.

The Decision should be modified to include in Section 3 identification of the gas conditioning facilities at Prudhoe Bay as part of the transportation system.

INDEMNITY

In Section 2 of the President's Decision, the route of the Alcan gas pipeline in Alaska is described as parallel to the TAPS oil pipeline and within 80 to 200 feet of that oil pipeline for a distance of several hundred miles. Section 2 of the Decision further states that Alcan will perform construction of its pipeline by extending the TAPS work pads. Obviously, there is a great risk that some damage will be caused to the oil pipeline as a result of accidents during construction of the Alcan pipeline, yet the Decision does not impose upon Alcan any obligation to indemnify the owners of the TAPS oil pipeline in the event of such damage.

Section 7(a)(6) of the Alaska Natural Gas Transportation Act states that the President may identify in his Decision "such terms and conditions permissible under existing law as he determines appropriate" to any certificate, permit or other authorization for the transportation system. The President's Decision does set forth, in Section 5, general terms and conditions to be incorporated in the certificates, permits, rights-of-way and other authorizations for construction and operation of the Alcan pipeline, and these conditions require strict budgetary control, safety and protection of the environment, but none of these provide any protection for the TAPS pipeline owners.

Under Public Law 93-153, the TransAlaska Pipeline Authorization Act, the owners of the TAPS oil pipeline are strictly liable for damages resulting from activities along or in the vicinity of the right-of-way, without regard to fault, except for acts of war or except for negligence on the part of a government entity or the damaged party. The TAPS oil pipeline owners would be exposed to liability for damages to others even if the damage occurred as a result of acts by Alcan or its contractors. The TAPS oil pipeline owners would have recourse against Alcan through judicial proceedings for all damages and liability incurred, but the burden of initial cost for damages would be upon the oil pipeline owners. Alcan should be required to indemnify the oil pipeline owners against liability for oil spills and other damages arising from construction and operation of the Alcan pipeline. Such a condition should be included in the President's Decision.

Mr. DINGELL. Sir, will you identify yourself, please?

STATEMENT OF CLAUDE O. GOLDSMITH

Mr. GOLDSMITH. Thank you.

Mr. Chairman and members of the committee: My name is Claude Goldsmith, and I am vice president in charge of Atlantic Richfield Co's Finance and Tax Division. Thank you for the opportunity to make this statement of Atlantic Richfield's views and report to Congress.

My detailed testimony has been given to the committee, and I ask that it be included in the record, but please permit me to discuss with you orally.

Mr. DINGELL. The full presentation will appear in the record and you are recognized for such summary and comments you desire.

Mr. GOLDSMITH. I would like to discuss financing, gas conditioning, and gas pricing.

First as to gas pricing, Atlantic Richfield's Prudhoe Bay gas reserves are currently estimated to be 7.52 Tcf. While we fully support prompt construction of an Alaskan gas transmission facility and recognize the desirability of early identification of gas purchasers, negotiation of contracts for the sale of Atlantic Richfield's gas has necessarily been deferred pending essential regulatory and legislative action clarifying the pricing of Alaskan gas.

Absent deregulation, Atlantic Richfield is in accord with the premise of the President's decision that natural gas from the State of Alaska receive the same pricing treatment afforded all other domestically produced natural gas. Until adoption by Congress or the Federal Energy Regulatory Commission of a fair and nondiscriminatory pricing formula for Alaskan gas, Atlantic Richfield cannot commence negotiations of gas sales contracts. As we understand it, the sponsors will not commence construction.

Next is as to conditioning. In the lower 48 States, jurisdictional sales of interstate gas of the pressure and quality available at the wellhead in the Prudhoe Bay field would be authorized by the Federal Energy Regulatory Commission at the current base national rate of \$1.47 per M ft³ plus an adjustment for production taxes and Btu content. At the present time these FERC regulations do not apply to Alaska.

It is our belief that the application of existing regulatory policies or the principles of the national energy plan to Alaskan gas will also equitably resolve the problem of providing for the "conditioning" of Prudhoe Bay gas to meet pipeline requirements.

Significantly, it is the gas transmission system owners that will dictate the gas pressure and quality requirements at the inlet of the gas conditioning facilities. Based on a 1971 study, we estimated that the cost of gas handling and conditioning facilities could exceed \$1.8 billion; however, these costs cannot be accurately determined until the pipeline design has been completed. In any event, they should be considered as part of the transportation costs, and not charged against the wellhead price as they are not charged against the wellhead price in the lower 48 States.

Let me turn now to the question of the financial analysis and conclusions of the President's decision.

The President's decision requires that the "successful applicant shall provide for private financing of the project, and shall make the final arrangements for all debt and equity financing prior to the initiation of construction." The decision also specifies that:

The successful applicant shall exclude and prohibit producers of significant amounts of Alaskan gas or their subsidiaries and affiliates from participating in the ownership of the Alaska natural gas transportation system, except that such producers may provide guarantees for project debt. The aforesaid producers of Alaskan gas may not be equity members of the sponsoring consortium, have any voting power in the project, have any role in the management or operations of the project, have any continuing financial obligation in relation to debt guarantees associated with initial project financing after the project is completed and the tariff is put into effect, or impose conditions on the guarantees of project debt permitted above which may give rise to competitive abuse, including power to veto pro-competitive policies.

Such limitations are unprecedented in any financial transaction that we have ever encountered.

Atlantic Richfield does not view the prospect of financial participation in an Alaskan gas transportation system as an attractive investment opportunity for our company.

Mr. RONCALIO. Understatement of the day.

Mr. GOLDSMITH. So we are not disturbed economically by being excluded from equity participation, but we are deeply concerned that the judgmental theorizing of the Department of Justice influenced the President's decision. To reduce the price of Alaska gas below the price of other domestically produced gas, whether by compulsory participation in financing, price regulation or the imposition of conditioning costs upon the State and producers, would constitute unprecedented discrimination against a single State and its gas producers.

The President's decision has the announced objective of placing the risk of noncompletion on the projection sponsors, the producers and the State of Alaska, as was testified to.

It suggests that such risk is minimal and that Alaskan producers and the State of Alaska can bear it without detriment and for a relatively small fee.

Additionally, the President's decision explicitly rejects any possibility of Federal financial assistance for the project. Permit me to comment on the decision's rationale for the denial of Federal financial assistance.

First, the decision concludes that, even though the risk of non-completion is minimal it would be inequitable to place such risk on the taxpayers. Government guarantees of project debt would, as a practical certainty, eliminate any risk of noncompletion and it follows that such guarantees would be without cost to the taxpayers.

The second basis for denying Federal financial assistance was that the decision concluded that the Government should not perform the critical risk assessment function normally performed by private lenders. This seems to me contradictory in view of the risk assessment made by the President's report which I have just outlined. In fact, the larger risks in this project are governmental in nature and cannot be resolved by private concerns.

Third, although the decision recognizes that Federal guarantees would result in lower interest rates at minimal risk and no cost to the taxpayer, such reduction however is deemed undesirable since it would yield an artificially low price for gas.

Here again, we find a paradox since the policies of the Federal Power Commission under the Natural Gas Act have successfully maintained an artificially low price for gas for over 20 years and deregulation which would permit gas prices to rise above their artificially low level is opposed by the administration.

Alaska gas delivered to the lower 48 States will be costly in any event. Prior witnesses before these committees have estimated that the combination of tariff, conditioning cost, and gas price could well exceed \$3.40 per M ft³—1975 dollars.

By the time the gas is delivered in 1983 or thereafter the tariff is going to be considerably higher in those dollars, and many people in this country face the problem that their wages don't increase with inflation, notably retired people and Congressmen.

I believe that Government guarantees could lower interest costs on a projected \$10 billion of debt or therefore as much a \$300 million per year reduction in tariff, or a total of \$6.6 billion on the average 22-year life of a 30-year bond issue. This would result in a reduction in transportation costs of 30 cents to 40 cents per million Btu for the American consumer. During the initial years when the tariff rate is at its peak, this could be particularly critical.

Fourth, it is claimed that the incentive for efficient management of the project would be reduced by Federal financial assistance. If so, the same result would flow from producer guarantees, especially since the producers would be denied the opportunity to attempt to correct management deficiencies or cost overruns.

Fifth, it is claimed that the Government would be in conflicting roles if it guaranteed as well as regulated the project. I doubt that Congress would permit the Federal regulatory agencies to exercise less than optimum supervision of design, construction, and oper-

ation of the system whether or not governmental guarantees were made and particularly after the testimony today.

Sixth, and finally, it is believed that providing Federal assistance to this project would set an undesirable precedent. I suggest that the uniqueness of the financial requirements of the Alaskan natural gas transportation system should refute any possibility of Federal completion guarantees being cited as a precedent. Here we have an artificial economic environment, away from the marketplace, created by Government regulation of gas prices and pipeline returns and also involving a foreign government.

Our analysis indicates that over 50 percent of the total projected tariff represents the cost of money after allowance for Federal income taxes. Accordingly, if Federal completion guarantees would insure financing of the project and significantly reduce the ultimate tariff without cost to the taxpayer, I do not understand why it is not being considered.

In addition to the importance of minimizing the interest cost, we should consider the applicant's ability to obtain the debt capital required on the basis of project financing alone. Using Alcan's \$9.7 billion cost, before overruns, Alcan estimates it will have to raise over \$5.5 billion from U.S. institutional lenders, plus about \$1 billion from U.S. banks and \$1 billion from Canadian lenders.

Even without prospective overruns, the capacity of capital markets for a single project financing will be severely stretched and perhaps exceeded. Lenders provide funds only if borrowers can repay whether or not a project is completed or successful, or if lenders are assured by others who can and will pay in place of the borrowers, neither element of credit extension is currently present in the Alcan financing plan.

Regardless of the estimated degree of the noncompletion risk, the magnitude of the contemplated liability is staggering and necessarily open ended. I can state with complete assurance that, even if we were never called upon to perform, the mere presence of the required footnote to Arco's financial statements disclosing the existence of a contingent liability of such potential impact would adversely affect our bond rating and would be detrimental both to our ability to borrow money and to the rate of interest that would be required upon any borrowings that we were able to secure.

Mr. DINGELL. You are talking about if you would appear as guarantors in whole or in part of the pipeline.

Mr. GOLDSMITH. Yes, sir. If Atlantic Richfield were to take on completion guarantees it could, with our existing debt of \$3.5 billion, place us in default of an existing bond indenture, and it would today, if we were called to honor such guarantees, place us in default of an existing bond indenture, trigger acceleration of roughly \$1 billion of existing obligations and exceed the debt limits permitted by our articles of incorporation related to preferred stock.

If Atlantic Richfield were to commit its limited financial capacity to pipeline debt guarantees it would advantage our competitors, the other gas producers in Alaska and Canada, both present and future, who are not likewise compelled to guarantee project debts. Also, Atlantic Richfield's ability to fund its primary functions—oil and gas exploration, production, refining, and marketing—would

be significantly reduced, to the detriment of the Nation's energy supply and to the detriment of our shareholders.

I see no possible circumstance under which Atlantic Richfield would be able to commit its assets to the type of debt guarantees proposed to be structured under the President's decision.

There is urgency to arriving at a viable solution since, as indicated by the testimony before these committees from the chairman of Alcan, any upfront delay will prevent delivery of Canadian gas as planned for the 1979-80 heating season, one of the attractions of this project.

I fear that there is a substantial likelihood of delay because the sponsors may be unable to raise the enormous sums required under a financing plan which currently lacks sufficient credit support. This project faces formidable political and regulatory risks created by governments, and it would seem appropriate that the Government assist in minimizing these risks.

I have shared with you the concerns of my company regarding decisions yet to be made by the Congress and the regulatory agencies.

Now permit me to make two suggestions that are not in the submitted testimony.

I believe that major uncertainties can be promptly resolved if the Federal Energy Regulatory Commission would undertake immediate action in two areas—gas pricing and project financing.

For more than 2 years my company has urged the uniform application of nationwide regulation to all producing States, including Alaska. Our petition requesting such action is filed as an exhibit to my written statement. Pending enactment of a national energy plan, we believe that the FERC should immediately extend existing nationwide policies to Alaska so that the State of Alaska, the pipeline applicant, producers and potential gas purchasers, will be able to make economic decisions concerning their role in the production, sale, and transportation of Alaskan gas.

May I suggest that Congress should be assured that Alaska is not singled out for discriminatory rate treatment.

Additionally, the FERC should determine whether or not the recommended project can be financed as currently proposed without completion guarantees by the producers or the Government. If not, the FERC should promptly inform these committees so that other arrangements can be made.

We respectfully suggest that these committees approve the President's recommendation but require the FERC to report back to the Congress no later than 6 months from the date of its approval, to inform the Congress as to the financeability of the project and, absent legislation, the steps which the Commission has taken to extend its nationwide policies to the State of Alaska. If at that time the Commission has not satisfactorily resolved these issues, these committees can then determine what further steps need be taken.

Thank you for your time.

[Mr. Goldsmith's prepared statement follows:]

Statement of Claude O. Goldsmith, Vice President Financing and Tax Division, Atlantic Richfield Company, Before the Energy and Power Sub-Committee of the Committee on Commerce and the Indian Affairs and Public Lands Sub-Committee of the Committee on Interior and Insular Affairs, United States House of Representatives, October 14, 1977

I am pleased to be afforded the opportunity to express Atlantic Richfield's views regarding the "Decision and Report to Congress on the Alaska Natural Gas Transportation System" issued by the Executive Office of the President on September 22, 1977. I shall comment as to financing, gas conditioning and gas pricing.

Atlantic Richfield was an early advocate of the construction of a gas transportation facility to permit gas sales from the Prudhoe Bay Field and participated in and contributed to feasibility studies of both the trans-Alaskan and trans-Canadian gas transportation routes. We are gratified and pleased by the prospect of an early resolution of the knotty problem of route selection. We compliment the Chairmen and these Committees upon the prompt manner in which you have received and undertaken to act upon the President's recommendation. We trust that all of these efforts will lead to the early construction of a system that best serves the interest of all concerned.

At the present time none of Atlantic Richfield's Prudhoe Bay gas, currently estimated to be 7.52 Tcf of proved reserves, is subject to any form of contractual commitment. While Atlantic Richfield fully supports prompt construction of an Alaskan gas transmission facility and recognizes the desirability of early identification of gas purchasers, negotiation and filing of contractual arrangements for the sale of Atlantic Richfield's Prudhoe Bay gas have necessarily been deferred pending essential regulatory and legislative action clarifying the status of Alaskan gas. The predecessor to the Federal Energy Regulatory Commission excluded Alaska from coverage of the National Rate Proceeding and did not otherwise determine a just and reasonable rate for the State of Alaska. Earlier this year, Atlantic Richfield requested that the Federal Power Commission determine the pricing policy applicable to Alaska. 1/ However, until Congress has completed action on pending legislation, we see little prospect of regulatory action to expand the coverage of the National Rate Proceeding to include Alaska. In the meantime, Alaskan gas producers have no economic basis upon which to contract for the sale of their Alaskan gas.

1/ See "Petition of Atlantic Richfield Company for Declaration of a Pricing Policy with Respect to Jurisdictional Alaskan Natural Gas" filed before the Federal Power Commission March 31, 1977.

Atlantic Richfield is, therefore, in accord with the premise of the President's Decision that natural gas from the State of Alaska receive the same pricing treatment afforded all other domestically produced natural gas. While we do not support the specific gas pricing provisions contained in the National Energy Plan, we are in agreement with its intent to afford equal treatment to Alaskan gas. Upon adoption by Congress or the Federal Energy Regulatory Commission of a fair and non-discriminatory pricing formula for Alaskan gas, Atlantic Richfield will be in a position promptly to commence negotiations of gas sales contracts.

It is our belief that the application of existing regulatory policies or the principles of the National Energy Plan to Alaskan gas will also equitably resolve the problem of providing the "conditioning" of Prudhoe Bay gas which will be required to meet final pipeline specifications. The current base national rate established by the Federal Power Commission is exclusive of all state or federal production taxes and subject to further adjustments for quality. A specific quality adjustment is provided for Btu content and all other quality standards and resulting adjustments to the base rate are made in accordance with the provisions of the particular gas sales contract involved.

Thus, in the lower 48 states, jurisdictional sales of interstate gas of the pressure and quality available at the wellhead in the

Prudhoe Bay field would be authorized by the Federal Energy Regulatory Commission at the current base national rate of \$1.47 per Mcf plus an adjustment for production taxes and Btu content. Alaska producers should not be required to incur liability for services which are the purchaser's responsibility in the Lower 48 States. Significantly, it is the gas transmission system owners that will dictate the gas pressure and quality requirements at the inlet of the pipeline which, in turn, will determine the design and cost of the gas conditioning facilities. In 1976, the FPC was informed that the gas handling facilities for gathering, compressing and conditioning the gas could cost \$1.8 billion or more.

Though final pipeline requirements are not yet known, it is a practical certainty that "conditioning" of the gas will require:

1. compressing the gas to unusually high pipeline inlet pressures,
2. establishing its hydrocarbon and water dew points at unusually stringent levels,
3. chilling the gas to below freezing temperatures to prevent melting the permafrost and
4. reducing its carbon dioxide content to a level more than 3 times lower than the level ordinarily accepted for pipeline transmission.

Such unique gas pressure and quality requirements will be imposed to provide initial pipeline compression, facilitate the transportation of the gas, increase pipeline throughput capacity by chilling and reduce transmission facility costs.

Atlantic Richfield is of the view that the compression of Prudhoe Bay gas above its normal pressures and the chilling and conditioning of the gas to meet the super quality requirements of the project sponsors is not a production function. 2/ Conditioning costs cannot be definitively estimated until the pipeline design has been finally determined; however, the actual costs incurred should be considered as part of the transportation cost of the gas.

Let me now turn to the question of the financial analysis and conclusions of the President's Decision. I am familiar with the testimony presented during the course of the Federal Power Commission's proceedings in "El Paso Alaska Company Docket No. CP75-96, et al.," and I recognize the magnitude of the financing problems as well as the necessity for their solution.

2/ See "Supplemental Submission of Atlantic Richfield Company Concerning Conditioning of Prudhoe Bay gas."

The President's Decision requires that the "successful applicant shall provide for private financing of the project, and shall make the final arrangements for all debt and equity financing prior to the initiation of construction". (Decision Page 36)

The Decision also specifies that "the successful applicant shall exclude and prohibit producers of significant amounts of Alaskan gas or their subsidiaries and affiliates from participating in the ownership of the Alaska Natural Gas Transportation System, except that such producers may provide guarantees for project debt. The aforesaid producers of Alaskan gas may not be equity members of the sponsoring consortium, have any voting power in the project, have any role in the management or operations of the project, have any continuing financial obligation in relation to debt guarantees associated with initial project financing after the project is completed and the tariff is put into effect, or impose conditions on the guarantees of project debt permitted above which may give rise to competitive abuse, including power to veto pro-competitive policies." (Decision Pages 38-39) Such limitations are unprecedented in any financial transaction that we have ever encountered and would severely discourage any prospective creditor or guarantor.

From the inception of the proposals for an Alaska Natural Gas

Transportation System, Atlantic Richfield resisted on constitutional grounds the repeated suggestion that it be compelled directly or indirectly to participate in the financing of the Alaska gas pipeline. As we perceived the original intentions of the Federal Power Commission, the Department of Treasury and the various applicants, producer participation in both equity ownership and debt guarantees was actively solicited if not demanded. Atlantic Richfield maintained a consistent posture with regard to the possibility of its financial participation in the project. On April 9, 1976 we testified before the Federal Power Commission that Atlantic Richfield would not reject all thought of an investment in an Alaskan gas transmission facility. We informed the FPC that we could not state what set of conditions would have to exist in order to make such an investment economically attractive, but that it would be neither prudent nor feasible for Atlantic Richfield or any other company to make an open-ended guarantee in connection with the overrun financing or the completion of the project.

Atlantic Richfield does not view the prospect of financial participation in an Alaskan Gas Transportation System as an attractive investment opportunity for our company. We are not disturbed economically by being excluded from equity participation, but we are deeply concerned that the judgmental theorizing

of the Department of Justice influenced the President's Decision in any way. Having explicitly denied Atlantic Richfield the right to put at risk a finite sum of money with the opportunity to earn a compensatory rate of return for bearing such risk, the Department of Justice in a revision of its initial opinion which would have precluded any form of financial participation, would permit it to put at risk a non-finite sum of money in the form of open-ended debt guarantees without any voting power over expenditures and with the fee for providing the guarantees to be determined later. Some have even intimated that, in lieu of a fee, there should perhaps be a penalty assessed against the producers if they do not provide guarantees. To reduce the price Alaska gas below the price of gas produced in the lower 48 States, whether by compulsory participation in financing, price regulation or the imposition of pipeline gas conditioning costs upon the State and producers, would constitute unprecedented discrimination against a single state and its gas producers. Discriminatory price treatment under any guise could precipitate reconsideration by the State of its decision to permit early gas sales and its taxation policy.

