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DEPARTMENT OF ENERGY

OFFICE OF FOSSIL ENERGY

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YUKON PACIFIC CORPORATION	)	ERA DOCKET NO. 87-68-LNG

ORDER GRANTING AUTHORIZATION TO EXPORT
LIQUEFIED NATURAL GAS FROM ALASKA

DOE/FE OPINION AND ORDER NO. 350

NOVEMBER 16, 1989

CDP_707224

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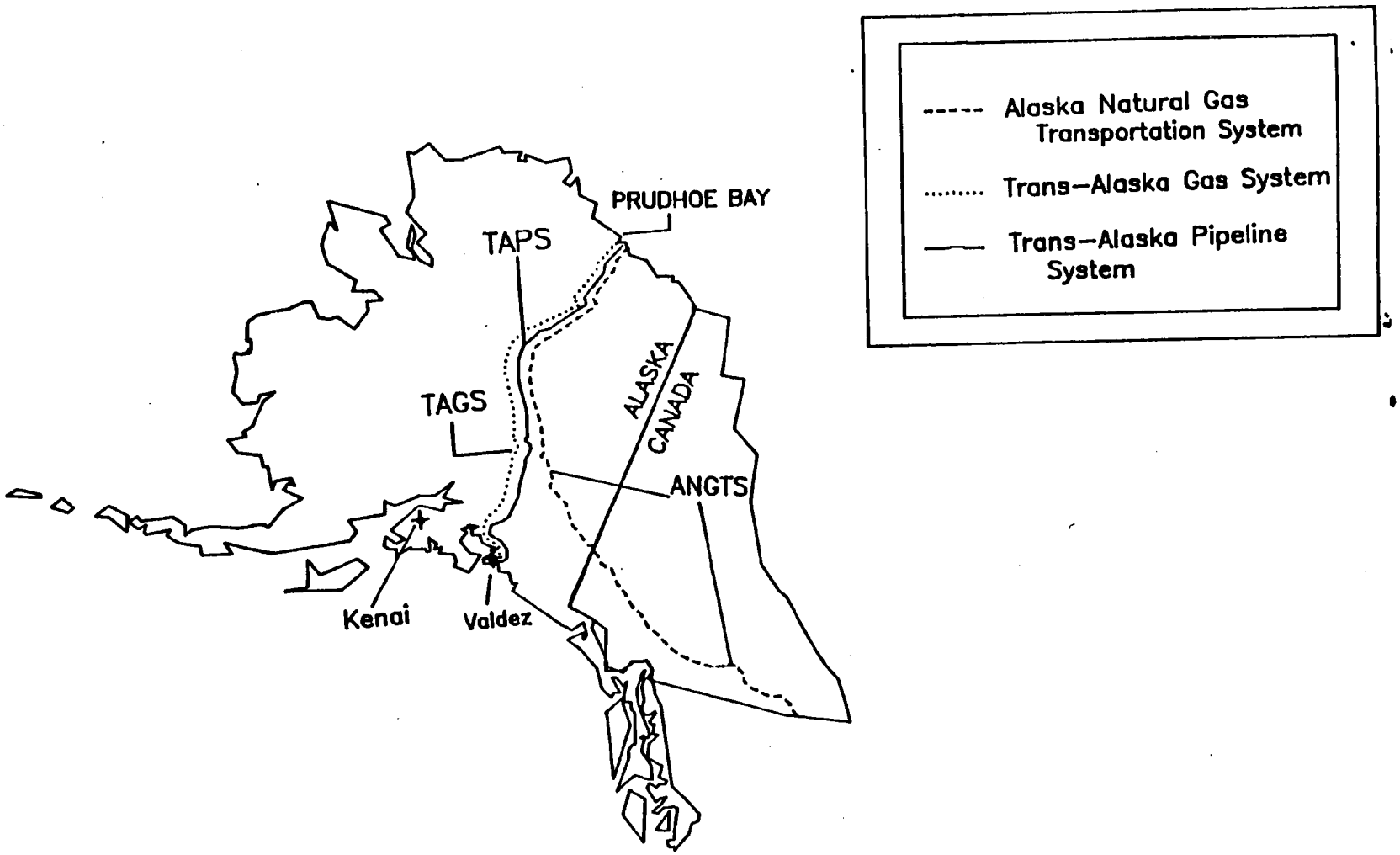
GLOSSARY OF ABBREVIATIONS

