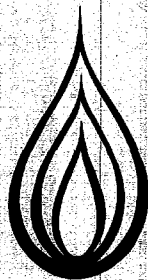


ACTION PAPER

**NORTH SLOPE
NATURAL GAS:
TRANSPORTATION
ALTERNATIVES
AND
THE PROMISE OF
A WORLD SCALE
PETROCHEMICAL
INDUSTRY**



**NORTH SLOPE NATURAL GAS:
TRANSPORTATION ALTERNATIVES
AND
THE PROMISE OF A WORLD SCALE
PETROCHEMICAL INDUSTRY**

A REPORT BY
COMMONWEALTH NORTH

Prepared by the
GAS PIPELINE STUDY COMMITTEE

March 1980

PREFACE

The Board of Directors of Commonwealth North commends the Gas Pipeline Study Committee for the quality of their research and the report they have produced. The issues they have addressed since their formation on August 22, 1979 have been constantly changing. The players have mostly been outside the state in Salt Lake City, Washington, D. C., New York, Houston and Newport Beach.

Every few weeks a new development has emerged which has postponed deadlines, altered government and industry pronouncements and thrown the entire gas line project into greater confusion and complexity.

As the resolution of the issues addressed in this report is far from complete, the Board accepts this study as an interim statement. Our hope is that the Committee will remain as a standing committee to observe the forthcoming developments and to provide guidance as to their interpretation.

MAX HODEL,
President
Commonwealth North

March 1980

TABLE OF CONTENTS

	FORWARD.....	2
I.	PROJECT HISTORY.....	3
II.	MAJOR PROJECT PARTICIPANTS.....	4
III.	DESIGN CONSIDERATIONS.....	7
IV.	THE PROMISE OF IN-STATE PETROCHEMICAL INDUSTRY.....	8
V.	ANALYSIS OF ISSUES.....	13
VI.	FALLBACK POSITION IF THE NORTHWEST PIPELINE PROJECT FAILS.....	25
VII.	CONCLUSIONS.....	27
VIII.	RECOMMENDATIONS.....	31
IX.	A PLAN FOR ACTION.....	35
	EXHIBIT I.....	37
	EXHIBIT II.....	38
	COMMONWEALTH NORTH GAS PIPELINE STUDY COMMITTEE.....	40
	COMMONWEALTH NORTH.....	41
	BIBLIOGRAPHY.....	42

FOREWORD

When oil was discovered on the North Slope, few Alaskans realized that it would be the natural gas, more than the oil, that would provide the greatest promise for on-going employment and revenues for the people of Alaska.

The competition to build a pipeline to move the gas to market produced a spirited contest. The most controversial bidder, Northwest Pipeline Company, won the nod from President Carter through skillful maneuvering and unmasked political influence.

But two and one-half years later, the project still writhes in controversy, and the hopes of in-state processing of the resource seem slim.

Most Alaskans ardently supported an all-Alaska route for the pipeline. Many still believe it is the best solution, especially as Northwest continues to flounder in its desperate search to finance the cross-Canada project which began at an estimated \$6 billion level and has already scaled to \$23.5 billion.

For many reasons, the all-Alaska line could be a great benefit to the nation as a whole. As far as Alaska's interests go, however, the more vital issue is how the gas liquids, the prime feedstock for the petrochemical industry, can be utilized within the state.

Louisianans still rue the day they signed contracts to ship their raw natural gas to other states, eliminating the opportunity to create new and additional revenues through the establishment of petrochemical industries. This phenomenon is well recognized in Alaska. Since territorial days, the belief that in-state processing of Alaska's natural resources motivated the leaders to fight for processing of fish, timber and now oil and natural gas.

Alaska seems designed to perfection for such applications. There is not only an abundance of natural gas, there are great quantities of fresh water and a climate that attracts capital intensive industries, requiring few, but highly paid, employees.

This paper was written after several months of study and interviews. Its purposes are to explore the feasibility of the current Northwest Pipeline project, analyze the actual benefits that can accrue from the development of the North Slope gas resource and to outline what is necessary to make a petrochemical industry a reality in Alaska.

Gas Pipeline Study Committee
Commonwealth North
March 1980

I. PROJECT HISTORY

The origins of the current project trace back to 1966 when the State of Alaska sold leases for oil exploration on state land on the Arctic Slope of Alaska. This sale led to the 1967 discovery of the Prudhoe Bay oil field, the largest oil reserve on the North American continent. In the excitement over oil, many Americans have never realized that a significant added feature of this particular field is the enormous quantity of natural gas contained in the reservoir.

Best estimates are that approximately 27 trillion cubic feet of recoverable gas are contained in the Prudhoe Bay field alone. Large additional quantities of gas are expected to be discovered in the Beaufort Sea, Arctic Wildlife Range and Naval Petroleum Reserve fields, all of which are either on or immediately off-shore of the North Slope of Alaska.