Because of these possibilities, we view such suggestions as ill-conceived and contrary to all legislative and judicial precedents.

The President's Decision has the announced objective of placing the risk of noncompletion on the project sponsors, the producers and the State of Alaska. (Decision Page 124) The report rationalizes this objective in the following fashion:

1. The equity owners will be required to finance the first two billion of investment.
2. After the expenditure of the first two billion of investment, the capital markets will provide virtually unlimited amounts of overrun funds since the project, regardless of its cost, will be ultimately successful and deliver gas at competitive prices.
3. Noncompletion of the project for any reason other than excessive cost overruns need not be considered because of the Treaty and Agreement on Principles in effect between Canada and the United States and the requirements of the President's Decision creating proper planning, control and incentives.
4. The Alaskan producers and the State of Alaska can therefore carry the burden of the minimal noncompletion risk without detriment and for a "relatively

small" fee.

5. The Alaskan producers and the State of Alaska will find it in their self interest to accept the burden of the noncompletion risk since otherwise the project would be difficult to finance.

Additionally, the President's Decision explicitly rejects any possibility of Federal financial assistance for the project. Permit me to comment on the rationale for the denial of Federal financial assistance which is set forth on Page 122 of the Decision.

First, the Decision concludes that, even though the risk of noncompletion is minimal it would be inequitable to place such risk on the taxpayers. (Government guarantees of project debt would, as a practical certainty, eliminate any risk of non-completion and it follows that such guarantees would be without cost to the taxpayers.)

Second, the government should not perform the critical risk assessment function normally performed by private lenders. (This seems to me anomalous in view of the risk assessment made by the President's report which I have just outlined. In fact, the larger risks are governmental in nature and cannot be resolved by private concerns.)

Third, although recognizing that Federal guarantees would result in lower interest rates at minimal risk and no cost to the taxpayer, such reduction is deemed undesirable since it would yield an "artificially low price for gas". (Here again, we find a paradox since the policies of the Federal Power Commission under the Natural Gas Act have successfully maintained an "artificially low price for gas" for over 20 years and deregulation which would permit gas prices to rise above their "artificially low" level is opposed by the Administration. Alaska gas delivered to the lower 48 states will be costly in any event. Prior witnesses before these Committees have estimated that the combination of tariff, conditioning cost and gas price could well exceed \$3.46 per Mcf (1975 dollars). I believe that Government guarantees could lower interest costs on the projected \$10 billion of debt by as much as \$300 million per year or a total of \$6.6 billion in 22 years. This would result in a reduction in transportation costs of approximately 30 cents per million Btu.)

Fourth, the incentive for efficient management of the project would be reduced by Federal financial assistance. (If so, the same result would flow from producer guarantees, especially since the producers would be denied the opportunity to attempt to correct management deficiencies or cost overruns.)

Fifth, the government would be in conflicting roles if it guaranteed as well as regulated the project. (I doubt that Congress would permit the Federal regulatory agencies to exercise less than optimum supervision of design, construction and operation of the system whether or not governmental guarantees were made.)

Sixth, and finally, it is believed that providing Federal assistance to this project would set an undesirable precedent. (I suggest that the uniqueness of the financial requirements of the Alaskan Natural Gas Transportation System should refute any possibility of Federal completion guarantees being cited as a precedent. Here we have an artificial economic environment, away from the market place, created by government regulation of gas prices and pipeline returns and also involving a foreign government.)

Our analysis indicates that over 50% of the total projected tariff represents the cost of money after allowance for Federal Income taxes. Accordingly, all thought of federal completion guarantees should not be abandoned if they would insure financing of the project and significantly reduce the ultimate tariff without cost to the taxpayer.

In addition to the importance of minimizing the cost of financing for a project of this magnitude we should consider the project's

ability to obtain the total capital required. Based on a \$9.7 billion cost, before overruns, Alcan estimates it will have to raise over \$5.5 billion from U. S. institutional lenders, plus about \$1 billion from U. S. banks and \$1 billion from Canadian lenders. Even without prospective overruns the capacity of capital markets for a single project financing may be stretched. Lenders provide funds only if borrowers can repay whether or not a project is completed or successful, or if lenders are assured by others that can and will pay in place of the borrowers. Neither element of credit extension is currently present in the Alcan financing plan.

Regardless of the estimated degree of the noncompletion risk, the magnitude of the contemplated liability is staggering and necessarily open-ended. As the Financial Officer of Atlantic Richfield Company, I can state with complete assurance that, even if we were never called upon to perform, the mere presence of the required footnote disclosing the existence of a contingent liability of such potential impact would adversely affect our bond rating and would be detrimental both to our ability to borrow money and to the rate of interest that would be required upon any borrowings that we were able to secure. Monte Canfield of the GAO testified before the Senate that "because of inflation, the final costs are likely to be higher than the administration's \$13.7 billion estimate." Thus the administration's prediction

that the overrun will exceed \$4 billion may be conservative. If Atlantic Richfield were to take on completion guarantees it could, with our existing debt of \$3.5 billion, place us in default of an existing bond indenture, trigger acceleration of roughly \$1 billion of existing obligations and exceed the debt limits permitted by our Articles of Incorporation related to preferred stock.

If Atlantic Richfield were to commit its limited financial capacity to guarantee the pipeline debts, it would advantage other gas producers in the Prudhoe Bay field and elsewhere on the North Slope of Alaska and producers of Canadian gas discoveries who were not likewise compelled to guarantee project debts. If Atlantic Richfield were a pipeline debt guarantor, its ability to fund its primary functions oil and gas exploration, production, refining and marketing would be significantly reduced. I see no possible circumstance under which Atlantic Richfield would be able to commit its assets to the type of debt guarantees proposed to be structured under the President's Decision. I am confident, however, that the Alaska Natural Gas Transportation System recommended by the President is economically feasible and can and will be financed in a manner which will serve the public interest. In that regard, I note that Treasury and the Alcan financial consultants agree that producer participation is not essential to private financing.

We do not wish to suggest what form of tariff should be adopted; however, we share the hope and expectation that the project can be financed without Atlantic Richfield participation. It would be imprudent for Atlantic Richfield to guarantee project completion under the proposed conditions. I am certain that with the larger public interest in mind and the unquestioned essentiality of the gas transportation system, a satisfactory way will be found to provide the debt overrun and completion guarantees requisite to a successful financing plan. There is urgency to arriving at a viable solution since, as indicated by the testimony before these committees from the Chairman of Alcan, any delay will prevent Canadian gas from being delivered as planned for the 1979-80 heating season. I fear that there is a substantial likelihood of delay because the sponsors may be unable to raise the enormous sums required under a financing plan which currently lacks sufficient credit support. This project faces formidable political and regulatory risks created by government, and it would seem appropriate that the government assist in minimizing these risks.

Thank you for your attention.

Mr. DINGELL. Thank you very much.
 You have given us an impressive statement, Mr. Goldsmith.
 Our next panel member is Mr. Miller.

STATEMENT OF JOHN R. MILLER

Mr. MILLER. My name is John R. Miller. I am vice president of finance and planning for the Standard Oil Co.

I am pleased to appear here today in response to your request for commentary on several issues which are relevant to the subject of transportation of natural gas from the North Slope of Alaska to markets in the lower 48 States. These issues are:

Prudhoe Bay gas reserves and their deliverability; gas processing or conditioning facilities; gas sales contracts and pricing; and producer participation in the financing of gas transportation facilities.

Sohio has previously made known its position on these issues in response to various congressional questionnaires and in the course of Federal Power Commission proceedings relating to this subject.

I will submit for the record a written statement addressing each of these issues, but will limit my remarks today to the issue of producer participation in the financing of such transportation facilities, the only issue on which I have personal knowledge and which I feel qualified to discuss in detail.

Sohio's financial condition is unique among the major North Slope participants. To the extent that producer participation in the financing of a gas transmission system is critical to your deliberations, I believe that you should be aware of Sohio's limitations in this regard.

Sohio's current estimate of proven gas reserves of the entire Prudhoe oil pool and its associated gas cap is 8.5 trillion cubic feet of solution gas and 16.9 trillion cubic feet of gas-cap gas. The Prudhoe Bay unit agreements provide that we will have production participation of approximately 53.2 percent in the solution gas and approximately 14.8 percent in the gas cap, in each case before deduction of the royalty interest of the State of Alaska. Thus, Sohio's interest in gross gas production will approximate 27 percent of the total proven Prudhoe Bay gas reserves.

Mr. RONCALIO. What is the Alaskan royalty on that gas?

Mr. MILLER. That is one-eighth, 12½ percent.

In the early 1970's, Sohio was a participant in the Northwest project study group, a predecessor to the gas Arctic project, one of the unsuccessful applicants for certificates to construct a pipeline for the transportation of North Slope gas.

Our intention as a member of this study group was made known from the start—that is, to participate only in the study phase of the project with no desire to enter into the gas transmission business. Sohio reiterated its original intention when it withdrew from the project in 1974.

At that time, the study phase had drawn to a close, and the gas Arctic project was preparing to file applications with the Federal Power Commission in the United States and the National Energy Board in Canada to certificate this project.

On March 7, 1974, Sohio notified the other participants in the study group of our decision to withdraw. Our letter communicating our intention stated, among other things:

The size of the project has brought us to a point of real concern. The participants in the study group have recognized that the companies that ultimately band together to finance and build the project will probably include a number but not necessarily all of these companies, and will probably include some companies not now participating. In fact, the participation in the project may well be determined by a company's success in obtaining gas contracts for Arctic gas. While it is likely that this group of companies will themselves be able to raise a substantial part and perhaps all of the funds necessary to construct the project, Sohio feels very strongly that in order to make the project fully viable, both the Canadian and the U.S. Governments must act as backstops or insurers to the project to satisfy the guarantees on completion and operation which lenders will require. Sohio feels that this concept should be communicated to both governments from the outset and on a continuing basis, even though the exact extent of government participation cannot be determined until the group of companies which will actually undertake the financing and construction of the pipeline system is known. It is our belief that failure to commence dialogue with the two governments involved very early will ultimately lead to significant delay of the project.

We recognize that some companies in the study group may not share our view and that most would prefer to leave the project entirely in the private sector. We certainly would agree with the latter point as a general rule. The size of this project, however, makes that unrealistic and Sohio firmly believes that some government participation is essential and that it would be a serious error not to apprise our governments of this fact from the beginning.

Mr. RONCALIO. The most astounding hearings I have ever run into in my 61 years on Earth, asking the Government to step in. It is unbelievable.

Mr. MILLER. Perhaps we can indicate why we take that position in this particular instance.

Mr. RONCALIO. Surely.

Mr. MILLER. Following our withdrawal from the study group, Sohio's posture with respect to the gas Arctic project and similar proposals can be best characterized as one of simply monitoring developments. From time to time, however, we have been asked to review our position with regard to participation in the financing of a transportation system for North Slope gas. Our position on this matter remains the same, however, and we foresee no change in circumstances which would result in a different conclusion on our part.

We are well aware of the financial burdens commensurate with projects of the magnitude required to transport North Slope gas to the lower 48 States. In developing our crude oil interests in the Prudhoe Bay field and in constructing the Trans-Alaska Pipeline System, or TAPS as it is commonly referred to constructing tankers and other related facilities to transport North Slope crude oil to market, we are, initially, investing an aggregate amount of approximately \$6.2 billion.

To provide perspective on the relative magnitude of this requirement, our total assets immediately prior to our involvement in the North Slope of Alaska were under \$1 billion. Thus, the \$6.2 billion program being financed represents an enormous undertaking which is severely taxing our corporate credit capacity to say the least.

Of the \$6.2 billion of initial development costs of our Alaska related projects, about \$5.2 billion is being obtained from external sources with the remaining funds being supplied from internal cash generation from existing operations. To date, we have borrowed approximately \$4.5 billion and have raised approximately \$136 million through the sale of common stock.

To provide protection for their investments, and to minimize the degree of risk to which they are exposed, lenders to Sohio have imposed stringent restrictions upon the company which, among other things, establishes a maximum amount of indebtedness that can be incurred for development of our Alaska related projects and limits the amount of indebtedness that can be incurred for other purposes prior to the completion, as defined in the governing agreements, of TAPS.

Indebtedness is broadly defined by these agreements to include substantially all financial obligations of Sohio and its subsidiaries including balance sheet debt, leases, charters, debt of other parties secured directly or indirectly by guaranties, throughput agreements or similar financing agreements of Sohio or its subsidiaries.

For the time period following completion of TAPS until 1998, at which time relevant restrictions will be removed by the final repayment of the associated debt, Sohio is prohibited from incurring additional direct debt or funded debt beyond a prescribed ceiling. This ceiling is based on a maximum debt-to-equity relationship wherein debt may not be incurred if, as a result, total debt would exceed: (a) 60 percent of capitalization if such debt is incurred during the first year following TAPS completion; (b) 55 percent of capitalization if the debt is incurred during the second year; and (c) 50 percent of capitalization if the debt is incurred thereafter.

Together, the precompletion and postcompletion covenants, although restrictive, were designed to provide reasonable flexibility to complete the financing of our planned projects while also providing maximum protection of the lenders' investment.

Upon full completion of the initial development of the Prudhoe Bay oil field and the construction of TAPS, tankers and the other related facilities necessary for producing and transporting North Slope crude oil to market, Sohio's total debt is expected to be in excess of 75 percent of capitalization.

Thus, we will be prohibited from borrowing additional funds at that time. We estimate that a period of at least 5 years must elapse before the debt-to-equity relationship will be reduced to a level that would permit any significant new debt incurrence. And any such borrowing capacity created at that point in time represents only the technical ability to borrow funds within the constraints of the debt covenants.

Our current financial plans, which management considers prudent, contemplate that our debt as a percent of total capitalization will be reduced to and maintained at a more traditional level in the long term. Prudence would dictate that the company not expose itself to a continuing policy of borrowing to the limits of its legal debt capacity even if the investment community would permit it to do so.

During the post-completion period, the definition of funded debt contained in our covenants incorporates, with a \$50 million aggregate exemption, guaranties of debt of other parties in which Sohio does not have an equity interest and guaranties of debt of other parties in which Sohio does have an equity interest to the extent such guaranty exceeds Sohio's equity interest on a percentage basis.

Thus, Sohio, as an outside party, would not be capable of providing an underlying guaranty of the debt obligations of a gas transportation system so long as its debt-to-equity relationship exceeds the limits discussed earlier.

If Sohio held an equity interest in a project, certain forms of financial obligations could be incurred even though the incurrence of direct debt is prohibited; however, such additional burdens would not be advisable at a time when a deliberate effort is being made by the company to reduce its debt-to-equity relationship to a level considered acceptable by the investment community, credit rating agencies, and management, itself.

Furthermore, the investment community would attach little value to such guaranties if they considered the company to be incapable of honoring them. Beyond any doubt, the wisdom of incurring major commitments of the magnitude which will be required for meaningful participation in a project such as this would be questionable. Indeed, with the tremendous burden of our annual debt service requirements, and the substantial additional capital which will be required to complete the development of, sustain production from, and maximize the ultimate recovery of oil from Prudhoe Bay, the company must preserve borrowing ability to meet contingencies which might arise.

If, for reasons we cannot now identify, Sohio were to guarantee, in any form, the financing of a system to transport North Slope gas, our ability to meet unforeseen contingencies associated with current endeavors would be seriously jeopardized and our ability to invest in other projects would be virtually eliminated.

We would be compelled to preserve our financial capability to meet potential problems which might arise as the project proceeds. Such problems can occur before, during, and after construction and these potential problems are well known not only to those of us directly involved in the construction of TAPS, but are equally well known to the major lending institutions in this country.

In summary, Sohio does not have the capability to provide any meaningful financial support to a North Slope gas transportation project now or for a number of years in the future. We have, on prior occasions, stated our concerns regarding the ability of the likely owners of this project to finance the construction of such a system in the absence of governmental support. We still believe that in order to make any project to transport North Slope gas to market in the lower 48 States fully viable, the government must, in some fashion, act as a guarantor or insurer to such a project to provide the assurances lenders will require.

While we believe that such projects are generally best left entirely in the private sector, the extraordinary cost and the complexity of any North Slope gas transmission system makes it imperative that Government and industry cooperate to bring this natural gas to market.

Thank you.

[The prepared statement of the Standard Oil Co. of Ohio follows:]

Statement of
The Standard Oil Company of Ohio
Before the
House Commerce Subcommittee on
Energy and Power
and the
House Interior Subcommittee on
Indian Affairs and Public Lands
Regarding an
Alaskan Natural Gas Pipeline System

October 14, 1977

This statement of The Standard Oil Company of Ohio is intended to address several issues which are key points on the subject of transportation of Alaskan natural gas to markets in the lower 48 states. These issues are:

- Prudhoe Bay Gas Reserves and their deliverability
- Processing or conditioning facilities
- Gas sales contracts and gas pricing
- Producer participation in financing of transportation facilities

We have addressed these issues in the past in response to various Congressional questionnaires as well as in response to Federal Power Commission interrogatories during the El Paso Alaska Company hearings in 1976. We also provided testimony at those hearings.

Prudhoe Bay Gas Reserves and their Deliverability

Our current estimate of proven gas reserves in the Permian reservoir is 8.5 trillion cubic feet of solution gas and 16.9 trillion cubic feet of gas cap gas. This reservoir includes the Sadlerochit, the Sag River, and the Shublik formations.

Since a large part of these gas reserves are in contact with and overlying the oil reservoir, the oil and gas are interrelated. Until gas conditioning facilities and a gas transportation system are in place, gas produced in conjunction with the oil is being, and will continue to be, reinjected into the formation. This operation can continue for many years without damaging total oil recovery potential.

The Prudhoe Bay Unit Agreement was signed by the Working Interest Owners and became effective on April 1, 1977. The Agreement and the operating plan were subsequently approved by the State of Alaska.

It is currently anticipated that a gas sales rate of 2.0 billion cubic feet per day can be sustained for delivery to a pipeline. The State of Alaska has approved such a plan of operation subject to confirmation as field performance history is accumulated. In later stages of oil production it may be possible to increase the gas sales rate above the level of 2.0 billion cubic feet per day.

Processing or Conditioning Facilities

Not only will ultimate production of Alaskan gas for delivery be contingent upon completion of the necessary pipeline facilities, but also upon completion of needed gas conditioning equipment. This conditioning equipment is not a part of the existing field facilities.

The only gas handling facilities currently in existence on the North Slope are those necessary to reinject the produced gas into the formation and to provide fuel gas for operations. The central gas facilities consist of a central compressor plant including an emergency flare system, an injection gas pipeline system, and a field-fuel gas unit and distribution system.

The four existing gathering centers provide for separation of gas and water from the oil. The field fuel gas unit conditions that amount of gas required for fuel at the flow stations, the field central power plant, and the first four pump stations of the Trans-Alaska Pipeline System. This unit is designed to treat 100 million cubic feet per day of fuel gas with a backup unit of the same size available on standby.

The central compression plant handles gas which is produced in excess of that required as fuel. This gas is received from the separation facilities at the gathering centers at approximately 600 psig and is compressed to

approximately 4,500 psig. This high pressure gas then enters the injection gas pipeline system which transports it to the injection wells where it is reinjected into the gas cap of the Permian reservoir.

To recover and process gas to pipeline quality, however, would require additional facilities which would be constructed and made available at the time a gas pipeline was ready to commence operation. These new facilities would treat the solution and gas cap gas following field separation and would consist of carbon dioxide removal units, dew point control units, natural gas liquid recovery, and additional gas compressors.

We have no specific up to date details on either the design or the cost of these conditioning facilities. In the lower 48 states such facilities are sometimes provided by the producer, sometimes by the purchaser, and sometimes by third parties. We assume that the question of ownership of these facilities at Prudhoe Bay will have to be resolved through negotiations between the parties.