ADNR	Alaska Department of Natural Resources
AGA	American Gas Association
AGCF	Alaska Gas Conditioning Facility
Agreement on Principles	"Agreement Between the United States of America and Canada on Principles Applicable to a Northern Natural Gas Pipeline
Alaskan Northwest	Alaskan Northwest Natural Gas Transportation Company
Alcan	Alcan Pipeline Company
Alyeska	Alyeska Pipeline Service Company
ANGTA	Alaska Natural Gas Transportation Act
ANGTS	Alaska Natural Gas Transportation System
ANGTS sponsors	Alaska Northwest Natural Gas Transportation Company and Foothills Pipe Lines (Yukon) Ltd.
AOGCC	Alaska Oil and Gas Conservation Commission
Argonne	Argonne National Laboratory
bbls	Barrels
Bcf	Billion cubic feet
BLM	Bureau of Land Management
Btu	British thermal unit
CERI	Canadian Energy Research Institute
Decision	"Decision and Report to Congress on the Alaska Natural Gas Transportation System
D&M	Dames & Moore and Decision Focus, Inc.
DOE	Department of Energy
DOE Act	Department of Energy Organization Act
DRI	Data Research Institute
EIA	Energy Information Administration of
EIS	Environmental Impact Statement
ERA	Economic Regulatory Administration
Exxon	Exxon Corporation
Exxon U.S.A.	Exxon Company, U.S.A.
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
Finding	"Presidential Finding Concerning Alaska Natural Gas"
Foothills	Foothills Pipe Lines (Yukon) Ltd.

FPC	Federal Power Commission
GCF	Gas Conditioning Facility
GRI	Gas Research Institute
Jensen	Jensen Associates, Inc.
LNG	Liquefied Natural Gas
Mcf	Thousand cubic feet
MMBtu	Million British thermal units
NEB	Canadian National Energy Board
NEPA	National Environmental Policy Act of 1979
NGA	Natural Gas Act
NGPA	Natural Gas Policy Act of 1978
NPC	Northwest Pipeline Corporation
OFI	Office of Federal Inspector
OPEC	Organization of Petroleum Exporting Countries
PG&E	Pacific Gas and Electric Company
PGT	Pacific Gas Transmission Company
quad	quadrillion British thermal units
R/P ratio	Ratio of proved natural gas reserves to production
Reorganization Plan	Reorganization Plan No. 1 of 1979
Statoil	Statoil North America, Inc.
State Department	United States Department of State
TAGS	Trans-Alaska Gas System
TAPS	Trans-Alaska Pipeline System
TAPS Carriers	the seven companies that own the Trans-Alaska Pipeline System
Tcf	Trillion cubic feet
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey

ALASKA ENERGY PROJECTS



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I. SUMMARY

The Department of Energy (DOE) is granting the application of Yukon Pacific Corporation (Yukon Pacific) for authorization under section 3 of the Natural Gas Act (NGA) to export natural gas from the North Slope of Alaska to the Pacific Rim countries of Japan, South Korea, and Taiwan by means of the proposed Trans-Alaska Gas System (TAGS). The DOE has concluded that this export will not be inconsistent with the public interest. In particular, the DOE finds that this gas supply is not needed to ensure American consumers adequate supplies at reasonable prices. In addition, the DOE expects the TAGS export project to provide important benefits in the areas of energy security, energy production, international relations, trade deficit reductions, and the Alaskan economy.

The DOE has conditioned the export authorization to minimize any detrimental effects on American consumers, the Alaska Natural Gas Transportation System (ANGTS), and the environment. Specifically, the authorization provides that no costs of the export project can be recovered from American consumers, that no action can be taken in connection with the export project that would impair the construction and operation of the ANGTS project, and that the export project must be undertaken in accordance with all applicable environmental procedures and safeguards.

By granting this application, the DOE is not dictating that a specific project should be undertaken for developing North Slope natural gas.1/ The approval neither commits any natural gas supplies to Yukon Pacific nor creates any regulatory impediments to other North Slope natural gas projects, including ANGTS. Rather, the approval is intended to spur competition to develop North Slope natural gas efficiently, with the marketplace determining the course of development. The public interest lies in bringing this immense energy resource to market in an efficient and timely manner.

II. BACKGROUND

In the winter of 1967-68 a wildcat rig drilling Prudhoe Bay State Well No. 1 on Alaska's North Slope struck a formation that, when later delineated, proved to be the biggest known crude oil deposit ever found in the U.S. and one of the largest accumulations of natural gas. The Prudhoe Bay Field alone contains an estimated

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1/ For purposes of this order, North Slope natural gas means gas derived from the area of the State of Alaska north of the Brooks Range, including the continental shelf of the U.S. under the Beaufort Sea.

26 Tcf of recoverable gas reserves,2/ more than 13 percent of the proven natural gas reserves in the U.S. While the ultimate gas potential has yet to be determined, total accumulations in reservoirs on the North Slope have been estimated at more than 100 Tcf.

In 1970, the Alyeska Pipeline Service Company (Alyeska) was formed to construct and operate an oil pipeline from Prudhoe Bay to Valdez, a deepwater port in southern Alaska. Pipeline construction of the Trans-Alaska Pipeline System (TAPS) began in the winter of 1974-75 and by 1977 crude oil was being transported through the pipeline for markets in the lower-48 states.