Following the planning for the trans-Alaska oil pipeline, three gas pipeline projects were actively promoted. One project, the Arctic Gas Pipeline, was backed by the Prudhoe Bay oil producers. They proposed to construct a gas pipeline running along the edge of the Arctic Ocean to the MacKenzie River country in the Northwest Territory and from there across Canada to the Midwest. A second project, designed by El Paso Natural Gas Company and widely supported by the Alaskan people, proposed a pipeline roughly parallel to the trans-Alaska oil line ending at a tidewater location near Valdez. This project involved the liquification of the natural gas and transportation by LNG tankers to California.

A third proposal was presented by Northwest Pipeline Company and consisted of a natural gas pipeline roughly paralleling the trans-Alaska pipeline from Prudhoe Bay to Fairbanks. From that point the line would basically follow the

In the excitement over North Slope oil, many Americans did not realize the significance of the enormous reservoir of natural gas.

Alaska Highway through Canada, eventually re-entering the United States at the Alberta border.

In 1977, President Jimmy Carter issued a Decision in which he selected the Northwest Pipeline proposal.

In October, 1976, President Gerald Ford signed into law the Alaska Natural Gas Transportation Act (ANGTA). This Act superseded the Federal Power Commission's normal procedures and called for the FPC to make a recommendation on the Alaska gas pipeline route directly to the President. In September 1977, President Jimmy Carter issued a Decision, as required by ANGTA, and an accompanying report in which he selected the Northwest Pipeline proposal as the designated means by which Alaska gas would be transported. While the Decision described the facility requirements for the pipeline as those that had been submitted by Northwest Pipeline, it did not specify an operating pressure, an issue which was later to become a subject of controversy.

II. MAJOR PROJECT PARTICIPANTS

The participants are generally grouped as follows:

A. The Major Producers

Exxon, ARCO, Sohio, and the State of Alaska are the original owners of the gas. The oil company producers have entered into sales contracts with various gas distribution companies in the south 48.

B. The Gas Buyers

The producers share of the Prudhoe Bay gas has been committed to the following gas transmission companies:

Columbia Natural Gas	Sohio (2/3)
Northern Natural Gas	Sohio (1/3)

Pacific Interstate

Transmission	ARCO	(33%)
Panhandle Eastern	ARCO	(20%)
United Gas Pipeline	ARCO	(15%)
Texas Gas Transmission	ARCO	(12%)
Trans Western Pipeline	ARCO	(10%)
Texas Eastern		
Transmission, Co.	ARCO	(10%)
Northern Natural Gas	Exxon	(1/3)
Michigan Wisconsin Gas	Exxon	(1/3)
Pacific Gas and Electric	Exxon	(1/3)

C. The Northwest Pipeline Consortium

The Northwest Alaska Pipeline Company consortium is owned by seven partners, American Natural Alaska, Northern Natural Gas, Panhandle Eastern Pipeline, United Gas Pipeline, Pacific Lighting and Northwest Energy. The Canadian portion will be the responsibility of Foothills Petroleum, Ltd, who will act as operator for several Canadian consortiums which include West Coast Transmission, Alaska Gas Transmission, Trans-Canada, Pan Alberta, Consolidated Natural Gas, Alberta Natural Gas, and Alberta Gas Trunkline.

D. State of Alaska

Several officials and departments of the executive branch of state government share jurisdiction over various aspects of the pipeline project. The Governor, through the Department of Natural Resources, has primary responsibility for representing the natural resource interests for the state. The Department of Natural Resources coordinates the activities of mineral and energy management as well as oil and gas conservation. The Department of Commerce coordinates the activities of power and energy development, economic development, the Pipeline Commission and the power authority. The Department of Environmental Conservation

is responsible for approval of permits related to development projects.

The State legislature, primarily through the Joint Gas Pipeline Committee, has assumed a major role in developing a state position regarding the gas pipeline and gas development issues.

The Mayors Task Force has advocated forcefully for the development of an in-state petrochemical industry.

The Royalty Oil and Gas Board, created by the legislature in 1972 and appointed by the Governor, has taken the lead in advocating the development of a petrochemical industry using the gas liquids from Prudhoe Bay.

The State Pipeline Coordinator, appointed by the Governor, is responsible for coordinating gas pipeline construction issues.

The Mayors Task Force is an ad-hoc committee consisting of the mayors from the North Star (Fairbanks) Borough, North Slope Borough, Matanuska-Susitna Borough, Kenai Borough and the Municipality of Anchorage. The Mayors Task Force has advocated forcefully for the development of an in-state petrochemical processing industry and has studied the issue of the location of a conditioning plant for the pipeline.

E. The Federal Government

The Federal Energy Regulatory Commission (FERC) has primary responsibility for representing the interests of the Federal Government in the project. In addition, the President has appointed a federal inspector for the gas line and given him wide-ranging authority to resolve bureaucratic problems that might delay the project. The Department of Energy has also become involved as a facilitator to aid the state in getting a commitment for the producers' gas liquids in return for state financial participation in the pipeline project.