Gas Sales Contracts and Gas Prices

In 1971 Sohio and Columbia Gas Transmission Corporation entered into a Preliminary Gas Agreement designed to provide early, partial funding for the development of Sohio's Prudhoe Bay leases. This agreement provides that either party may

require the other to enter into negotiations for the completion of a definitive Gas Purchase and Sale Agreement.

A definitive sales contract could not be enacted at the time the Preliminary Gas Agreement was entered into because there were too many unknown or variable factors having a bearing on such contracts. Some of these factors involved uncertainties with respect to future regulatory pricing provisions as well as uncertainties with respect to volumes of gas which would be available for sales. Neither the gas production capabilities nor the quantity of gas that might be taken in kind under a complex net profits royalty interest held by BP Alaska, Inc. were known at that time. This net profits interest entitles BP Alaska to 75% of the net profits attributable to Sohio's net production between 600,000 barrels per day (or the highest rate, if less, achieved prior to January 1, 1978) and 1,050,000 barrels per day. In addition, of course, Sohio's gas production is subject to a 12.5% royalty interest of the State of Alaska which also may be taken in kind.

Recently, however, some of these uncertainties have been minimized by an agreement whereby the gas from Sohio's leases, including that applicable to the net profits interest would be shared on a percentage basis by Columbia Gas and by Northern Natural Gas. Northern had acquired certain gas rights relative to BP Alaska's net profits gas in 1972.

Two major disincentives presently exist to entering definitive contracts for the sale of Prudhoe Bay natural gas. These are uncertainties of final resolution with respect to certain recent FPC orders and the absence of a pricing structure for Alaskan gas. Federal Power Commission Orders Numbers 539, 539-A, and 539-B would seemingly place a warranty obligation on the gas producers to deliver specific volumes of gas regardless of reservoir performance. Such obligations could have an adverse impact on oil production from the Prudhoe Bay reserves. These orders are currently in litigation and the final outcome is uncertain.

An additional problem relates to the concept of "vintaging" for the purposes of fixing contract prices for the sale of natural gas. Regardless of how the allowable wellhead price is established, a regulatory system that fixes a vintage date for the establishment of that price based on the date on which a definitive contract is entered into is not only unfair but discourages energy development.

Prudhoe Bay gas is a good example of the problem. That gas is several years away from actual pipeline sales at this time due to the need for both conditioning facilities and the pipeline before such sales can commence. In the meantime, producers of that gas will have continuing expenses to maintain the gas reserves as the oil is produced in the field, but will have no current revenue from the gas reserves until the related gas facilities are completed. Because of the

uncertainties that exist on future gas pricing provisions, producers are faced with the possibility of having their gas reserves "vintaged" by contract date instead of by date on which commercial pipeline sales commence. Understandably, they are reluctant to enter into contracts until the certainty of actual sales is close at hand. They know that the actual value of such gas at the time that it is delivered to pipeline facilities will be needed to explore for and develop new energy, to pay off indebtedness, and to pay reasonable dividends to shareholders for the risks they have assumed. Gas contracts that require prices out of sync in time with the actual sales, work to limit these necessary activities. Indeed, such vintaging would discourage early exploratory efforts in remote or frontier areas inaccessible to existing transportation systems.

The issue of gas pricing as it relates to the sale of Alaskan gas is currently very much uncertain. Nevertheless, it is an issue which must ultimately be resolved in order that definitive gas sales contracts might be negotiated. We concur with President Carter when, in his recent Report to Congress, he stated:

"Producers cannot be expected to negotiate sales contracts until a price has been established with a reasonable degree of certainty."

As long ago as the El Paso hearings before the FPC we

have stated that the uncertainties with respect to gas pricing provisions must be resolved before contracts could be negotiated. Today, if anything, there is more uncertainty than there has been in the past. The FPC, in its Recommendations to the President, has recommended a pricing strategy for Alaskan gas; the President, in his National Energy Plan and again in his Decision and Report to Congress, has also recommended a strategy; the Senate has recently passed a decontrol measure.

The absence of a firm pricing structure applicable to sales of North Slope gas does not lend itself to meaningful negotiation of a definitive gas sales contract. In light of these uncertainties, Sohio feels that it has gone about as far as it realistically can in completing negotiation of a contract for the sale of its Prudhoe Bay gas.

Producer Participation in Financing of Transportation Facilities

In the early 1970's, Sohio was a participant in the Northwest Project Study Group, a predecessor to the Gas Arctic Project, one of the unsuccessful applicants for certificates to construct a pipeline for the transportation of North Slope gas. Our intention as a member of this study group was made known from the start -- that is, to participate only in the study phase of the project with no desire to enter into the gas transmission business. Sohio reiterated its

original intention when it withdrew from the project in 1974. At that time, the study phase had drawn to a close, and the Gas Arctic Project was preparing to file applications with the Federal Power Commission in the United States and the National Energy Board in Canada to certificate this project. On March 7, 1974, Sohio notified the other participants in the study group of our decision to withdraw. Our letter communicating our intention stated, among other things:

"The size of the project has brought us to a point of real concern. The participants in the Study Group have recognized that the companies that ultimately band together to finance and build the project will probably include a number but not necessarily all of these companies, and will probably include some companies not now participating. In fact, the participation in the project may well be determined by a company's success in obtaining gas contracts for Arctic gas. While it is likely that this group of companies will themselves be able to raise a substantial part and perhaps all of the funds necessary to construct the project, Sohio feels very strongly that in order to make the project fully viable, both the Canadian and the U. S. governments must act as backstops or insurers to the project to satisfy the guarantees on completion and

operation which lenders will require. Sohio feels that this concept should be communicated to both governments from the outset and on a continuing basis, even though the exact extent of government participation cannot be determined until the group of companies which will actually undertake the financing and construction of the pipeline system is known. It is our belief that failure to commence dialogue with the two governments involved very early will ultimately lead to significant delay of the project.

"We recognize that some companies in the Study Group may not share our view and that most would prefer to leave the project entirely in the private sector. We certainly would agree with the latter point as a general rule. The size of this project, however, makes that unrealistic and Sohio firmly believes that some government participation is essential and that it would be a serious error not to apprise our governments of this fact from the beginning."

Following our withdrawal from the study group, Sohio's posture with respect to the Gas Arctic Project and similar proposals can be best characterized as one of simply monitoring developments. From time to time, however, we have been

asked to review our position with regard to participation in the financing of a transportation system for North Slope gas. Our position on this matter remains the same, however, and we foresee no change in circumstances which would result in a different conclusion on our part.

We are well aware of the financial burdens commensurate with projects of the magnitude required to transport North Slope gas to the lower 48 states. In developing our crude oil interests in the Prudhoe Bay field and in constructing the Trans-Alaska Pipeline System, or TAPS as it is commonly referred to, tankers and other related facilities to transport North Slope crude oil to market, we are initially investing an aggregate amount of approximately \$6.2 billion. To provide perspective on the relative magnitude of this requirement, our total assets immediately prior to our involvement in the North Slope of Alaska were under \$1 billion. Thus, the \$6.2 billion program being financed represents an enormous undertaking which is severely taxing our corporate credit capacity to say the least.

Of the \$6.2 billion of initial development costs of our Alaska related projects, about \$5.2 billion is being obtained from external sources with the remaining funds being supplied from internal cash generation from existing operations. To date, we have borrowed approximately \$4.5 billion and have raised approximately \$136 million through the sale of common stock.

To provide protection for their investments, and to minimize the degree of risk to which they are exposed, lenders to Sohio have imposed stringent restrictions upon the company which, among other things, establishes a maximum amount of indebtedness that can be incurred for development of our Alaska related projects and limits the amount of indebtedness that can be incurred for other purposes prior to the completion, as defined in the governing agreements, of TAPS. Indebtedness is broadly defined by these agreements to include substantially all financial obligations of Sohio and its subsidiaries including balance sheet debt, leases, charters, debt of other parties secured directly or indirectly by guaranties, throughput agreements or similar financing agreements of Sohio or its subsidiaries.

For the time period following completion of TAPS until 1998, at which time relevant restrictions will be removed by the final repayment of the associated debt, Sohio is prohibited from incurring additional direct debt or funded debt beyond a prescribed ceiling. This ceiling is based on a maximum debt-to-equity relationship wherein debt may not be incurred if, as a result, total debt would exceed: (a) 60% of capitalization if such debt is incurred during the first year following TAPS completion, (b) 55% of capitalization if the debt is incurred during the second year, and (c) 50% of capitalization if the debt is incurred thereafter. Together, the pre-completion

and post-completion covenants, although restrictive, were designed to provide reasonable flexibility to complete the financing of our planned projects while also providing maximum protection of the lenders' investment.

Upon full completion of the initial development of the Prudhoe Bay oil field and the construction of TAPS, tankers and the other related facilities necessary for producing and transporting North Slope crude oil to market, Sohio's total debt is expected to be in excess of 75 percent of capitalization. Thus, we will be prohibited from borrowing additional funds at that time. We estimate that a period of at least five years must elapse before the debt-to-equity relationship will be reduced to a level that would permit any significant new debt incurrence. Any such borrowing capacity created at that point in time represents only the technical ability to borrow funds within the constraints of the debt covenants. Our current financial plans, which management considers prudent, contemplate that our debt as a percent of total capitalization will be reduced to and maintained at a more traditional level in the long term. Prudence would dictate that the company not expose itself to a continuing policy of borrowing to the limits of its legal debt capacity even if the investment community would permit it to do so.

During the post-completion period, the definition of

funded debt contained in our covenants incorporates, with a \$50 million aggregate exemption, guaranties of debt of other parties in which Sohio does not have an equity interest and guaranties of debt of other parties in which Sohio does have an equity interest to the extent such guaranty exceeds Sohio's equity interest on a percentage basis. Thus, Sohio, as an outside party, would not be capable of providing an underlying guaranty of the debt obligations of a gas transportation system so long as its debt-to-equity relationship exceeds the limits discussed earlier.

If Sohio held an equity interest in the project, certain forms of financial obligations could be incurred even though the incurrence of direct debt is prohibited; however, such additional burdens would not be advisable at a time when a deliberate effort is being made by the company to reduce its debt-to-equity relationship to a level considered acceptable by the investment community, credit rating agencies and management, itself. Furthermore, the investment community would attach little value to such guaranties if they considered the company to be incapable of honoring them. Beyond any doubt, the wisdom of incurring major commitments of the magnitude which will be required for meaningful participation in a project such as this would be questionable. Indeed, with the tremendous burden of our annual debt service requirements, and the substantial additional capital which will be required

to complete the development of, sustain production from, and maximize the ultimate recovery of oil from Prudhoe Bay, the company must preserve borrowing ability to meet contingencies which might arise.

If, for reasons we cannot now identify, Sohio were to guarantee, in any form, the financing of a system to transport North Slope gas, our ability to meet unforeseen contingencies associated with current endeavors would be seriously jeopardized and our ability to invest in other projects would be virtually eliminated. We would be compelled to preserve our financial capability to meet potential problems which might arise as the project proceeds. Such problems can occur before, during, and after construction and these potential problems are well known not only to those of us directly involved in the construction of TAPS, but are equally well known to the major lending institutions in this country.

In summary, Sohio does not have the capability to provide any meaningful financial support to a North Slope gas transportation project now or for a number of years in the future. We have, on prior occasions, stated our concerns regarding the ability of the likely owners of this project to finance the construction of such a system in the absence of governmental support. We still believe that in order to make any project to transport North Slope gas to market in the lower 48 states fully viable, the government must, in some

fashion, act as a guarantor or insurer to such a project to provide the assurances lenders will require. While we believe that such projects are generally best left entirely in the private sector, the extraordinary cost and the complexity of any North Slope gas transmission system makes it imperative that government and industry cooperate to bring this natural gas to market.

J. R. Miller
 The Standard Oil Company (Ohio)
 Midland Building
 Cleveland, Ohio 44115
 October 14, 1977

Mr. RONCALIO. Your conclusions answered my observation.

Mr. MILLER. Thank you.

Mr. DINGELL. Do you have a comment, Mr. Dickerson?

Mr. DICKERSON. No, sir.

Mr. RONCALIO. Are you with Mr. Goldsmith?

Mr. DICKERSON. Yes.

Mr. DINGELL. The Chair yields to my good friend.

Mr. RONCALIO. I am a little startled about what I heard. I didn't expect any participation. I had hoped that someone among you would have come up with a statement that you would like to have seen the private sector get this since the financing sectors testified at our last meeting that they were willing and able to raise the \$10 billion to \$12 billion for this project. If it doesn't put a strain on them I would like to see it done that way.

Mr. RAWL. Mr. Chairman, I would certainly expect and like to see this project privately financed. We, too, recognize that the risks to us do not seem to be physical risks in this project. The gas is there. The markets are there. The risks we envision would appear to be regulatory kinds of risks or the stipulations that might be included or the requirements, et cetera.

We would then say that we feel strongly that it should be able to be privately financed. There is capital in this country that would probably be looking for a place to be invested. If it cannot be privately financed, we think the Government might look to their stipulations, et cetera, on this project. We hope it would be privately financed. You have had people testify from firms that have advised the proposed builders that they felt it could be privately financed. We would like to accept their testimony on that.

Mr. RONCALIO. We appreciate that. Thank you very much.

Earlier this week a professor from USC testified that any decision on the pipeline should be delayed several years to study the oil field more carefully. Do any of you feel there is not enough known now? You just answered that when you said you thought it was ready.

Mr. RAWL. This gentleman recognized before the Senate committee that he had not made a study. He has been hired by a legislative committee in the State of Alaska. He has talked to our people and I am sure some of the other producer people on this project. I have read his testimony as submitted.

In conclusion, I feel he has just taken a position that it is a very large oil field and a very large gas field. Since the industry does not now know how to get 100 percent of the oil and gas out of the ground, he seems to be suggesting that we ought to keep the gas in the ground to make sure nothing is done wrong. I guarantee you we have a strong feeling about getting the maximum oil out of the ground and certainly the maximum gas out of the ground. We have studied this field. These other companies have studied it. The State has had studies made. Obviously, in the earlier production life of a field there are some uncertainties, but there are plans made that if water has to be injected, it will be injected in a timely fashion. I feel badly about that testimony because I thought it was very poorly done and not based on sufficient study.

Mr. RONCALIO. We appreciate the rebuttal. Perhaps the Sohio man would like to respond to it.

Mr. GOLDSMITH. I am not an engineer, but we have addressed this subject and testified before the State of Alaska on this issue. I am quoting from testimony from our vice president of production in Alaska who testified before the Alaskan Legislature in 1976.

Mr. RONCALIO. What was his name?

Mr. GOLDSMITH. Howard Slack. I will provide copies of this.

[The statement referred to follows:]

TESTIMONY OF HOWARD A. SLACK, VICE PRESIDENT
ATLANTIC RICHFIELD COMPANY
BEFORE THE GAS PIPELINE IMPACT COMMITTEE
JUNEAU, ALASKA
FEBRUARY 18, 1976

Mr. Chairman, my name is Howard A. Slack, I am Vice President of Atlantic Richfield Company and Manager of our North American Producing Division's Alaska Region. I am responsible for Atlantic Richfield's exploration and production activities in the State of Alaska and the adjacent offshore areas.

Atlantic Richfield Company welcomes the opportunity to assist the Committee in its deliberations today. In this effort, I will address the three topics set forth in your letter of January 30, 1976 - namely, the Rush Moody Report, the State's Reservoir Analysis, and Royalty Gas Options - and I will endeavor to be responsive to the several specific questions raised in your letter.

THE RUSH MOODY REPORT

Mr. Moody's "Legal analysis of issues relating to natural gas transportation" has been studied by Atlantic Richfield's counsel. We do not disagree in any material respect with the principals of law discussed by Mr. Moody. We do, however, note that Mr. Moody's suggestions concerning State taxation options in his letter to Senator Rader must be read in light

of his legal conclusions that taxing schemes that burden interstate commerce or conflict with federal interests are suspect. It should also be noted, that Mr. Moody's legal memorandum and cover letter of January 14, 1976 can be read to suggest that State - Federal differences concerning route selection, production and end use of natural gas produced in Alaska should be resolved by the imposition of new or increased taxes upon producers such as Atlantic Richfield. To the extent that Mr. Moody's review of the law might be construed to advocate such a course of action, we would have contrary views.

As a first step toward a decision concerning natural gas sales the State should decide whether or not it plans to exercise its option as set forth in its oil and gas lease to take royalty gas in kind and market this production separately from working interest gas. We believe that a prompt decision to permit royalty gas in excess of the State's needs to flow to markets in the South 48 States is essential to both maximize state gas royalty revenues and help ensure the viability and early construction of a gas transportation system from the North Slope area. However, to insure that provision will be made for the State's gas needs, we endorse Mr. Moody's view that "the State's power to call upon the gas resource when needed in the future can, in reasonable probability, be exercised if the State's rights and obligations are fully spelled out, fully presented to the Federal

power Commission (FPC) and accepted by the FPC as an integral part of the transportation system which is certified by the FPC". Once agreement has been reached between the State and the FPC, negotiations with prospective interstate and intrastate gas purchasers to permit the State to take its gas in kind can be completed. Atlantic Richfield supports, and believes that Mr. Moody's legal analysis supports, a State policy which would favor:

- (1) early construction of a gas transmission system from the North Slope of Alaska to the South 48 States,
- (2) the marketing of State royalty gas in the South 48 States coupled with a reasonable reservation of royalty gas volumes to meet future Alaskan needs, and
- (3) the adoption of taxation and regulatory policies which would be reasonably calculated to foster such a gas transmission system. To further insure the economic viability of a North Slope gas transmission system, Atlantic Richfield also urges the State to adopt a policy which will include cooperation with Federal regulatory agencies and the oil and gas producing industry to bring about prompt exploration and development of undiscovered Alaskan gas reserves.

In our view, both the national interest and the best interests

of the State of Alaska require the earliest possible certification and construction of a viable gas transmission system to permit early gas sales. Design and optimization of such a gas transmission system is dependent upon the proved and potential volume of gas reserves which are estimated to be available for delivery. The State's royalty gas share, even if subject to future Alaskan needs, is a significant factor in determining both economic feasibility and line design. We, therefore, urge an early clarification of the State's intention and a prompt and cooperative resolution of its posture with the FPC. Massive investments will be required to facilitate early gas sales, and we urge the State to adopt and maintain fiscal policies which will facilitate such investments and not handicap an industry already burdened with enormous exploration and development costs.

Atlantic Richfield Company has responded to the Federal Power Commission's interrogatories in connection with the pending FPC proceeding pertaining to transportation of Alaskan natural gas. A copy of the Company's submittal to the FPC is attached to the written copy of my testimony as you have requested.

With regard to the Committee's inquiry pertaining to Atlantic Richfield's commitments for the sale of gas, the Company, in accordance with Federal Power Commission Order

No. 499, entered into advance payment agreements with Panhandle Eastern Pipeline Company and Texas Eastern Transmission Corporation committing to each of them a call on 20% of Atlantic Richfield's share of the Prudhoe Bay field gas production. A funding agreement was signed with Pacific Lighting Gas Development Company (PLGD), granting the California company a call on the remaining 60% of Atlantic Richfield's Prudhoe Bay gas. On December 31, 1975, the FPC retroactively terminated the advance payments program for Alaska and the California PUC then scheduled hearings to reconsider its prior approval of the Atlantic Richfield - PLGD funding agreement. As a result of these actions the PLGD funding agreement has been terminated and the advance payment agreements with Panhandle Eastern Pipeline Company and Texas Eastern Transmission Corporation will be terminated if the decision of the FPC becomes final.

Atlantic Richfield's position as to its gas sale commitments has been clearly set forth in our response to the FPC interrogatories. As we indicated in that response, all of our agreements with prospective purchasers contemplated the ability and willingness of such purchasers to accept deliveries of Prudhoe Bay gas through any gas transmission system which was certificated and constructed. Such an understanding should be an essential ingredient of any other commitment of Prudhoe Bay gas made prior to selection and certification of a gas transmission system.

Hence, relative to SCR 66, we can categorically state that our existing commitments to Panhandle Eastern and Texas Eastern are in no way detrimental to the certification of a trans-Alaska natural gas pipeline nor can we conceive of any situation in which we would make a pre-commitment of Prudhoe Bay gas to a market which could not be served by any gas transmission system that might be constructed.

THE STATE'S RESERVOIR ANALYSIS

The Committee has expressed a concern about the effect of the recently published State of Alaska, Department of Natural Resources Study on Sadlerochit Reservoir conservation and specifically whether this study, or the lack of production history, will affect the FPC decision on certification of a pipeline. Atlantic Richfield does not believe that the Van Poollen study which was done for the Department of Natural Resources will have any impact on the FPC decision on pipeline certification, nor do we expect it to have any impact upon the financing of the gas pipeline project. The various points raised in the Van Poollen study had been recognized and incorporated in our studies prior to the time of the Van Poollen report. We have found nothing in the report which will lead us to alter in any way our plans for Prudhoe Bay gas production.

The studies of the Prudhoe Bay Field Sadlerochit Reservoir which have been made by Atlantic Richfield Company and those

reported by the state and federal governments differ in a fundamental and important manner. That difference lies in the fact that the various reservoir simulation studies of the Prudhoe Bay Field that have been published were undertaken with different objectives in mind. On the one hand, our studies have as their objective the optimum reservoir management for maximum economic recovery of oil and gas. On the other hand, we believe the state and federal studies have as their objective the determination of recoveries of either oil or gas for a range of different operating conditions.

The question has been raised concerning the reliability of a model in the absence of production history. It is certainly true that the availability of production history can provide a useful check of a study and a basis for modification. However, Atlantic Richfield has a high degree of confidence in its predictions of Prudhoe Bay reservoir performance. This confidence stems from the fact that in the Prudhoe Bay modeling effort the major elements of the model have been subjected to thorough sensitivity testing. In sensitivity testing the first step is to identify those parameters having the greatest effect on the answer and define those parameters to the fullest extent possible. Our thorough application of this approach and the subsequent follow-up work, both field and laboratory, has given

us a high degree of confidence in our current forecast of the Prudhoe Bay Field performance. We are convinced that, although some adjustments may be made to the model as production history is developed, our present studies are adequate to demonstrate that, from a reservoir performance standpoint, early gas sales from the Sadlerochit reservoir would be non-injurious.

As we stated in our response to FPC Question II(5) of the "Interrogatories", Atlantic Richfield believes that the Trans Alaska oil pipeline can be expected to begin operation in Mid-1977 at 600,000 barrels per day, reach a sustained throughput of 1.2 million barrels per day before year's end and have a 1.5 million barrels per day production rate commencing on January 1, 1979. We also believe that at such oil production rates, gas sales of 2.0 to 2.5 billion cubic feet per day would be consistent with good reservoir management.

ROYALTY GAS OPTIONS

We have made no study of the market for State royalty gas inside of Alaska. As to the market for State royalty gas outside of Alaska, in our view the opportunities are virtually unlimited. We are aware that the Department of Natural Resources has solicited offers from potential gas buyers and that many have responded. If the State should decline to separately dispose of its share of the gas, the

producers, pursuant to their leases, would be obligated to sell such gas on the same terms that producers' gas would be sold. As noted earlier, prompt State action to resolve the "in kind versus in value" issue and active cooperation with the FPC will expedite early construction of the optimum gas transmission facility.

Thank you again, Mr. Chairman, for affording me the opportunity to testify before your Committee today. If you have any questions concerning my testimony today, I shall be happy to attempt to answer them.

Mr. GOLDSMITH. Atlantic Richfield has a high degree of confidence in its predictions of the Prudhoe Bay reservoir performance. This confidence stems from the fact that in the Prudhoe Bay modeling effort, the major elements of the model have been subjected to thorough sensitivity testing. That testing has been to identify those parameters that have the most effect.

Our thorough application of this approach and the subsequent followup work, both field and lab, has given us a high degree of confidence in our current forecast of the Prudhoe Bay performance. I am convinced that our present studies are adequate to demonstrate that from a reservoir performance standpoint early gas sales would be noninjurious.

Mr. DINGELL. Did he indicate in what amount? He indicates sales. Now obviously there are two things that go into that. One is that the sale takes place and the other is the amount that takes place.

Mr. GOLDSMITH. We were looking at 2 billion cubic feet a day.

Mr. RAWL. Yes. The 2 billion cubic feet of gas per day was included and we had expert witnesses testify on that.

Mr. DINGELL. These two fields are unitized?

Mr. RAWL. Yes.

Mr. DINGELL. Do you contemplate sale from the gas cap or simply from the gas dissolved in the oil?

Mr. RAWL. We feel like the gas produced with the oil from oil wells should be adequate in early years to satisfy this 2 billion a day requirement. But, obviously, as the oil is depleted in the later years some gas will be produced from gas wells.

Mr. DINGELL. With apologies to my friend, if he would permit me to continue.

Mr. Miller, do you have a comment that you would like to make on this?

Mr. MILLER. No, I don't think there is anything I can add to your understanding. I have no reason to think that their comments are not valid.

Mr. RONCALIO. You are not flaring any gas are you, for goodness sakes?

Mr. RAWL. No, sir.

Mr. RONCALIO. It will be reinjected?

Mr. RAWL. Yes, sir.

Mr. RONCALIO. How long can you reinject?

Mr. RAWL. We can reinject for as long as we have to. As some of you know, many years ago when oil and gas were found in this country there was little market for the gas and we had no flare orders in Texas and we returned the gas to the gas caps in many fields with no damage to the reservoirs.

Mr. RONCALIO. All prior witnesses testified that the conditions in Alaska will necessitate the construction of a plant. You gentlemen this morning most certainly and without ambivalence let us know that you cannot and will not pay for any of it, it must be done by the transporting arm of the industry. Is that irrevocable? Can't there be some negotiation on it? It makes possible the sale of your product and gives us control of the by-products at the conditioning plant?

Mr. RAWL. Mr. Chairman, we as a group, the producers, have invested in the Prudhoe project roughly \$12 billion. I can give you more numbers for the record if you would like. We envision that the producers will have maybe a total of \$23 billion invested in this field through depletion. That is not including conditioning facilities or a pipeline.

Exxon feels that here we have an industry that is a large industry, the gas transmission industry. They have a narrow focus. Their principal reason for doing business is to provide gas transmission. This would seem to us to be a project that the gas transmission industry would be more than happy to put in as they have stated.

The purpose, as I have mentioned in my testimony and these other gentlemen have, too, of conditioning is to provide an efficient gas transmission project. I guess my feeling is that if the pipeline companies find they cannot finance it, I would recommend that the committee look at the type of regulation that they have had over the years that puts them in such dire financial straits that when they have work to do, they cannot get the credit to do the work. I guess that is how I feel about that.

Mr. RONCALIO. I know how you feel about that, but I wish there was some way I could have you appreciate the other side of that coin and how difficult it is to wrestle this deregulation thing. It is beginning to tear this country apart. If it can be financed by the Alcan Co., will construction develop any new or untested technology of the nature of your gas or is it just another conditioning plant?

Mr. RAWL. I don't want to tie up this microphone, but, no, we don't feel like there is anything new in this regard. We do feel that the conditioning requirements for the gas will be more stringent than in a normal climate because, as I mentioned, the pipeline will be in the permafrost.

Mr. RONCALIO. Did I hear anything other than 90 cents per thousand cubic foot on that?

Mr. RAWL. That 90 cents was an escalated figure. I tried to keep up with all the figures in the President's decision and some are escalated and some are not. The nonescalated figure, compared to

30 cents in the President's decision, is probably a figure like 64 cents.

Mr. RONCALIO. Thank you, Mr. Chairman.

Mr. DINGELL. Mr. Meeds?

Mr. MEEDS. Gentlemen, I am sorry that I did not get to hear all of your prepared testimony. I just came in at the end of the testimony by Mr. Miller. So I didn't get to hear it all. If I missed something, I hope you will set me straight.

As I heard the end of your testimony, Mr. Miller, it was that you were not exactly pleading poverty but at least the inability to contribute very substantially at the present time. Is that the thrust of your testimony?

Mr. MILLER. Yes, I think so. Basically the message we have regarding our ability to participate in a gas transmission system is that financially we cannot do so. We just are not going to be in a position to undertake any substantial additional financial requirements for a number of years.

Mr. MEEDS. I hoped that was not the thrust of Mr. Rawl's testimony. I didn't get to hear that. I happen to remember seeing something in the morning paper. I dug one out of the trash can over there. I see that in the first 6 months of 1977, Exxon had profits of \$1,220,000,000 which was almost twice what you had in 1972. Is that relatively correct?

Mr. RAWL. I don't remember the 1972 figure. You are certainly correct on the first 6 months of 1977 figure.

Mr. MEEDS. So you are not pleading poverty?

Mr. RAWL. No, sir, our credit is very good.

Mr. MEEDS. It is the government regulation that bothers you, right?

Mr. RAWL. It is that plus we really do feel that despite the fact that we are more than viable financially, we are spending a lot of money. For example, in the United States last year our earnings were about \$1.2 billion but we spent about \$2.4 billion. Our capital and exploration expenditures were \$2.4 billion. The corporation has also stated that over the next 4 years our capital expenditures will be about \$22 billion.

I stated that the total field here will need another \$11 billion expended on it. We feel like we are in businesses that we have expertise in and we are not in the interstate gas transmission business. There are people who testified before these committees that want to build this pipeline. We are more than delighted to have them do it.

Mr. MEEDS. You were testifying here about not, as I understand it, not wanting to participate in any way in the conditioning of the gas to get it ready for transmission; is that correct?

Mr. RAWL. Yes, that is correct.

Mr. MEEDS. I am a neophyte about this so perhaps you can enlighten me. Is that the general way this is handled in the lower 48? Do the producers not contribute to the conditioning?

Mr. RAWL. Over the years it has varied, of course. But in recent years the Federal Power Commission has permitted the pipeline companies to include these conditioning facilities in their rate base. For example, in recent discoveries and developments in the Gulf of Mexico, the pipeline companies would put conditioning facilities on

the producers' platforms and they would build and own those facilities and, of course, the connecting pipelines to the interstate system.

Mr. MEEDS. Would you say that most of these facilities are owned by the transmission companies or more of the conditioning facilities are owned by the producers in the United States generally?

Mr. RAWL. I am afraid I cannot answer that. In recent years they have essentially all been owned by transmission companies but I can't answer your question.

Mr. MEEDS. Can you answer?

Mr. GOLDSMITH. There has never been a conditioning plant or capital requirement for conditioning anything like what we are facing in the State of Alaska, so this is entirely new and different when you are talking about the cost.

Mr. BROWN. Could you expand on that and give me relative terms? Excuse me, Lloyd.

Mr. MEEDS. You ask him questions when it is your turn and I will ask him my questions. Go ahead, please.

Mr. GOLDSMITH. There is nothing to parallel this from the past. What we were talking about in the costs, whether they are 30 cents as the administration talked about or 60 to 90 cents, I think that that cost should in the case of Alaska be treated the same as it is in the case of the lower 48 States, added to the wellhead price.

Now as to who owns and finances the conditioning plant, all three of the competing pipeline projects omitted the capital costs of the conditioning plants in the capital estimates they provided you. Nobody has planned to finance that plant. This is of great concern to us.

Mr. MEEDS. That is really why I am asking the question. If it is the custom for the producer to do that, then I would think that they were totally justified in omitting that. If it is the custom for them to do it, then they should have added it. That is really what I am trying to find out.

Mr. GOLDSMITH. We would say it is not a custom. Atlantic Richfield has written to both Secretary Schlesinger and to President Carter, this was a number of months ago. We stated that we had absolutely no interest in participating in the financing of the pipeline. We did indicate, trying to be of as much assistance as possible to bring this gas to production and without in any way committing any other North Slope producer, that we would consider assisting in the financing of the conditioning plant and we would help construct it and operate it or whatever, provided it is regulated separately from the pipelines because the Justice Department told us we cannot own anything of the pipeline and providing there is some system, a common carrier or contract carrier or some other regulated rate of return concept that will provide a fair return and one that you can rely on. That means we cannot rely on the kind of treatment we received from the ICC in the case of the trans-Alaskan oil pipeline.

Our expressed interest to the President and Secretary Schlesinger on the conditioning plant has been dimmed because of what happened to us before the ICC. If Congress can find a regulatory system we can rely on, that would be different.

Mr. MEEDS. If I could summarize, then, it is my understanding that you are still prepared to live up to your word, assuming they can find a system under which you feel comfortable to function?

Mr. GOLDSMITH. Yes.

Mr. MEEDS. Is that the same for the other people here?

Mr. MILLER. It is my understanding that it does go both ways in the lower 48. I think that is going to be a subject of negotiation as to who will do it and how they will be compensated for their undertaking.

Mr. MEEDS. Mr. Rawl?

Mr. RAWL. No, we don't feel like we should plan to participate in this. We had four contracts signed for gas sales back in 1975. At that time the gas companies had agreed to include this in their part of this project. Now everything is subject to negotiation obviously, but I think you just have to look at that.

Mr. MEEDS. It seems to me—and I am just a neophyte looking at it—under the worst possible circumstances to your companies out there we are talking about \$20 billion at wellhead.

Mr. GOLDSMITH. Investment?

Mr. MEEDS. No, \$20 billion in return for your product at the wellhead at the worst possible circumstance, it seems to me. Therefore, it seems to me that you ought to be prepared to participate in some of the capital investment that might be necessary to make that come true.

Mr. RAWL. Of course, that \$20 billion, you understand that you are talking about is revenue, not income. There is a lot of cost associated with it. The State gets one third and the Federal Government gets one third—

Mr. MEEDS. Is that all we get?

Mr. RAWL. That is all you are getting right now. I don't know what might be coming.

Mr. MEEDS. Finally, did I understand that you gentlemen were questioning the financing system which at least to my knowledge has been developed by Loeb Rhoades & Co., one of the top financial companies, and helped develop by the Boston Co. and the Bank of America is involved, and the U.S. Treasury says it is going to work and the President says it is going to work and you are now telling us it is not going to work. Do I understand that correctly?

Mr. GOLDSMITH. May I comment?

The original financing plan proposed by Alcan when it seemed to win the race among the three projects, selected for route preference reasons or political reasons or whatever, was a financing plan based on a detailed six-point consumer guarantee plan. It was an all-events tariff with limitation on the power of the State public utilities commissions and the Federal Power Commission even to change rates and threw absolutely all risks and costs on the consumer. Had such a plan been legislated by Congress, then one would have to admit they had a financing plan that would work. But it was politically naive for them to believe that such a total bearing of risks by the consumer would be agreed to by the Congress.

Mr. MEEDS. That means it is politically naive by Loeb Rhoades and Bank of America and other people?

Mr. GOLDSMITH. In my opinion. That was their plan and that was what was being looked at by the administration at the time they seemed to be tapping Alcan. At the time Alcan got ready to testify before this committee I suspect, and do not know, that they feared that the major issue that would slow them down would be the issue of a consumer-supported financing plan.

Therefore, if you read very carefully the testimony made by Mark Mallard of Loeb Rhoades before these committees, he did not say he had a financing plan. He indicated that he hoped he would be able, especially if he could get support from the State of Alaska and the producers, and we have indicated that we can't or won't, that then he might be able to get the money and he would want to go out and try.

I have talked to the senior lending officers, the senior and executive vice presidents of the largest insurance companies in the United States. I have talked to the largest commercial banks in the United States. I have talked to other investment banking firms that are considerably larger than Loeb Rhoades and have done a great deal of financing, including those who are the advisers to the two competing projects. In all cases all of these people are extremely skeptical as to the ability of the project to obtain the quantity of capital required and skeptical about making loans to it.

Mr. MEEDS. I would assume they are skeptical. I have heard that a long time ago. With your help and participation it would make it better, wouldn't it?

Thank you.

Mr. RONCALIO. You made inquiries and they volunteered the information. Was that while El Paso was still in the ball game?

Mr. GOLDSMITH. Yes.

Mr. RONCALIO. Then that makes a difference.

Mr. GOLDSMITH. They were skeptical about all three projects unless there were Federal Government guarantees of some sort.

Mr. RONCALIO. I see. I am going to call on a man with some very tough questions for you—Mr. Brown of Ohio.

Mr. BROWN. Who placed the debt limitations on Sohio and Arco? I gather Exxon does not have the same debt limitation problems that the other two companies testified to?

Mr. MILLER. With regard to Sohio, these debt limitations were negotiated and entered into by the company and the lenders when we placed privately with a group of insurance companies and pension funds \$1,750 million of debt. It was in the course of negotiating that financing that these covenants were agreed to.

Mr. BROWN. Are those reviewed by the Securities and Exchange Commission?

Mr. MILLER. No, sir, not in this instance. This was a private placement.

Mr. BROWN. Do you have any debt that is reviewed by the Securities and Exchange Commission which has those covenants?

Mr. MILLER. We have public debt, but it doesn't incorporate those same restrictions, no.

Mr. BROWN. How about Arco?

Mr. GOLDSMITH. Congressman Brown, I spoke to two restrictions on Atlantic Richfield. One was a debt indenture which was from one of our predecessor companies, the Richfield Oil Corp., which

was a privately negotiated debt instrument which has this limitation that our tangible assets must be $2\frac{1}{4}$ times our funded debt and that guarantees of someone else's debt counts as funded debt.

Mr. BROWN. That is specifically in that limitation; correct?

Mr. GOLDSMITH. Yes. That was an arm's-length restriction which is a common one for lenders to make. We are now in excess of that limitation in the sense that the total additional amount of money we could borrow until such time as our profits increase or our debt is reduced is about \$350 million.

So we could not take on without violating that indenture an open-ended guarantee that could result in billions of dollars having to be borrowed against our credit. You will remember that the administration expects a \$4 billion cost overrun at least.

So we are looking at \$13.7 billion or whatever. That would put us into default in the debenture. We have acceleration provisions in other debentures which say if you are in default of one, they all come due.

The other thing was that the company is required to maintain a ratio of two to one in the case of our preferred stock. So we could not amend those Articles of Incorporation without the agreement of the preferred stock shareholders. The preferred stock shareholders have no rights to convert into common stock so they would have no motivation to approve a change in the ratio. It would be to their detriment.

Mr. BROWN. That is a limitation blessed by the SEC or not?

Mr. GOLDSMITH. They don't get involved in blessing those.

Mr. BROWN. Well, I didn't mean to use that word. It is filed with them, right?

Mr. GOLDSMITH. Yes.

Mr. BROWN. What can flow from this is a sharp increase in your necessity to get financing or the necessity to dispose of the company to somebody else who can take you over; is that correct?

Mr. GOLDSMITH. Well, sir—

Mr. BROWN. Is that the alternative?

Mr. GOLDSMITH. One could attempt to call this bond debt and buy it back from the lenders at a premium if they will sell to you. I have tried to do that on occasion and believe me, they rob you.

Second, in the case of the preferred stock, we would have to go to the preferred shareholders and ask consent which in my opinion they would not give.

Mr. BROWN. Then the alternate choice is that company goes up for grabs because the stock comes down?

Mr. GOLDSMITH. The company becomes insolvent.

Mr. BROWN. Then what happens?

Mr. GOLDSMITH. Then all the lenders stand in line.

Mr. BROWN. Unless you find something to take it over, who is in a better position to deal with the debt problem? Sohio, if I understand correctly, is in worse shape than Arco in this; right?

Mr. MILLER. Sohio has tighter financial constraints.

Mr. BROWN. Where are you in the Fortune 500?

Mr. MILLER. I don't know.

Mr. GOLDSMITH. We are 12.

Mr. BROWN. Exxon is one or two; correct?

Mr. RAWL. Correct.

Mr. BROWN. The only one of the three who could finance their part of it; correct?

Mr. RAWL. We may be able to afford to, but I guess you understood that it is not our plan or intention to do so.

Mr. BROWN. I did.

Mr. RONCALIO. Atlantic Richfield would not obligate itself to guarantee the \$13 billion. When you only make a contribution of one fourth of the line's capacity, you would only obligate yourself to one fourth of the debt; right?

Mr. BROWN. Hopefully.

Mr. GOLDSMITH. Hopefully, but they have given us no structure as to how this guarantee would be allocated between producers. They are thinking of these three companies, but there are other companies that have production.

Mr. BROWN. You don't like to subsidize the production of your competitors up there and this is a factor?

Mr. GOLDSMITH. Yes; and we are being asked to help the Canadian gas producers.

Mr. RAWL. I think these comments about debt are interesting, but I think there is something more fundamental here. We are being asked to give somebody a blank check without any management rights.

Mr. BROWN. You are prohibited from management rights?

Mr. RAWL. Yes, sir, and how do you explain that to your shareholders and how do you footnote that whether you are talking about Exxon's balance sheet or Sohio's? How can you say to your shareholders that we can't tell you whether we are going to make a return on it or not? This whole question of guarantees, possibly the U.S. Government can do that, we can't do that.

Mr. BROWN. Have you tried any Georgia banks?

Mr. RONCALIO. When Atlantic Richfield acquired Anaconda, what did it add to your debt position?

Mr. GOLDSMITH. We used equity securities in order not to increase our debt. The actual cash outflow was about \$300 million which was less than what we received from selling our Canadian operations because of how we were disturbed about operating in Canada which obviously relates to our interest in participating in another project in Canada.

Mr. RONCALIO. Did it add to your tangible assets?

Mr. Goldsmith Yes, sir.

Mr. RONCALIO. Three times that much perhaps?

Mr. GOLDSMITH. Yes; it actually would have not impacted this ratio.

Mr. RONCALIO. Thank you very much. Go ahead, Mr. Brown.

Mr. BROWN. Thank you.

I would like to ask if anyone in the White House or DOE or DOT ever asked the companies about the detail of your financing arrangements, and the Treasury, as to whether or not you can legally obligate yourselves to this extent?

Mr. GOLDSMITH. I have personally visited with the Assistant Secretary of the Treasury Altman.

Mr. BROWN. At his request?

Mr. GOLDSMITH. At my request, to express my views that I thought these projects could not be financed without either the

total consumer guarantee legislated by Congress or government guarantees. I have also said this to Loeb Rhoades and the advisers for El Paso, White, Weld, and Morgan, Stanley, the advisers for the Canadian pipeline.

When Mr. Miller and I were on the Gas Arctic finance committee we insisted any presentation they make to the FPC and Congress should indicate that government guarantees be required because we felt it could not be financed any other way.

Mr. BROWN. Have you specifically mentioned to Mr. Goldman or Mr. Martin who felt this should be the problem of the producers and should be without the legal problems?

Mr. GOLDSMITH. I am surprised Mr. Goldman is not aware of our correspondence with Secretary Schlesinger.

Mr. BROWN. Mr. Miller?

Mr. MILLER. We have had no dialog with any of them on our financial condition. We submitted a paper to the FPC in this matter giving the same views we expressed today. Whether they took note of our views, I am not aware. At least it was available to them. I would have thought they would have.

Mr. BROWN. If the pressure is brought by the Federal Government or if the Congress should in some way mandate your participation in this, what would be the impact on your company?

Mr. MILLER. Well, I don't know quite how we would comply with that. I suppose the only way we could do it would be to go back to the lenders and indicate to them that we needed that modification of our covenants and see if they were willing to enter into that kind of arrangement.

I would suspect that we would not be successful in that regard.

Mr. BROWN. If they refused?

Mr. MILLER. We have a legal obligation to them. I think we would be in a little bit of a bind, given the restrictions and the compulsion to enter into it. I don't know how one would settle that.

Mr. BROWN. Do you want to speak to the legal obligation?

Mr. DICKERSON. If such an obligation were imposed upon Atlantic Richfield, we could decline to participate because of the risk to our shareholders. At that point I suppose it would be a question of how the Congress would seek to enforce the obligation.

On the other hand, like Sohio has indicated, if we felt the penalty for noncompliance was so substantial that we had to undertake to go back to the shareholders, we could do that. I suppose the gravest concern would be what penalty would be assessed if it felt it could not participate.

Mr. BROWN. Do you feel there is a constitutional issue involved in this?

Mr. DICKERSON. Yes, sir; that is a fifth amendment question.

Mr. DINGELL. If the Congress were to impose upon you the requirement that you participate and you did not participate, what would be your choices?

Mr. MILLER. That is the quandary that I said I don't know how to resolve. If Congress said we had to participate and we had contractual arrangements with practically every lending institution in the United States which says we are unable to enter into those obligations, it is not clear in my mind exactly how we would work our

way out of that situation. We could speculate on all sorts of things, but I don't know what the right answer to that is.

Mr. DINGELL. I am curious because obviously the matter has come up. I am not indicating a position on my part. I am curious.

Mr. RAWL. Mr. Chairman, I assume we would check to see whether under the Constitution we could be mandated into taking our money and investing it in something we did not want to invest in.

Mr. DINGELL. How about you, Mr. Goldsmith?

Mr. GOLDSMITH. Chairman Dingell, presumably the way this would happen is through the FERC in some fashion with its gas pricing I would assume. Such creation of an illiquid condition, which would violate our stewardship to our shareholders, would in my view make production of North Slope gas uneconomic. My recommendation would be that we not commence negotiations of gas sales contracts.

Mr. DINGELL. So you are saying you would not produce gas? You would either reinject or flare?

Mr. GOLDSMITH. We would not flare.

Mr. RAWL. We cannot legally flare.

Mr. BROWN. As I understand, we are at the point then where the producers say they can't or won't finance the project because they think the risks are too great, and the control is too total in the hands of the government to just simply destroy their opportunity to pay it back, and their creditors will not let them do it. So, there is a legal problem.

Mr. RONCALIO. Not totally, is it. Wasn't there a little qualification in the case of Sohio and Atlantic, a modest one regarding conditioning?

Mr. GOLDSMITH. In the case of Atlantic Richfield only.

Mr. RONCALIO. I want to make sure that exception is on the record.

Mr. BROWN. Yes; but the understanding had to be, if I may, at this point, that it had to be an assured guarantee that the costs would be covered for that project, an assured guarantee by the Federal Government.

In other words, the same kind of guarantee that the pipeline has that they are going to make money on this project to return whatever investment they have in it.

Now, you do not at this point have that guarantee.

Mr. GOLDSMITH. That is right.

Mr. BROWN. Even for the gas in the ground, for that matter.

Mr. GOLDSMITH. That is right.

Mr. BROWN. I just want to pursue that for a minute. I want to get clear in my mind, or at least the way I see this, and have it corrected by my colleagues here and, if I am in error, that the pipelines won't finance this either, or can't.

I don't know which it is in their case because I don't recall their testimony that well. Maybe we never asked them that question, but they either won't finance it or can't. But, if they did finance it the Federal Government, under its regulatory authorities, guarantees their return, does it not?

Mr. GOLDSMITH. Yes, sir.

Mr. BROWN. You do not have your return guaranteed on the gas you found?

Mr. GOLDSMITH. Right.

Mr. BROWN. And so the Government can say to you, "If you don't put some of your money into this thing, we will set that wellhead price so low"——

Mr. RONCALIO. \$1.40.

Mr. BROWN [continuing]. "That you cannot make the return on the anticipated amount of gas that you have to sell."

Mr. GOLDSMITH. Right, sir.

Mr. BROWN. So that is where Mr. Goldman will have his leverage, I assume, when the time comes, and I understood from his testimony this morning that he wanted to have good cooperation between the DOE, the administration and FERC, so that the FERC can be party to this process of forcing you to participate in the financing of this project. Do I understand that correctly?

Mr. GOLDSMITH. Yes, sir.

Mr. BROWN. Wait a minute. One other point. And the Federal Government, according to Mr. Goldman's comments to me, the administrative branch at least has said they won't guarantee the project either; the executive branch has said that because they will not come, he says, they will give us a letter from the President that says that they will not guarantee the expenditure of this money from the taxpayer.

But, it was left a little up in the air as to whether or not they would set the rates to the consumers if you all play ball. They might set the rates to consumers so high that somebody would have a return that would see that the whole project can be financed if you guys participate.

Mr. GOLDSMITH. Yes, sir.

Mr. BROWN. But now that did not set the wellhead rate. That only spoke to setting the rate for the pipeline.

Mr. GOLDSMITH. Yes, sir.

Mr. BROWN. So there is no guarantee from them on the wellhead rate, but there is some suggestion that the pipeline rate might be OK.

Well, I thought I understood that. I just wanted to try to get it down.

Mr. GOLDSMITH. Could I elucidate there? As far as the conditioning plant is concerned, it could be done in any one of three ways.

The gas transmission companies could go on and make it part of the pipeline project.

Second, it could be an entirely different regulated entity with the rate of return concept.

Third, we could deregulate gas, and sell the gas at the tail-end of this conditioning plant, with all the conditioning done, for what it is worth, and we would be happy with that solution.

Mr. BROWN. Is there a time problem?

Mr. RONCALIO. There was a minute ago, but there is not now. You have unlimited time to the next 10 minutes.

Mr. DINGELL. Off the record.

Mr. BROWN. Mr. Chairman, I will be glad to subside for a while. Thank you, Mr. Chairman.

Mr. DINGELL. The Chair recognizes Mr. Moore, and then Mr. Gammage.

Mr. MOORE. Thank you, Mr. Chairman. I only have two questions.

One, I don't know much about this loan guarantee proposition, but the gentleman on the end referred to that as an investment a moment ago. How would that be an investment to your company, to have a loan guarantee on this pipeline?

Mr. RAWL. I may have miscommunicated. A loan guarantee would be something where we would put up our credit or our money, and other people would manage this project, and use our money, and we might get, as they said in the President's decision, a modest fee because there is supposedly very little risk.

Now, I submit that if there were very little risk, they wouldn't need loan guarantees on this thing. Basically, what I am saying is you just give someone else a blank check and you have no management in that. We couldn't operate like that.

Mr. MOORE. You wouldn't know what the return is going to be for having given someone your blank check—you don't know what the return is.

Mr. RAWL. That is exactly right. You don't.

Mr. MOORE. The second thing I would like to ask is, let's go back to an old outdated notion, free enterprise, and say there could be a way worked out in the Justice Department where you could own a proprietorship interest, where you might get a return by owning an interest in the pipeline.

Would you then be interested in investing in it? I ask all four of you that question.

Mr. MILLER. I don't think we would be. We are not in that particular business. We have no desire to get into the gas transmission business.

In addition to our financial limitations, if we are excusing those for the moment, if the Justice Department said it was OK, you are still in a very highly regulated area of business. So, I don't think that is really back to the old notion of free enterprise.

Mr. MOORE. It is halfway back.

Mr. MILLER. Yes; but it's the wrong half.

Mr. BROWN. Would you yield, because I want to clarify a point. You said putting the restrictions aside.

Mr. MILLER. Yes.

Mr. BROWN. But that doesn't really answer his question. Are those restrictions limiting in terms of equity ownership?

Mr. MILLER. No; I am saying—we have several problems as a corporation. The first and foremost is our financial limitations. If we set those aside—

Mr. BROWN. I want to know what that means with reference to the question as he posed it, which was equity.

Mr. MILLER. In order for us to take an equity position you are going to have to guarantee I think an equal portion of the debt. So that for us to take an equity position we have to do two things.

The first thing we would have to come up with is the capital required for the equity position. The second thing we would have to do would be to guarantee as a sponsor our proportionate share of the debt. So, it is not possible for us to take an equity position.

Mr. MOORE. What you are saying is under any circumstances you cannot participate in this pipeline, ownership, guarantees or whatever?

Mr. MILLER. That is right. The only thing I was advancing is the notion that if we were able to do so under the free enterprise idea that you suggested, we still have the regulatory concerns and the political risks that probably would have us opt not to take a position anyhow.

Mr. MOORE. How about the next two companies?

Mr. GOLDSMITH. Atlantic Richfield is very happy with the private enterprise system. We feel comfortable in measuring exploratory production and economic risk. We cannot measure political risks.

We are in the midst of a very unpleasant experience, after having completed the trans-Alaskan pipeline, with an investment of over \$8 billion, and have found that the ICC has changed a regulatory practice that has been in existence for decades, retroactively.

That was all one would need from the standpoint of discouraging him from investing further in regulated utility type enterprises. So, no, we have no interest in an equity position in the gas pipeline.

Mr. RAWL. Mr. Moore, at the risk of being a little redundant, before you came in I pointed out that the risks in this one are strictly regulatory, that type of thing.

As a consequence, here we have a very large volume of gas, and we have a market, and if this cannot be financed by an industry whose principal objective is to provide interstate gas transmission, well then I would suggest that the regulators, or in this case the Congress, certainly has an opportunity to have some input, take a look at the requirements on this pipeline of various types, or the stipulations, or whatever we might get into in overlaps in bureaucracies, and they will probably find why this thing cannot be financed.

If some improvement can be made in that area, I would suggest that it could probably be financed. It would seem to me if it couldn't be financed for those reasons that it would not be very intelligent of producers to step into the same environment and finance it.

But, we are not in the business, and it is not our intention now to get into that kind of business.

Mr. MOORE. Thank you, Mr. Chairman. I will conclude my questioning by adding a comment.

I really hope that no producer leaves our hearings with any thought in his mind that there is not going to be one hell of a fight in the Congress before we put up 1 penny of Federal money to build this pipeline.

I am going to tell you right now, if I am back I am going to dedicate everything I have got to seeing to it not 1 cent of Federal money goes into that pipeline. So, we either straighten out the regulatory problems or we don't build it, or private enterprise builds it, as far as I am concerned.

Mr. RONCALIO. Mr. Gammage?

Mr. GAMMAGE. Thank you, Mr. Chairman. I won't take my entire 5 minutes. I don't really have any questions, just one comment.

Down in my district recently we have had a very similar problem. Exxon would be familiar with this because they were a participant, the proposed off-shore terminal construction, importation of about 2½ million barrels a day of crude oil, feeding about 43 percent of the Nation's refining petrochemical complex, a facility that will now not be built because in issuing its permit the Department of Transportation, with its window in from the Justice Department, sought to impose regulatory standards they had not previously been given the permission of Congress or the courts to impose.

So, Exxon, Mobil, and Gulf bailed out. Now nobody can build it. We won't have that 2½ million barrels a day of crude oil. It also is the strategic petroleum reserve—we are going to have to lighter that stuff and tanker it with smaller tankers, and face all the environmental hazards of navigating the channels, and additional costs of transferring it from the supertankers to the lighters and smaller tankers.

The State passed backup legislation so that it could be constructed publicly with an issue of bonds, but with the proviso that it would have to be guaranteed by the same participants and virtually underwriting of those bonds by those participants.

So, apparently it is not going to be built at all. What we have got is a situation where we see a need and have a resource available and we come forward in Congress with a very idealistic attitude of making that stuff available, and then we instead of licensing those facilities in the business we regulate them out of existence.

I think it is a serious problem. I think Mr. Moore spoke well in his questions.

Mr. RONCALIO. Mr. Meeds?

Mr. MEEDS. Thank you, but not at this time, Mr. Chairman.

Mr. RONCALIO. Mr. Moorhead?

Mr. MOORHEAD. In the event that the transmission companies cannot borrow the money necessary to build the pipelines, and the Government does not wish to put up a subsidy, or a loan guarantee, aren't the major oil companies producing the gas in their oil fields going to lose an awful lot of money that would otherwise be available to them through the same gas?

Mr. GOLDSMITH. Yes, sir.

Mr. MOORHEAD. You have a real positive economic need for the pipeline to be built.

Mr. GOLDSMITH. Yes, sir.

Mr. MOORHEAD. I certainly would agree with you that it will be ideal if we could get the transmission companies to build it. They are in that business. But I would think that, as you can here, there is not unanimity on the desire of the Federal Government to provide a profit for the major oil companies.

If you heard the President lately, I don't think he has much of a desire in that direction, either.

So, it would seem that perhaps you are going to have to work together. I want to see this done through the free economy. But maybe if there is an economic need the oil companies are going to have to at least help with the guarantees in order to insure profits.

We don't want the gas to go to waste. I know you don't, because that is money in the bank.

Mr. GOLDSMITH. I share your concern, Congressman Moorhead. We are very reluctant to recommend Government financial participation in what should normally be a private enterprise project.

It has not been our posture or practice in the past. But, we find here a project of capital cost greater than any project ever built in the history of the world. We find one that is international in nature, that crosses two countries. We find an artificial marketplace situation.

This is not the real marketplace, as you know, Congressman Moorhead, because here we have regulation of gas prices at the wellhead, we have regulated rates of return on the pipeline, regulated prices charged to consumers. So, we cannot look at the commodity value of the gas.

I think gas producers could be encouraged to work with others to form a project if there were deregulation of natural gas, and we went back and let the marketplace sort everything out.

You know, Congressman Moorhead, if you saw the draft of this executive agreement between Canada and the United States, it was agreed in that executive agreement that will come before the Congress that there would not be Government financing, any Government financial support, nor would there be any consumer financial support.

Either one would do it. We could have an all-events tariff and the consumer would be the only one at risk rather than the Federal Government. But, they propose in that treaty not to have any financial support from either one, which raises additional concerns of any potential equity investors or lender to the project.

It seems to suggest that the Canadians might feel more free to deal in an adversary way with the project if they are not directly impacting the U.S. Federal Government or the U.S. consumer, if they are picking on some oil companies or gas transmission companies.

We have been nationalized enough around the world to be very concerned about starting out on a project with that sort of expression of attitude.

Mr. MOORHEAD. Isn't it true there is a treaty, however, that virtually protects the project from nationalization and guarantees to the American consumer the product without any discriminatory taxation?

Mr. GOLDSMITH. I am not an expert in international law, and perhaps our counsel would like to comment. I am told, sir, we cannot rely on that executive agreement as actually limiting the power of the Provinces and the various local governmental units within those Provinces as far as their taxation of this project.

The Dominion Government, which as you know hasn't even solved the confederacy issue that we attacked 200 years ago, has not even offered to exempt from withholding tax in Canada the interest that will be paid by the Canadian entity, which will enlarge the cost of financing.

We talk of Federal Government financial support. We are not talking of the Federal Government loaning the money. We are suggesting here one of two kinds of Federal financial support, for which there is a great deal of precedent. In the first one, that means simply Government guarantees of the debt, which would

save the consumers as I estimated 30 to 40 cents per thousand cubic feet on this gas, we have this in title XI for ship financing.

We have situations like Lockheed, of course, which could not handle its financial affairs, and where the Government guaranteed its debt until it could cross the bridge back to financial viability.

Now, those guarantees are being removed, and Lockheed is going on on its own. It didn't cost the Government anything. It hasn't cost the Government anything to my knowledge, in guaranteeing title XI financing. In fact, the Government gets a fee for this, 50 basis points, one-half of 1 percent per annum. So, the Government actually takes in revenue from that kind of a process.

Mr. MOORHEAD. It did on the Lockheed loan, too.

Mr. GOLDSMITH. That is right. Alternative to guaranteeing the total debt on the project, which has this big interest saving element to it, another alternative is simply to use the minimum tariff proposed by Alcan, where the consumer takes the risk after completion, he takes the risk of abandonment, the risk of excess cost, the risk of a long interruption.

That is already proposed by Alcan. That leaves one other major risk the lenders are worried about. That is the risk of completion. So, the Federal Government could do somewhat like Lockheed. It could guarantee that the funds will be provided.

If private enterprise is not able to come up with enough equity and debt capital to complete this project, the Federal Government will assure that the additional funds will be provided through Government guarantees of that debt or whatever, which, if we can believe the project sponsors, are not going to be required because they don't plan on there being any overruns.

Mr. RONCALIO. Mr. Moorhead, could I interrupt a minute?

Mr. MOORHEAD. Yes. I have promised Mr. Brown I would yield back to him. I would be happy to yield to you.

Mr. RONCALIO. I would be glad to give each of you 5 more minutes. Do you want them now?

Mr. MOORHEAD. I am not seeking the time for myself. I am seeking it for Mr. Brown.

Mr. RONCALIO. Gentlemen, I have got some problems with what I have been hearing the last hour or so. Little things come up that sort of remind me. Were some of you disappointed that this came down on Alcan and not Arctic Gas or El Paso a little bit?

Mr. RAWL. No, sir.

Mr. RONCALIO. Were you folks at Atlantic Richfield a little disappointed?

Mr. GOLDSMITH. Atlantic Richfield very carefully stayed away from endorsing any one of these three projects. We think this is something that is too complex, and should be sorted out by Congress and the American public. It is not for the producer to say which project it should be.

Mr. RONCALIO. We appreciate that. But were you a little disappointed? You served on the Finance Committee.

Mr. GOLDSMITH. Yes. Atlantic Richfield also subsidized the El Paso project, from the standpoint of preparing the financing plan for El Paso. I worked on that a little bit and talked to the Alcan people. My only concern about the Alcan project is simply the Canadian element.

Mr. RONCALIO. I served on the Canadian International Joint Commission for 3 years, having water problems with General McNaughton, on the Great Lakes and the Saint Lawrence.

The provincial problems are not solved, but we have not solved our problems with the Indians, either. We are not all that far ahead of the provincial problems vis-a-vis Quebec and our Indians.

Gentlemen, Exxon does not have interstate transmission lines. Does Exxon engage in any intrastate shipment or own any intrastate lines?

Mr. RAWL. Yes, sir, we do.

Mr. RONCALIO. I would like to also say this. I would like to have submitted for the record a chart on U.S. conditioning plants. How many of those are actually owned by the producers of the gas and how many are owned by those who own the transmission lines? Identify which producers own which conditioning systems, which transmission lines own theirs.

Mr. BROWN. Would the gentleman yield at that point. Could you also include in that the point that I wanted to raise, when Mr. Meeds was questioning, and that is the unit value of those plants compared to the unit value anticipated in the Alcan plant.

Mr. GOLDSMITH. Yes, sir.

Mr. RAWL. We will work on it. But this may be a difficult thing to do because there are obviously a lot of, literally thousands of fields connected to interstate pipelines. All of them have some form of conditioning. We will make every effort.

Mr. RONCALIO. Do the best you can.

[See letter dated Dec. 6, 1977, p. 530.]

We have some figures submitted to our staff which would indicate a little differently from what your general observations were regarding percentage of product in the States that is producer conditioned and—

Mr. RAWL. I certainly didn't intend to—we did not talk about percentage owned by producers versus pipeline companies. What we said was that in recent years, probably since 1972 or so, the Federal Power Commission, rather than increasing the price of gas, permitted these conditioning facilities to be included in the pipeline company rate base.

They also, you recall, had advanced payments. After we got advance payments in Alaska, they removed them retroactively.

Mr. RONCALIO. Back in the days, the happy days of the fifties, I wish that President Eisenhower would have never gone to play golf with his friends. You would have had the deregulation 25 years ago. But these accidents happen, and they hurt us, historically or whatever. Five more minutes for Mr. Moorhead.

Mr. MOORHEAD. I yield my time to Mr. Brown.

Mr. BROWN. Gentlemen, I begin to perceive a couple of things here that I think are interesting. One is what do you anticipate is going to be the total cost of this project? Separate out, if you will, the conditioning plant and the pipeline.

Mr. GOLDSMITH. Yes, sir. I will make a stab at it. Someone may have other views.

In 1975 dollars, Alcan talked to a \$6 billion project, with a 40-percent overrun. When they talked to the dollars as they are actually incurred, as the money is spent, 1979, 1980, through 1983,

which is what really matters, without any overrun, they talked about \$9.7 billion.

Our own internal escalation factors, which is what we assume is going to happen to construction and labor costs over the next 5 years, would track that sort of thing.

When we take the 40 percent overrun case, which is the one that GAO seems to say is the most likely one, and look at dollars as they are spent, 1979 through 1983, we come up with \$13 billion to \$14 billion cost of the gas pipeline alone, without the gas conditioning plant.

Now, we don't really know what this gas-conditioning plant is going to cost, and we hesitate to give any numbers after our experience with the trans-Alaska oil pipeline. We did make a study in 1971. All we have done is change that to current dollars, to dollars as they would be spent, and that told us it might be somewhere in the \$1.5 to \$2 billion range.

So, we must be looking at something in the \$15 billion area for the facilities that need to be added.

Mr. MOORHEAD. Is there difference of opinion between any of you on that? \$15 billion is relatively a small amount for the Federal Government. I think that is part of our problem. I think that those of us who are responsible for spending \$460 or \$480 billion a year have some difficulty understanding why you guys are having so much trouble with \$15 billion.

Well, can you help me with that?

Mr. GOLDSMITH. Yes, sir.

Mr. RONCALIO. I would like to attempt to when you are through.

Mr. MOORHEAD. I guess the difference is we have the printing press. And also we set the prices in the commodities in which you are dealing. If I understand you—have all three of you fellows been in the service?

Mr. RAWL. Yes, sir.

Mr. GOLDSMITH. Reserves.

Mr. MILLER. I have not.

Mr. MOORHEAD. Well, I have, and I know that the chairman has. I have to say that I have your healthy fear of the Government changing the rules on me from that experience some years ago.

Mr. RONCALIO. You went for 1 year and came back 4 years later.

Mr. BROWN. So I think I know what is eating you up. But, it comes from a different presumption.

Now, the \$15 billion thing, that part bothers me. Can you tell me out of that—I shouldn't say it bothers me. I think the problem is that we are—\$15 billion is a small project for the Federal Government.

Can you tell me what kind of guarantee we are talking about here on the part of the companies that are represented? What do you think out of that \$15 billion would be what you are being asked for?

Mr. GOLDSMITH. Well, sir, Alcan has not structured their proposal. They simply first talked about guarantees of the project. Then they corrected that in letters to the Assistant Secretary of the Treasury, and said what we really mean is guaranteeing the overrun.

We don't know what the overrun is going to be, but if we take the General Accounting Office number, it is going to be \$4 billion or more.

Mr. BROWN. In other words, do I understand it that the Alcan is going to put up the \$10 billion?

Mr. GOLDSMITH. They think they are going to put up the \$10 billion. I question, sir, that they can raise \$10 billion.

When we were part of this Canadian Arctic gas group, we had a study made by Morgan Stanley, one of the most prestigious banking firms in the country, as to the capacity of capital markets for a single project, as well as for the financial capacity of the gas transmission industry.

At the same time, we estimated the total American gas transmission industry had the ability to raise between \$1.5 and \$2 billion of additional capital, if they suffered a one grade reduction in their bonding rating.

They may be a little richer today than 4 years ago. But, they are going to have trouble raising \$2 billion of equity that they propose to put in this pipeline. Their credit won't be worth a darn as far as borrowing any money on their credit.

I don't think they intend to put their credit behind it. What they proposed to do is to form corporations that will be the obligors, of which they will merely be stockholders. I have not heard anywhere they intend to guarantee the debt.

Mr. RONCALIO. They committed 100 percent of equity capital.

Mr. GOLDSMITH. That is right, but not this debt that would be \$7 billion without overruns, and would be \$10 billion with overruns. They are not guaranteeing that debt. Lenders don't loan money unless people are going to repay whether or not the project is completed.

Atlantic Richfield's credit wouldn't be of any use to the project if we were required to take on one-third of the obligation, and if the project were not completed, and \$13 billion had been spent and then you collapsed the project.

People wouldn't loan money on that basis with Arco's guarantee, or with Sohio's, if I may say so.

Mr. RONCALIO. You didn't have any trouble getting money to build the TAPS.

Mr. GOLDSMITH. That is the reason our credit is now of lesser value today. We have extended ourselves. We have a debt ratio in excess of 40 percent, which is the second highest of the 20 largest oil companies in the United States.

We have no apologies to make for not helping the energy situation in the United States. We have been spending \$2 billion a year for each of the last 3 years, and expect to spend roughly that much for the next 5 years of capital spending.

The total capital spending of all American businesses is only \$130 billion. We have been spending \$2 billion yearly in capital investments, to help to respond to the energy situation.

Mr. BROWN. Let me interrupt you just a minute. The Chase econometrics figures on the coal conversion program alone, in the President's energy program between 1981 and 1985, the time frame in which we will be building this project, is going to be—the

requirements for capital expenditures are going to be—\$180 billion in that 5-year period.

So, that is going to chew up a good hack of that \$130 billion.

Mr. GOLDSMITH. That is right. We have about 2 billion tons of coal. We would like to use some of that financial capacity to develop that coal.

Mr. RONCALIO. You are not talking about the same thing. You are talking about gross capital investment. You are talking about capital expenditures.

Mr. BROWN. I am talking about fixed investment, \$180 billion is the Chase econometrics estimate of the cost of coal conversion program from 1981 to 1985.

Mr. GOLDSMITH. That is right.

Mr. BROWN. And you just said that the average annual investment is what?

Mr. GOLDSMITH. By our company is \$2 billion.

Mr. BROWN. No; by all American industry.

Mr. GOLDSMITH. All industries, \$130 billion. It is predicted next year it will be \$140 billion.

Mr. RONCALIO. I submit for the record that you are talking about different things. The investment capital, gross capital investment in the United States, is \$260 billion a year, which has nothing to do with capital investments that you gentlemen are talking about.

Mr. BROWN. Gross capital investment. He is talking about industrial investment and gross capital investment—

Mr. RONCALIO. Investors' money.

Mr. BROWN. Gross capital investment I think includes housing and agriculture and a lot of other things that are not considered industrial investment. We are talking about industrial investment. When you are talking about the coal conversion costs, Chase econometrics was talking about industrial investment, which if you take the \$180 billion and divide it over a 5-year period, it is, you know, something like \$30 to \$40 billion a year.

Mr. GOLDSMITH. That is right. In fact, we are opening next month the largest coal mine in the United States, in Wyoming, with a capacity to produce 20 million tons of coal a year. You are familiar with that mine, sir.

Mr. RONCALIO. Yes.

Mr. GOLDSMITH. We are going to invest \$205 million. We would like to build 8 or 10 more like that over the next 10 years. And the country needs them, but we cannot use our financial capacity to guarantee other people's debts, and then develop coal mines.

Mr. BROWN. I would like to conclude my questioning with just one other point. Would you each—well, I guess you cannot get together to discuss this.

I guess I ought to ask of you, then, because you are the financial officer here—would you advise me what the interests costs would be—maybe I should ask for each company—what the interests costs would be on the financing—I am sorry, on the guaranteeing of the loans if you had to come up with the money for that and what that does to your ability to meet your other obligations?

Do you understand what I am asking?

Mr. GOLDSMITH. Yes.

Mr. BROWN. Because if you have to come up with the money, then your financing costs alone for the money that you would be guaranteeing—I would like to have that related to the debt that you now carry, and what it would do to that debt, your payments, the payments that you are now making, on the debt that you carry.

Do you have any question about what I am after? I have said it very badly, I know.

Mr. GOLDSMITH. The differing interest costs that we would incur if we were forced to produce on guarantees for this project as far as the cost of borrowing money.

Mr. BROWN. That is right. I am not sure, first, exactly what you think the guarantees will amount to and what your share of that will be and then I want your projection based on your other company projections of what you would be obliged to pay in interest rates on the carrying charges of that as opposed to the carrying charges you now have on your current debt.

I have the feeling—I am not a stockholder, I just have an interest because it serves my area—that Sohio would be put to the wall by that.

Mr. DINGELL. I think that is a very interesting question. Gentlemen, if you would submit that for the record, it would be most helpful. We will in each instance be very grateful for that.

[See letters dated Nov. 11, and Dec. 6, 1977, pp. 527 and 530.]

The Chair recognizes now the counsel of the subcommittee, Mr. Braun, for the purpose of asking questions.

Mr. BRAUN. We would like to get an idea of the respective shares of oil and gas reserves in the Prudhoe Bay that are held respectively by Exxon, Arco, and Sohio. From the testimony we can glean that Exxon apparently controls 33 percent of the gas, and Sohio 27. Does that leave Arco's share at 40 percent approximately?

Mr. GOLDSMITH. Our share of the reserves is 7.5 trillion cubic feet, which is the same as Exxon's. That would be the same percentage.

Mr. RAWL. Let me just give you specifics as to ownership. You know there is the oil zone and the gas cap unit. Exxon and Arco each own 20.27 percent of the oil zone, and 42.12 percent of the gas cap unit.

Then you can multiply these figures times the reserves that Mr. Miller gave in terms of what was in the oil zone and in the gas cap, and in our case and Arco's case you come up with about a third of the proven gas reserves in the field.

In Sohio's case it was the other figure. There are other people in these units, too, smaller interests in these units.

Mr. BRAUN. All right.

Mr. Goldsmith, you said that Arco had a high degree of confidence in the Prudhoe Bay performance. The question is, will Arco and Exxon and Sohio and the other Alaskan producers then guarantee the delivery of 2 Bcf a day to Alcan?

Mr. GOLDSMITH. No, sir. Mr. Rawl, do you want to testify?

Mr. RAWL. We will not be able to guarantee the delivery of the gas. Studies have been made not just by these companies. The State has made studies. There have been outside parties that made studies. The FEA looked at it and had studies made.

The gas is there. It is everyone's understanding and feeling and technical view that 2 Bcf per day would certainly not strain that gas reserve. But when you talk about guarantees, you are talking about in effect guaranteeing loans and everything else. You are talking about guaranteeing the viability of this project.

We have not had to do that in selling gas in the past, and it would not be our intention to do that at this time.

Mr. DINGELL. I am curious. The question, as I understand it, was would you guarantee the delivery of 2 Bcf. It wasn't would you guarantee financing and other things.

Mr. RAWL. Congressman, what do you mean "guarantee"?

Mr. DINGELL. Guarantee delivery of gas.

Mr. RAWL. Let's say the field then because of State action or regulatory action by the State oil and gas commission, they decide—

Mr. DINGELL. I can't guarantee what any State is going to do.

Mr. RAWL. But you are in this case, sir, because if they tell us all you can produce is only 1.8 billion—

Mr. DINGELL. You are talking about them imposing allowables.

Mr. RAWL. Yes, sir, something of that sort.

Mr. DINGELL. Within that bounds, I think—with that reservation—why don't we phrase the question differently and say could you assure 2 Bcf.

Mr. RAWL. I think we can assure it. But if some external force prohibits us from delivering, and that has happened in places—

Mr. DINGELL. Let me explain the reason for the question of counsel. We have over the years had great controversy, as I am sure you are aware, over the fact that the contracts would provide for delivery of a given amount of gas, which would not be equaled over the life of the contract.

I think the question relates to the question of whether in point of fact 2 Bcf would come into the pipeline on a daily basis.

Is there any controversy over that point, that we could be assured that on a daily basis 2 Bcf would enter at least the northern end of the line?

Mr. RAWL. Yes, sir, I think you can be assured of that. But the word "assurance," based on all the technical knowledge and know-how and so forth, and external factors you have to take into account here, is a lot—

Mr. DINGELL. If you have an earthquake up there or something of that sort, it is pretty clear to me that 2 Bcf is not going to be going into the line.

Mr. RAWL. When you say guarantee, I felt like you are talking about that as if gas doesn't flow, we end up paying the tariff for nonflowing gas.

Mr. DINGELL. Counsel advises me he was not contemplating financial guarantee in this.

Mr. RAWL. Contemplating a throughput guarantee, though, which in effect—Mr. Gammage talked about that, in terms of underwriting bonds for the State of Texas, you just cannot guarantee throughput. We can assure you that based on our studies, and studies by others, and by the financial advisers of all of these projects, all three of these projects, and other projects in the State,

that the gas is available and it should be reasonably expected that it will be 2 Bcf or more for this project.

Mr. DINGELL. Can you give us some judgment as to what is the minimum price that enables you to sell the gas of your three companies into the line? What is the price at the pipeline head up there at the northern end?

Mr. GOLDSMITH. Let me try that, if I might, Chairman Dingell.

We, of course, asked for natural gas deregulation. Let the marketplace decide. That is the easiest.

Mr. DINGELL. I understand your position well. Although I disagree with it, I am not disposed to quarrel with you about it at this time.

Mr. GOLDSMITH. All right. Stepping from that, and looking at a regulated situation, we have asked that the price in Alaska be exactly the same as the lower 48 States. There are three reasons—

Mr. DINGELL. In other words, you are asking for the same prices as would be given in the lower 48?

Mr. GOLDSMITH. Right. There are three reasons for that, sir. We have been talking about reservoir performance a lot today. Well, until you have lived with a new wife or lived with a new reservoir, you don't know what is going to be required to keep her happy, as I understand.

But, we could be forced to incur very substantial capital investments and operating expense costs to maintain the reservoir once gas is produced.

One possibility—and here I am getting into Mr. Rawl's field—water flooding is a possibility. That could be a very substantial cost.

The second reason that you need a legitimate gas price in relation to oil is the trade-off aspect between oil and gas as commodity values. To the extent that there has to be any sacrifice temporarily or otherwise of oil production for gas or gas production for oil, if they are valued roughly equal, on a commodity basis at the well-head, those tradeoffs can be made in the best interests of the consumer and the producers and the State of Alaska.

But, if they are artificially far apart, you cannot operate on an economic basis. You get into an adversary position with the State of Alaska and an adversary position even among the producers, who have differing ownership interests.

Mr. DINGELL. Now, there has been the question raised from time to time about State and local taxation, things of that kind.

Are there any comments that you might make about the adverse effect of State and local taxation on this natural gas in Alaska, which might jeopardize the project either from the production end or from the transportation end?

Mr. GOLDSMITH. If we had an artificially low price for the gas the State of Alaska would feel they were being mistreated by the Congress or by the FERC, and they would consider some of the same actions considered in the case of oil, by excessively taxing the gas.

Mr. DINGELL. I am talking about things like boroughs, which would impose taxes on land up there.

Mr. GOLDSMITH. Excessively tax the gas. I would not expect, if the State of Alaska receives the same price as the lower 48, that the State of Alaska would tax us any different than the lower 48 States.

In fact, as I understand the position of the Commissioner of Revenue and the Governor of the State of Alaska they will tax equal to the highest State in the Union, but not greater than that. But, that assumes they are getting a fair price to begin with.

Mr. DINGELL. Gentlemen, Mr. Rawl, or would any of our other panel members like to make a comment on that particular point?

Mr. RAWL. Mr. Chairman, I am very reluctant, of course, to discuss price with a couple of competitors sitting here. I don't think I am in a position to forecast what the costs will be and how you allocate costs.

This is a typical butcher shop type of thing, only it is the largest butcher shop we have ever done business in, in terms of allocating costs. But, I will say that I do feel that Alaska should not be discriminated against in terms of whatever legislation transpires.

Mr. DINGELL. I have a curious position on discrimination. In all instances I am against it, whether it is for or against anybody. That goes to color of hide, or where a fellow happens to live, sex, race, or anything else. So in that at least I think we agree.

Mr. RAWL. In terms of the taxing authorities up there, I would think they would be reasonable in that regard. They certainly have an interest, too, in seeing that this gas goes to market. They have some other problems they would like to see some of the gas used in the State and so forth.

Mr. DINGELL. Do you have any reason to assume superboroughs might come into being with monstrous taxes being imposed on the product of the whole North Slope, or something of that kind?

Mr. RAWL. I have no reason to believe that.

Mr. DINGELL. Do any of you gentlemen have that concern? We have not heard from you, Mr. Miller.

Mr. MILLER. I will comment on both of those issues, if you would like.

On the first one, the price allocation is a very difficult thing, particularly the regulatory aspects and the uncertainty we are dealing with. But I think as a general matter whatever price is established has to be looked at in the context of the overall economics of the project, so that it is an economically viable project, because that is something that lenders are going to insist upon before they put any money into it.

Mr. DINGELL. The question is at what point do these taxes and so forth convert this from a viable project to one which is not viable.

Mr. MILLER. I am not sure what point that is. But in terms of the price that goes to each segment of this operation, I think you have to have a price and a return that will attract the capital into it.

In terms of the wellhead price, I think you have to give thought to what is going to be necessary to stimulate additional exploration and production on the North Slope.

If that price isn't deemed to be sufficient to spur that exploration and production, you are not going to get additional supplies developed. So, that has to be considered.

I think if that situation developed, where additional exploration, perhaps additional finds, and then production, is considered as part of the overall pricing philosophy, I think the State would be less inclined to be overzealous in their taxation policies.

If something was done to preclude additional exploration, and therefore deprive the State of additional revenue that might be generated by finding further supplies of natural gas or oil, perhaps they would try to offset that.

Mr. DINGELL. I yield.

Mr. RONCALIO. I thank you.

Gentlemen, I want to wrap up my feelings in this regard, to all three of you, and it is with every ounce of sincerity I have. I am a little surprised. I reread your statement but I think I sensed in the statements something less than enthusiasm over this choice. Yet I find Atlantic Richfield contributed money to help with the Trans-Alaskan originally, but the one you had not backed, you feel like a fellow leaving a racetrack, you bet on a couple of horses and somebody else stepped in, and I sense that coolness in your feelings today.

In the common situation I have to state this, gentlemen: I hope whether you believe or disbelieve who got the thing, you recognize the vast importance to this Government that this be completed. It is the President's choice. He picked it, Canada picked where it would go, and the environmentalists picked in Alaska.

In this Congress we face every day almost like military bullets—I find deep resentment and animosity for the gas and oil industry. There are bills for divestiture, horizontal and vertical. There is a bill I just about killed last week by bringing out of the blue a motion to table, my chairman Mo Udall's bill to prohibit your company from having any OCS lease. I lost by three votes. I think he had some proxies in his pocket, but it was close, three votes.

Downstairs this morning I introduced two men from Wyoming, both in the uranium filing business, with serious charges of almost criminal conspiracy toward McGee and Gulf Oil Co., two in your business, over what they allege to be improper filings of uranium, thus conspiring to control all of the various types of oil, gas, uranium, and so on.

It is tough to have to fight this off day after day, week after week, and to come up with something we can all live with, I think to see you progress, develop and go after the resources and bring them out and make it possible, and tax you and spend your taxes wisely. I understand that to be democracy.

It gives us political freedom, gives you economic freedom. I think it is the best system in the world, but I do not think we are moving in the right direction when I feel a little bit of hostility here toward the fact that there is a group now ready to put out \$10, \$12, or \$13 billion to do this, and all they want is some sign that you might sit down with them and let them help you make \$25 or \$30 billion more than you are going to by moving your product to the market.

I make my point with a degree, I hope, of friendship. I worked for your company. You hired me when I lost my Senate race, and for 4 years I got you good rates in the field on secondary recovery.

You have problems, not with me. I am leaving here in a year. You have to understand that.

In three different places hostilities are toward the oil company; downstairs, the uranium hearings, Mr. Moss, here, and in Interior on divestiture.

John Bingham will have one in a few months that is even stronger. It is the balance trying to move in the right direction and keeping 220 million people reasonably happy. That is our problem. I would like a little bit of a response.

Mr. MILLER. I did not get an opportunity earlier to comment on whether or not we were disappointed with the selection. You seem to feel that perhaps that had a bearing on what we had to say here today. I can assure you in Sohio's case, and I suspect in the other two, it did not. We do not perceive significant differences in terms of what our realization is going to be with any of the proposals that were advanced, such that we felt any disappointment in terms of whatever proposal was selected.

I think the one that we would endorse, support, and would hope would move forward is the one that could get us into production as soon as possible, but I think we would still be here regardless of what choices were made in that regard, because there are some fundamental issues here that do not relate to the selection of a project out of the three.

All three of them are involved with moving gas from a remote area through a very expensive system, regardless of which one was selected, to a regulated market, where prices are artificial. I think that is the fundamental underlying difficulty, and our enthusiasm would probably not be any greater had another project been selected.

Mr. RONCALIO. I thank you very much.

I heard each of you sort of criticize Alcan. Maybe Alcan is still busy pinching themselves. They have only been notified for a couple of weeks.

Mr. RAWL. With all due respect, I did not criticize Alcan. I am probably unemotional enough to not express my enthusiasm, but as I said in my statement, we are just delighted that there is a project, and that the administration supports the project.

Mr. RONCALIO. Thank you very much. I appreciate it.

Mr. GOLDSMITH. Could I also respond to your comments, and I thank you for them.

Please let me correct any impression that I was criticizing Alcan or thinking it was the worst of the three alternatives. We do not. We are most concerned about having the project approved, that is the most expeditious and in the best interests of the public. Alcan has been selected on that kind of criteria.

My only displeasure has been one of this attempt to extort producer involvement. As to the atmosphere, as you have pointed out, sir, from your excellent remarks about what is happening in Washington today with the oil industry; the threat of divestiture, especially, is the very kind of atmosphere in which one could not prudently invest the shareholders' money in a pipeline investment.

Mr. RONCALIO. I understand loud and clear.

Thank you very much, Mr. Chairman.

Mr. DINGELL. Gentlemen, thank you all. You have been patient and we thank you for your assistance. You have helped us greatly, as my good friend indicates. Thank you all for your presence here. I think you agree that it has been a useful meeting.

[The following letters were received for the record:]



THE STANDARD OIL COMPANY

MIDLAND BUILDING, CLEVELAND, OHIO 44115

November 11, 1977

JOHN R. MILLER
VICE PRESIDENT
FINANCE & PLANNING

The Honorable John D. Dingell, Chairman
Subcommittee on Energy and Power
House Interstate and Foreign Commerce Committee
3204 House Annex 2
Washington, D. C. 20510

The Honorable Teno Roncalio, Chairman
Subcommittee on Indian Affairs and Public Lands
House Interior and Insular Affairs Committee
421 House Annex 1
Washington, D. C. 20510

Dear Chairmen Dingell and Roncalio:

During the course of my testimony on October 14, 1977 before the joint hearings on the President's decision on an Alaska Natural Gas Transportation System, Congressman Brown asked me to submit, for the record, an estimate of the interest costs which would be incurred by The Standard Oil Company (Sohio) if, as a producer of gas from the Prudhoe Bay field on the North Slope of Alaska, we guaranteed a portion of the debt of the gas pipeline and, subsequently, had to perform under that guaranty. Furthermore, Congressman Brown asked that I comment on what this additional burden would do to our ability to meet other obligations.

In Sohio's case, these questions must be answered in the abstract since we cannot undertake to guarantee what might be considered by some to be our proportionate share of the debt associated with the gas pipeline project. The reasons for this were provided in my testimony. The prudence in taking on additional burdens of this magnitude was also addressed in my testimony. For the sake of brevity, I will not repeat those comments here, but I do want to reference them at the outset.

Sohio's financial commitment to develop our crude oil interests in the Prudhoe Bay field and to fund our share of the cost of constructing the Trans Alaska Pipeline System, tankers and other related facilities to transport North Slope crude oil to market is enormous. To date we have borrowed approximately \$4.5 billion for these purposes and, we estimate that total borrowings will amount to about \$5.2 billion. The two major debt rating agencies, Standard and Poor's and

THE STANDARD OIL COMPANY

The Honorable John D. Dingell
The Honorable Teno Roncalio

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November 11, 1977

Moody's, have rated Sohio's corporate debt "AA-" and "A", respectively. These ratings have been made with full knowledge of our financial requirements and complete understanding of the financial limitations imposed upon Sohio by the restrictive covenants contained in certain of our loan agreements. If we were to assume a hypothetical situation wherein Sohio was somehow relieved of these restrictions and Sohio agreed to enter into a guaranty of gas pipeline debt, we must first consider the reaction of the financial community to this undertaking in order to estimate the cost. We have told members of the financial community on numerous occasions in the past that we believe Sohio is approaching the limits of prudence with respect to the aggregate level of obligations being incurred and that we intend to reduce our debt-equity ratio to a more traditional level. Further exposure, especially in connection with a project of the magnitude of the gas pipeline, would most likely be viewed by the investment community as a decision, on our part, to reverse our position and to adopt even more liberal financial policies, thus creating greater risk for all of Sohio's creditors. As a consequence, our debt ratings would probably be downgraded.

If Sohio's debt ratings were to be lowered, the company's ability to honor its commitment by borrowing an amount equal to that guaranteed is highly questionable. If borrowings of this magnitude were possible, however, the additional debt would certainly be costly. The exact cost of such debt is difficult to predict, but a penalty of 1/2 of 1% for the lesser quality credit would appear reasonable if not, in fact, understated. Thus, using the current interest rate of approximately 8.25% for new issues of long term debt for industrial companies rated single A by Moody's, the annual interest rate for debt issued to honor Sohio's gas pipeline debt guaranty would be about 8.75%.

The nature of producer guaranties and the allocation of such guaranties among the various producers has never been set forth by the gas pipeline project's sponsors. However, assuming that the producers would be "the lenders of last resort" and, further assuming that the guaranties would be allocated on the basis of gas ownership, Sohio would be obligated to guarantee approximately \$2.7 billion of debt. This amount is based upon a \$10 billion cost estimate, cost overruns of 25%, debt financing of 80% of the overall cost of the project, and Sohio's approximate 27% share of the proven Prudhoe Bay natural gas reserves. Applying the 8.75% interest rate to the \$2.7 billion of debt if Sohio were to be called upon to borrow this amount in order to honor its guaranty, the annual interest charges would amount to approximately \$236 million. Sohio's interest expense on existing debt is estimated

THE STANDARD OIL COMPANY

The Honorable John D. Dingell
The Honorable Teno Roncalio

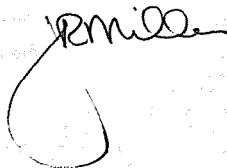
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November 11, 1977

to be about \$400 million for the coming year. Obviously, an exposure to additional interest charges in the amount of \$236 million would cause grave concern not only to Sohio's management but to the investment community as well. Any of the traditional yardsticks for measuring corporate creditworthiness, such as debt-to-equity ratios or coverage of fixed charges, if applied to Sohio under the circumstances would find the company's financial structure to be unsatisfactory. Indeed, such an exercise would support the rationale underlying the restrictions which have been imposed upon us by our creditors.

Any borrowing capacity which Sohio now has must be preserved to meet unforeseen contingencies associated with our current endeavors. To conduct our financial affairs otherwise would seriously jeopardize our ability to complete the development of, sustain production of, and maximize the ultimate recovery of oil from Prudhoe Bay and would virtually eliminate our ability to invest in other projects.

I trust that you will find this letter responsive to Congressman Brown's inquiry.

Sincerely yours,

A handwritten signature in dark ink, appearing to be "JRM", with a large, sweeping loop underneath the name.

JRM/amd

cc: Congressman Clarence J. Brown
Congressman James P. Johnson

EXXON COMPANY, U.S.A.
POST OFFICE BOX 2180 • HOUSTON, TEXAS 77001

L. G. RAWL
EXECUTIVE VICE PRESIDENT

December 6, 1977

The Honorable John D. Dingell
Chairman, Subcommittee on Energy and Power
House of Representatives
Washington, D. C. 20515

The Honorable Teno Roncalio
Chairman, Subcommittee on Indian Affairs
House of Representatives
Washington, D. C. 20515

Dear Congressman Dingell and Congressman Roncalio:

During the joint House Subcommittee hearings on October 14, 1977 regarding the President's Decision on an Alaskan Natural Gas Transportation System, you requested that the producers of Prudhoe Bay gas submit for the record additional information concerning gas conditioning plants in the United States. Congressman Clarence Brown of the Subcommittee on Energy and Power also asked about the impact on Exxon's financial condition and the cost of borrowed funds if Exxon were to participate in the Alcan project. I hereby submit the following response to those questions.

Ownership of Gas Conditioning Plants

During the hearings, we were requested to submit a chart which identified gas conditioning plants in the United States and owners of such plants. Congressman Brown further requested that the unit value or cost of such plants as compared to the unit value or cost of the proposed Alcan gas conditioning plant be documented. Insofar as we can determine, the data required to satisfy these requests are not available to us. It could be obtained only through a massive survey of all buyers and sellers of natural gas or the FERC could obtain most of such data from its files. We have documented, however, and are submitting information on Exxon's interstate gas contracting. This clearly demonstrates that the current practice is for purchasers, not producers, to accept the responsibility for conditioning gas to pipeline quality.

In June 1974, the FPC (now FERC) issued Opinion 699 specifying for the first time that interstate price ceilings would apply at a point upstream of any required conditioning. Price adjustments would not be allowed even if the producer were obliged by contract to provide conditioning. Since that time, the large majority of all new interstate gas sales from Exxon-operated properties (excluding only those where conditioning provisions had been established by prior negotiations) have been made under contracts which define the responsibility for conditioning to be an obligation of the buyer. The attached table shows that for such sales Exxon is responsible for conditioning less than four percent of the gas. We believe that these data clearly support our contention that interstate purchasers have accepted conditioning obligations in essentially all such new contracts entered into during the last three years.

As you are probably aware, the report submitted by the Committee on Interior and Insular Affairs of the House of Representatives entitled, "Approving the Presidential Decision on an Alaska Natural Gas Transportation System and for Other Purposes", included the following statement on page 8: "Exxon, although preferring not to help finance the conditioning plant, noted, however, that 'now everything is subject to negotiations obviously'". We object to the inference that was drawn from this quotation taken out of context. For the record, we again emphasize, as we did in the hearing, that Exxon does not plan to participate in the financing of the conditioning plant. Such facilities are an integral part of the transmission system.


Financial Participation

As I stated in my testimony, Exxon is not in the interstate gas transmission business and does not know the details of the financing of the proposed gas transmission system. We continue to feel that the primary focus should be on the reasons for the uncertainty that the interstate gas transmission industry lacks sufficient financial capacity to meet its capital requirements. Here we have a firmly established mature pipeline industry, a project within the realm of modern technology, a more than adequate proved supply of gas, and an insatiable market. The only impediments to financial viability are the possible governmental restrictions. If government would remove rather than impose regulatory risks and affirmatively adopt regulatory policies which would encourage the established industry to carry out this project, financial concerns would be minimized.

With regard to our cost of participation, however, borrowing would be only a small part of the overall cost. The Company is not able to finance its needs for capital with debt, but must also use more expensive equity in order to support debt financing. In fact, Exxon currently has about \$4 of equity for every dollar of long-term debt in its capital structure. This debt-equity ratio is the foundation of

Exxon's capability to participate in large, high risk projects in the energy industry. Therefore, assigning only a cost of debt to our participation would seriously underestimate the true cost of financing. Even if we should assume that Exxon's entire participation in the Alcan pipeline could be financed at rates for debt only, other projects would have to be financed with a disproportionately higher share of more expensive equity in order to maintain the Company's overall capital structure. In summary, while Exxon's cost of borrowing is currently about eight percent before tax, a more realistic cost of participation would be Exxon's weighted average cost of capital which is several times higher than our cost of borrowing.

Sincerely yours,



LGR:pl

Attachment

C- Members of the Subcommittee on Energy and Power
Members of the Subcommittee on Indian Affairs

TWENTY-ONE EUSA INTERSTATE CONTRACTS FOR
EUSA-OPERATED PRODUCTION CONCLUDED SINCE JUNE 1974 WITH
OPPORTUNITY FOR NEGOTIABLE GAS CONDITIONING OBLIGATIONS

Contract No.	Field	Buyer	Conditioning Obligation*	
			Buyer's	EUSA's
5770	W. Cameron 616	Columbia	26.1	
5771	W. Cameron 616	Trunkline	26.1	
5772	W. Cameron 616	Natural Gas P/L	20.9	
5773	W. Cameron 616	Northern Natural	31.3	
5774	Eugene Island 332	Columbia	4.6	
5775	Eugene Island 332	Northern Natural	5.5	
5776	Eugene Island 332	Natural Gas P/L	3.7	
5777	Eugene Island 332	Trunkline	3.7	
5714	Eugene Island 332	Columbia		0.9**
5731	Eugene Island 332	Natural Gas P/L		0.4**
5734	Eugene Island 332	Trunkline		0.6**
8544	Hitchland	Northern Natural	2.5	
3401	Wilshire	El Paso	0.1	
3455	Three Bar	Northern Natural		3.0
3468	Red Lake	El Paso	1.1	
3307	Eunice	El Paso	***	
3354	Fairview Mills	El Paso	***	
3395	Cooper Jal	El Paso	***	
3469	Laguna Grande	El Paso	***	
3504	Azalea	El Paso	***	
5718	Eugene Island 332	Northern Natural		***
Totals (21 Contracts)			125.6	4.9

*Figures shown are recent MMcf/D deliveries.

**Casinghead Gas.

***Negligible volumes.

Mr. DINGELL. The subcommittee is not in order. We do again remind our guests that this is a meeting of a congressional committee and it is the duty of the Chair to keep order, which I fully and vigorously intend to do. I would suggest that all who wish to converse should do so elsewhere.

We thank all of our guests for their assistance to us in maintaining order in the committee room.

Our next witness is Mr. Nicholas C. Yost, General Counsel Designate of the Council on Environmental Quality.

Mr. Yost, we are happy to welcome you. We note you have two of your associates with you. If you will, each gentleman identify yourselves for purposes of the record, we will be most pleased to receive your statement.

STATEMENT OF NICHOLAS C. YOST, GENERAL COUNSEL-DESIGNATE, COUNCIL ON ENVIRONMENTAL QUALITY, ACCOMPANIED BY BALLARD JAMIESON, COUNSEL, AND MALCOLM BALDWIN, SENIOR STAFF MEMBER, PROGRAM STAFF

Mr. BALDWIN. I am Malcolm Baldwin.

Mr. JAMIESON. Ballard Jamieson.

Mr. DINGELL. What are your titles?

Mr. BALDWIN. Senior staff member.

Mr. JAMIESON. Counsel.

Mr. DINGELL. Mr. Yost, we are delighted to have you with us. Your optimism in saying "Good morning" is much appreciated.

STATEMENT OF NICHOLAS C. YOST

Mr. YOST. I crossed that out in my notes and put in "Good afternoon."

Mr. DINGELL. We will put your full statement in the record and recognize you for summary.

Mr. YOST. To summarize then briefly, we appreciate the opportunity to testify before the two subcommittees. Given the shortcomings of any accelerated procedure, the process through which the Alaskan gas transmission determinations are being made has worked well and has shown how quickly and efficiently energy issues of national significance can be addressed without sacrificing the Nation's commitments to environmental quality.

This whole process has taken place in less than a year. As something of a substitute for judicial review, the Council was asked to review the legal and factual sufficiency of the environmental impact statements. While as a matter of principle we support judicial review rather than a substitute for it, this has, we felt, worked well, and as stated in our statement and at rather great length in our report to the President, we have concluded that the environmental impact statements were legally and factually sufficient under NEPA and provided an adequate basis for selecting the corridor and basic technology for an Alaska gas transmission system.

There were problems with the documents, and of course the documents must be seen for what they are, overall impact statements which do not go into precise alignments of where the line crosses such and such river, and so on. That has still to be done, and I am sure that the presence of NEPA will continue to insure

that it is done right. However, for the purposes of this decision and overall technology and overall corridor selection, we feel that the impact statements are sufficient.

With that I will conclude my summary, unless there are questions from the members.

Mr. DINGELL. Mr. Yost, you made a comment in your statement, I believe, that is most helpful to us here. You said "By insuring environmental full disclosure for each of the competing pipeline proposals, and a full consideration of reasonable alternatives, this statute," referring to NEPA, "contributed to the full development of the Alcan proposal and provided the basis for its ultimate approval."

Then you say earlier, "At CEQ, we view this process as a tribute to the National Environmental Policy Act and its key procedural requirement—the environmental impact statement."

Then you say after that, "After extensive environmental reviews, before and after passage of the Alaska Gas Act, the Alcan proposal emerged from the EIS process as the most environmentally acceptable alternative."

Further you say, "It was NEPA that led us to the Fairbanks corridor alternative and the Alaska Gas Act that helped get this proposal here on time. This is a true NEPA success story."

I think these are points that are of great value and I do not want them missed in your appearance today, even though I suspect out of modesty you have chosen to ignore them in your summary.

Mr. Yost. I am sure praise for NEPA is not needed to NEPA's author, but this certainly has been a success story of how NEPA is supposed to work in focusing the attention of decisionmakers and in this case of businessmen looking for a business opportunity on what was the environmentally soundest alternative, and that was the one which was ultimately selected.

[Mr. Yost's prepared statement follows:]

Mr. Chairman, I am pleased to have the opportunity to discuss the Alaska Gas Act and the role of NEPA in its passage. The Alaska Gas Act is a landmark piece of legislation that will provide for the development of the gas resources of Alaska. NEPA has played a significant role in this process, ensuring that the environmental impacts of the proposed gas pipeline are fully understood and that the most environmentally sound alternative is selected. I believe that the Alaska Gas Act is a true success story for NEPA, as it demonstrates the effectiveness of the Act in focusing the attention of decisionmakers and businessmen on the environmentally soundest alternative.

TESTIMONY OF NICHOLAS C. YOST
GENERAL COUNSEL-DESIGNATE OF THE COUNCIL ON
ENVIRONMENTAL QUALITY
BEFORE THE SUBCOMMITTEE ON ENERGY AND POWER
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

Good Morning. My name is Nicholas C. Yost. I am the General Counsel-Designate of the Council on Environmental Quality. I am appearing today on behalf of the Council. I am accompanied by Ballard Jamieson of our legal staff and Malcolm Baldwin of our program staff.

We appreciate this opportunity to testify before the Subcommittee on Energy and Power as the process of selecting an Alaskan Gas pipeline enters its final stages. Given the shortcomings of any accelerated procedure, this process has worked well and has shown how quickly and efficiently energy issues of national significance can be addressed without sacrificing the nation's commitment to environmental quality.

Faced with an urgent national need for additional supplies of natural gas, the Congress acted last year to establish a sound and systematic means for selecting a transportation system to deliver natural gas from Prudhoe Bay to the lower 48 states. The Alaska Natural Gas Transportation Act has gotten the job done -- and in record time. It expedited Federal decisionmaking and resulted in Presidential approval of the Alcan project on schedule -- less than a year after the statute was passed.

At CEQ, we view this process as a tribute to the National Environmental Policy Act and its key procedural requirement--the environmental impact statement. By ensuring "environmental full-disclosure" for each of the competing pipeline proposals, and a full consideration of reasonable alternatives, this statute contributed to the full development of the Alcan proposal and provided the basis for its ultimate approval.

As you will recall, the Fairbanks Corridor alternative was first identified as the environmentally preferable route while the Department of Interior and the Federal Power Commission were preparing environmental impact statements for the El Paso and Arctic Gas pipeline systems. Prompted by this favorable analysis, Alcan refined the Fairbanks Corridor alternative and entered the competition on this basis. After extensive environmental reviews, before and after passage of the Alaska Gas Act, the Alcan proposal emerged from the EIS process as the "most environmentally acceptable" alternative.

In short, it was NEPA that led us to the Fairbanks Corridor alternative and the Alaska Gas Act that helped get this proposal here on time. This is a true NEPA success story. The rigorous pursuit and evaluation of alternatives mandated by that Act resulted in the ultimate selection of an alternative more environmentally acceptable than either initial proposal.

The Council on Environmental Quality entered this process after the environmental impact statements had been prepared and while the Federal Power Commission was formulating its recommendations for submission to the President. Congress assigned us the responsibility of evaluating the legal and factual sufficiency of these documents and transmitting our views to the President. In the ordinary case, we favor full judicial review of environmental impact statements. So we approached our job much as a court would and held four days of public hearings - two in Alaska and two in Washington, D.C.

In our "Report to the President on Environmental Impacts of Proposed Alaska Gas Transportation Corridors," we concluded that the environmental impact statements were legally and factually sufficient under NEPA and provided an adequate basis for selecting the corridor and basic technology for an Alaska gas pipeline. In our opinion, these documents served their essential purpose of providing responsible officials with the information necessary to make a reasoned choice among the competing proposals. We found that the environmental impact statements analyzed each of the significant issues that we deemed crucial for adequate evaluation of the proposed transportation systems and discussed feasible mitigation measures for reducing environmental effects. The statements had been properly circulated to Government agencies and subjected to public scrutiny as required by the Council's

guidelines, and they contained the necessary written responses to the major environmental concerns expressed by interested citizens and public officials. Nothing which has happened in the interim alters our opinion on the adequacy of these documents.

This does not, of course, mean that the environmental impact statements for the Alcan proposal are perfect. They are not. They have a number of limitations which should be recognized.

For one thing, it was regrettable that there were two environmental impact statements for the pipeline proposals - one by the Department of the Interior and another by the Federal Power Commission. The fact that the statements were so long and detailed made it difficult to grasp the major environmental issues quickly. At the Council, we see the excessive length and complexity of environmental impact statements, and a lack of coordination in their preparation, as widespread and serious problems. The President has asked us to streamline the EIS process in our forthcoming NEPA regulations and we have assigned this goal as one of our top priorities.

But NEPA does not require perfection in an environmental impact statement. The specific shortcomings identified in our report are not by any means fatal flaws. NEPA's overriding procedural goal is to ensure that Federal agencies take a "hard look" at the environmental implications of their proposed actions. We are satisfied that that standard has been met here.

At the same time, it is important to clarify what the Alcan statement does not do. It does not purport, for example, to analyze specific route alignments, project designs, or facility siting. It was not possible, nor necessary, for the environmental impact statements to contain the site-specific and engineering design information that will ultimately be necessary to evaluate detailed plans for the actual on-the-ground, mile-by-mile construction of the Alcan project, should the President's decision be approved by Congress.

In these circumstances, NEPA requires that Federal agencies with authority over the approved gas transportation system continue to review environmental factors and alternatives as the pipeline is being built. This does not mean that an EIS has to be prepared every time the Department of the Interior issues another permit or approves another right-of-way. In fact, if the Alcan project is ultimately approved, it may well be that no additional environmental impact statements are required. But each of the decisions implementing the project, whose cumulative environmental effects will be important in both Alaska and Canada, must be based on a continuing evaluation of environmental factors and alternatives to meet the requirements of NEPA.

In conclusion, the process of selecting an Alaska gas pipeline has shown how much can be accomplished when the Congress and the Administration join forces in the search for solutions to the Nation's energy problems. It has also demonstrated that the environmental analysis required by NEPA can be accomplished within a reasonable time frame and leads to better, more informed decisionmaking.

Thank you.

Mr. DINGELL. I wanted that to be very clearly highlighted in this regard. I think it is important that NEPA be recognized as a mechanism which can provide progress as well as a brake for folks who try to go in the wrong direction. Some folks tend to ignore the real impact of NEPA. NEPA is really the mechanism for quicker, better decisionmaking with full citizen and governmental participation, and with full disclosure, which I regard as being absolutely essential to the resolution of highly controversial issues. So I want to commend you and your associates today for your most helpful statement.

The Chair recognizes my colleagues for questions. I yield first to my cochairman and friend, the gentleman from Wyoming.

Mr. RONCALIO. Do the others have questions?

Mr. Moore.

Mr. MOORE. No questions, Mr. Chairman.

Mr. BROWN. No questions.

Mr. RONCALIO. I have two questions.

Mr. Yost, were you satisfied with the arrangements of the panel when Mrs. Blum was here? Were you here then and had a general discussion of how they would follow the Federal inspector in these regards?

Mr. YOST. I was here for a portion, but not for all of that.

Mr. RONCALIO. The environmental groups have suggested that a citizens advisory council be established to advise on pipeline construction. Do you know of that? You will be working with that to see that it satisfies your requirements?

Mr. YOST. That is the case.

In its report to the President, the Council specifically said that we believe the public would be well served by a citizen monitoring capability staffed and federally supported to observe and report on pipeline construction in compliance with Government standards.

Mr. RONCALIO. That will be fine.

No further questions, Mr. Chairman.

Mr. DINGELL. Gentlemen, you have given us a most helpful statement, and the committee thanks you.

I would like to send you forth from the room with the thanks of the committee, and a very keen appreciation of the fact that I at least look forward to the continued vigor of your agency. We had some small potential for reorganization of the Council on Environmental Quality recently, a matter which did not reach even my most modest approval.

It is my hope that you gentlemen will be enormously forceful and vigorous in defending your turf and seeing to it that the purposes of the National Environmental Policy Act are carried forward, and also that you take all steps necessary to maintain the vigor and place of your agency in the executive department.

I want you to know I watch with considerable interest and not always pleasure the ways that the Executive tries to reorganize itself, particularly with regard to CEQ, and it is my prayer that you will appreciate the abjurations of the Founding Fathers that eternal vigilance is the price of freedom.

I think of continued success within the White House office. I hope you will carry that thought forth from here also.

Mr. YOST. We certainly will, Mr. Chairman, and we appreciate your support both now and in the past, including a couple of months ago.

Mr. DINGELL. You have had it in the past. You have it now, and you will, of course, have it in the future, but I remind you that my support does not mean all that much if you are not vigorous on your own behalf.

The subcommittee will adjourn.

[The following statements were received for the record:]



ADDRESS ALL COMMUNICATIONS
TO THE COMMISSION
CALIFORNIA STATE BUILDING
SAN FRANCISCO, CALIFORNIA 94102
TELEPHONE: (415) 557- 3703

Public Utilities Commission

STATE OF CALIFORNIA

October 12, 1977

FILE NO.

Honorable James A. Haley, Chairman
House Interior and Insular
Affairs Committee
House Office Building
Washington, D. C. 20515

Honorable Harley O. Staggers, Chairman
House Interstate and Foreign
Commerce Committee
House Office Building
Washington, D. C. 20515

Dear Congressmen Haley and Staggers:

On September 23, 1977, I submitted a statement at a Joint Hearing of the House Interior and Commerce Committees relating to the President's decision and report to Congress on the Alaska Natural Gas Transportation System. My statement indicated that since the President's decision was not transmitted to Congress until September 22, 1977, California had not had a chance to fully analyze the President's decision, but that after a further analysis of the decision, California would make its views known to both House Committees.

Enclosed herewith is a copy of my October 12, 1977, statement before the Senate Energy Committee relating to the President's decision. Hopefully, this statement might be placed in the joint hearing record of the House Interior and Commerce Committees.

Very truly yours,

ROBERT BATIMOVICH, President

Enc.

STATEMENT OF
ROBERT BATINOVICH
PRESIDENT, PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA
BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

OCTOBER 12, 1977

Mr. Chairman, Members of the Committee, my name is Robert Batinovich. I am President of the Public Utilities Commission of the State of California. This statement is being made on behalf of the State of California.

On September 22, 1977, President Carter transmitted his Decision and Report To Congress On The Alaska Natural Gas Transportation System as required by Section 7 of the Alaska Natural Gas Transportation Act of 1976. The President's decision favors approval by Congress of the Alcan project to transport natural gas from the North Slope of Alaska to the lower 48 states via Canada. Almost simultaneously with the transmittal of the President's decision to Congress, El Paso Company, the sponsor of the El Paso Alaska project--the only remaining competitor to the Alcan project--dropped its proposal to transport North Slope gas to the lower 48 states. Therefore, for all practical purposes the Congress has before it for consideration only one proposal to transport North Slope gas to the lower 48 states. Of course, this fact should not deter the Congress from determining whether the Alcan project, as presently structured, provides the natural gas consumers of the United States with a viable, economically efficient and environmentally sound method of transporting North Slope gas to lower 48 markets. California is prepared to comment briefly on those portions of the President's decision which most directly affect the interests of California's gas consumers.

A. Approval of Alcan Project

In the proceedings before the Federal Power Commission (FPC) relating to an Alaska Natural Gas Transportation System, the

California Public Utilities Commission (CPUC) and the California Energy Commission (Energy Commission) supported the construction of an overland transportation system through Canada, as opposed to an LNG delivery system, to transport North Slope gas to the lower 48 states. Therefore, we find no fault with the President's choice of Alcan over the El Paso Alaska project.

B. U.S./Canada Agreement In Principle

California is favorably impressed with the contents of the agreement between the United States and Canada with respect to the portion of the Alcan project to be constructed in Canada. The agreement seems to provide a reasonable compromise considering the conditions originally proposed by the NEB and the various Canadian governmental study groups. Hopefully, by the time final certification of the various segments of the Alcan project occurs in late 1978 or early 1979, the Canadian government would have taken major steps to settle the native claims in the Yukon, and the provinces of Alberta, British Columbia and Saskatchewan would have signed formal agreements with the Canadian federal government supporting the U.S./Canadian Transit Treaty.

C. "Western Leg" Delivery Facilities

California fully supports those portions of the President's decision dealing with the construction of "western leg" facilities to deliver North Slope gas and potential additional supplies of Canadian gas (even prior to delivery of North Slope reserves) to markets west of the Rocky Mountains (Decision, pp. viii, 5, 9, 10, 14, 15, 16, 19, 20, 21, 40, 217-234, 236). California submits that the approach taken by the President complies with the mandate of

Section 5(b)(1) of the Alaska Natural Gas Transportation Act of 1976 that the transportation system for North Slope gas which is ultimately chosen

"include provision for new facilities to the extent necessary to assure direct pipeline delivery of Alaska natural gas contemporaneously to points both east and west of the Rocky Mountains in the lower continental United States."

Further, the President's decision regarding "western leg" facilities would make it possible for areas east and west of the Rocky Mountains to obtain direct access to Canadian gas reserves prior to the time the proposed transportation system is ready to deliver natural gas from the North Slope of Alaska. Finally, the President's decision would allow California to support the abandonment of a portion of the existing natural gas pipeline system owned and operated by El Paso Natural Gas Company for conversion to a crude oil pipeline system as part of the proposed SOHIO West Coast to Midcontinent Pipeline Project (SOHIO Project) to transport Alaska North Slope oil to the midwestern and gulf coast areas of the lower 48 states, provided the Federal Energy Regulatory Commission (FERC) makes a reasonable determination as to the fair market value of the facilities to be abandoned.

D. Pricing of North Slope Gas

The President's decision urges that Alaska North Slope gas be classified as "old gas under a new contract" subject to a \$1.45 per mcf ceiling price, as specified in his proposed National Energy Act (Decision, pp. 44-46). California agrees with the President's concern that deregulation of the price of North Slope gas would result in serious uncertainties and delays concerning the development

of an Alaska natural gas transportation system, as well as a strong possibility that this gas would not be saleable and the transportation system would not be financeable. In order to guarantee the marketability of North Slope gas, California submits that the price of the North Slope gas entering the Alcan pipeline system should not exceed \$1.45 per mcf. Unless this ceiling price is maintained, the President's goal of delivering North Slope gas "below the cost of imported oil and substantially below the cost of other fuel alternatives" cannot be met (Decision, pp. vii).

In this respect, this Committee should take notice that in his initial decision in the FPC proceeding relating to the transportation of North Slope gas to the lower 48 states Administrative Law Judge Nahum Litt indicated that a field price of \$1.00/MMBtu (based on 1975 dollars) at the inlet of the transportation system (i.e., after gathering and conditioning) was "close to the maximum that this gas could command in the field and still be marketable under present market conditions" (Initial Decision, pp. 368). Judge Litt stressed that there would appear to be a substantial return to the producers from a total field price at or below \$1.00/MMBtu.

Further, in its recommendation to the President, dated May 1, 1977, the FPC indicated that a field price of \$.50/MMBtu (based on 1975 dollars) was supportable. This price would include the cost of gathering and conditioning with a 15% discounted cash flow after tax rate of return on incremental investment related to gas production. According to the FPC, if recovery of some joint oil/gas costs (gas in the Prudhoe Bay field is associated gas), the field price of the North Slope gas might be higher, but no amount was specified by the FPC for joint oil/gas costs.

Assuming a field price of \$1.45 per mcf at the inlet of the transportation system on the North Slope, the average cost of North Slope gas during the first five years of operation would be \$3.16 per mcf (based on 1975 dollars).^{1/} At this price, North Slope gas would be significantly higher than the Btu equivalent world market price of crude oil based on 1975 dollars.

California urges that Congress decide the issue of pricing North Slope gas in the near future so that the producers and the State of Alaska can proceed to enter into gas purchase contracts with the putative shippers at the earliest possible time.

California also strongly urges that in determining the price of North Slope crude, Congress recognize that a maximum field price of \$1.45 per mcf would provide ample profits to the North Slope producers and the State of Alaska and would provide sufficient incentive to the producers for future development of the North Slope and for some type of financial support of the Alcan project.

E. Financing of Alcan Project

During the FPC proceedings relating to a North Slope gas transportation system, California alleged that without financial participation by the producers and the State of Alaska, some form of federal financial participation would be required for any North Slope transportation system. California also suggested that because of the capital intensive nature of this project, federal financial participation might be required in addition to financial participation by the North Slope producers and the State of Alaska.

^{1/}	Field price	=	\$1.45
	Transp. cost	=	<u>\$1.71</u>
	(5 yr. avg.)		
	TOTAL		\$3.16

The President's decision seemed to confirm California's position that financial participation by the North Slope producers and the State of Alaska was needed to assure private financing of the Alcan project.

The President's decision concludes that the Alcan project, both in the United States and Canada, can be privately financed on the following conditions:

- "1. The equity investment in the project would be placed at risk under all circumstances and the budgeted equity investment be considered the first funds spent. The rate of return on equity would compensate sponsors for bearing this risk.
- "2. Producers and the State of Alaska, as direct and major beneficiaries of this project, should participate in the financing either directly or in the form of debt guarantees.
- "3. The burden of cost overruns be shared by equity holders and consumers upon completion through the application of a variable rate of return on common equity. This would provide a strong incentive for the project to be constructed at the lowest possible cost.
- "4. Provision of debt service in the event of service interruption would be borne by consumers through a tariff that becomes effective only after service commences." (Decision, pp. 100-101)

The decision further states that

"(the) Alcan sponsors and financial advisors have stated the Alcan project can be privately financed. The financial analysis above supports this conclusion. Therefore, it is reasonable to anticipate that the Alcan project can be financed in the private sector.

"Novel regulatory schemes to shift this project's risks from the private sector to consumers are found to be neither necessary nor desirable. Federal financing assistance is also found to be neither necessary nor desirable, and any such approach is herewith explicitly rejected." (Decision, pp. 127)

The feasibility of the proposed private financing plan assumes capital requirements of \$13.2 billion based on projected cost overruns of 32% and an operational date of January 1, 1983.

It is especially noteworthy that the President's decision indicates that producers of North Slope gas could participate in financing this expensive transportation system through guaranteeing some portion of the project debt, consistent with the Administration's anti-trust objectives, especially under a continuing system of price regulation (Decision, pp. 208-211).

California is cognizant of recent statements by Secretary of Energy Schlesinger to this Committee that the Alcan project could be privately financed without any financial participation by the North Slope producers or the State of Alaska. It appears that the capital markets will have to decide whether the President's written decision or the Secretary of Energy's oral statements better reflect financial reality.

California must withhold final comment on the concept of a "variable rate of return" for equity sponsors of the Alcan project until the FPC and the NEB have established the methodology to be used in establishing the variable rate of return. However, California thinks that the "variable rate of return" approach may be a significant method of avoiding excessive cost overruns, as well as the necessity for consumer prepayments or surcharges prior to operation of the transportation system.

Finally, California agrees with the President's statement to the Congress that any unnecessary delay in acting upon the President's recommendation would greatly increase the cost of the pipeline system. Therefore, California urges the Congress to act expeditiously in this matter.

Thank you for the opportunity to submit this statement.

DRAFT
AFY:df
10/7/77

COMMENTS BY
E. I. DU PONT DE NEMOURS AND COMPANY
ON TITLE II, SUBTITLE D, PART A, OF
H.R. 5037 AS AMENDED BY THE SENATE
BY INCORPORATING S. 2057

E. I. du Pont de Nemours and Company (Du Pont) has been identified as the second largest energy consumer in the chemical industry, the most energy intensive of all industries. Hence, Du Pont is subject to and has complied with industrial energy conservation reporting as required by the Energy Policy and Conservation Act of 1975. Based upon the most recent reports, Du Pont has already achieved greater than 13% reduction in energy per unit output as compared with 1972 base data. As such, we feel our experience and expertise particularly qualify Du Pont to comment upon the proposed changes in industrial conservation reporting which the House-Senate Conference Committee will address.

Changing Reporting Format

The proposed amendments would eliminate the reporting of industry energy conservation accomplishments through trade associations. New reporting forms are required to be developed under the proposal to accommodate not only direct company reporting, but reporting on a plant-by-plant basis.

It would be very burdensome for industry to change to a new reporting system with both corporate and plant reports.

Most of the companies required to submit reports have computerized their reporting procedures at significant expense of time, money and manpower. To change reporting requirements would necessitate reprogramming computers and retraining all people responsible for providing data and working with the system, at additional, considerable costs to industry.

To change the reporting format at this time, when the existing system is just beginning to produce the desired information would set the program to monitor industrial conservation back a considerable amount of time. Moreover, any change in the reporting format would raise difficulties in obtaining correct comparison data from the 1972 base year. Judging from past experience, it would take several years to develop, refine and implement any new reporting forms. To make a change now, while the present system is just beginning to show results, would lose the information trend now showing the achievements being made in industrial energy conservation.

We wish to emphasize that any requirement to report conservation by means of a classification other than a two digit SIC method would be virtually impossible. Many companies have products of several four digit classifications being produced at the same site location. Complicated and expensive metering facilities, and an inordinant amount of time and effort would be required to determine the energy consumed by each individual product. The value of information of energy conservation on

other than a two digit classification would not equal the cost of obtaining such information.

The base from which industrial energy conservation information presently comes would diminish if companies were not permitted to report through trade associations. In the chemical industry, for example, the Manufacturing Chemists Association reports energy conservation progress of 108 different companies. Only 68 of these companies use more than one trillion Btu of energy per year. If reporting through trade associations were discontinued, it is very unlikely that forty companies not presently required to report would make their energy consumption and their conservation progress available. And to the extent that the base from which data is collected diminishes, the information becomes less representative of the complete industry's progress.

"Second Law" Study

Measurements of improvements in industrial energy-use efficiency expressed in terms of the first law of thermodynamics are perfectly capable of serving the purposes of EPCA. Du Pont sees no reason for switching to a new method of calculating energy efficiency. Moreover, the methods of calculating efficiencies by the second law of thermodynamics are very vague and easily misunderstood, and are not applicable to all process systems in a chemical plant. We do not believe that the proposed study which this legislation would require would yield benefits worth the expenditures.

[Whereupon, at 3:45 p.m., the hearings were adjourned.]