By the mid-1970's, various plans for a transportation system that could bring North Slope gas to the lower-48 states were considered. Between 1974 and 1976, three different projects came before the Federal Power Commission (FPC) for certification. Because Congress was concerned about natural gas curtailments on the interstate transmission system, and feared a permanent supply shortage, it enacted the Alaska Natural Gas Transportation Act (ANGTA) in 1976 to ensure that regulatory action or inaction would not stand in the way of the efforts of private parties to bring North Slope gas to market.3/ The purpose of ANGTA was to streamline the lengthy certification process by authorizing the President to designate a transportation system from among the competing projects, subject to Congressional approval. In addition, in response to the perceived regulatory delays and inefficiencies in connection with the construction of TAPS, ANGTA included provisions designed to expedite the construction and initial operation of the selected gas transportation system and to prevent agency actions that would hinder expeditious completion of that system by the project's sponsors.4/

Although ANGTA removed and minimized regulatory barriers to the permitting and construction of the selected transportation system, responsibility for realizing the project was left to private parties. Likewise, responsibility for efficiently developing North Slope gas reserves was left to the owners of the gas. ANGTA did not mandate the use of this gas in domestic

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2/ Alaska Department of Natural Resources, Historical and Projected Oil And Gas Consumption, January 1989.

3/ 15 U.S.C. 719 *et seq*.

4/ In particular, section 9 of ANGTA prohibits actions that "would compel a change in the basic nature and general route of the approved transportation system or would otherwise prevent or impair in any significant respect the expeditious construction and initial operation of such transportation system."

markets. In fact, section 12 of ANGTA expressly permits the export of North Slope gas if the President finds that such exports will not affect American consumers adversely.5/

On September 22, 1977, following the signing of an agreement on principles with Canada,6/ President Jimmy Carter transmitted to Congress his decision concerning ANGTS.7/ The President's Decision and the Agreement on Principles were approved by Congress

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5/ Section 12 of ANGTA provides:

> Any exports of Alaska natural gas shall be subject to the requirements of the Natural Gas Act and section 103 of the Energy Policy and Conservation Act, except that in addition to the requirements of such Acts, before any natural gas in excess of 1,000 Mcf per day may be exported to any nation other than Canada or Mexico, the President must make and publish an express finding that such exports will not diminish the total quantity or quality nor increase the total price of energy available to the United States.

6/ "Agreement Between the United States of America and Canada on Principles Applicable to a Northern Natural Gas Pipeline," September 20, 1977, U.S.T. 3581, T.I.A.S. 9030, which established the terms and conditions by which the two countries would cooperate to facilitate the construction, by private parties, of a joint gas pipeline system for the transportation of gas from Alaska and Northern Canada.

7/ Decision and Report to Congress on the Alaska Natural Gas Transportation System, issued by the President on September 22, 1977, pursuant to section 7 of ANGTA. This decision selected the Alcan Pipeline Company (Alcan) to build and operate the U.S. portion of the ANGTS. Subsequent to the President's Decision, the FPC issued certificates of public convenience and necessity to Alcan. Thereafter, Alcan's rights were transferred to Alaskan Northwest Natural Gas Transportation Company. In the Agreement on Principles the two governments designated Foothills Pipe Lines (Yukon) Ltd. as the company responsible for the construction and operation of the Canadian segment of the system. As described in the President's Decision, the ANGTS would be a 5,000-mile pipeline originating on the North Slope and traversing Canada to the lower-48 states. The Canadian segment would be 2,000 miles long. To accommodate the growing surplus of exportable Canadian gas from Alberta, the project's construction was scheduled in two phases to enable export of Canadian gas pending the full completion of the system. The first phase of construction commenced in December 1980 with the building of a 1500-mile section that originates at a point just north of Calgary, Alberta, and splits into an Eastern and Western leg as it enters the U.S. The Western Leg terminates at (continued)

on November 8, 1977.8/ Because of fluctuations in energy market conditions and the appearance of widespread gas surpluses, the sponsors of the ANGTS project decided in April 1982 to postpone construction of the Alaskan segment of the system. In the absence of a gas transportation system, almost all of the natural gas produced on the North Slope in conjunction with the oil has been reinjected into the reservoirs.

The decision concerning the Alaskan segment can be linked to a fundamental change in circumstances and behavior of natural gas markets in North America during the last decade when the gas shortages of the seventies have been replaced by adequate supplies for the foreseeable future. To a large extent, this change has resulted from decisions to abandon government-mandated price controls and other artificial regulatory restraints on the operation of the market in favor of competition.9/

In 1978, Congress, through the passage of the Natural Gas Policy Act of 1978 (NGPA),10/ established as national energy policy the movement toward a competitive gas market in the U.S. The NGPA initiated a partial and phased relaxation of wellhead

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(footnote continued)
Stanfield, Oregon, and the Eastern Leg terminates at Ventura, Iowa. These "prebuild" segments of the system were completed in 1982 and Canadian gas now flows through them.

8/ Pub. L. No. 95-158.

9/ The shift from regulation to market competition has not been confined to natural gas but has occurred throughout the energy market. For example, in January 1981, President Reagan, through the issuance of Executive Order 12287, removed allocation and price controls from crude oil and refined petroleum products. This action resulted in increased competition between fuel oil and natural gas, which, in turn, caused extensive fuel switching in the industrial market.

10/ 15 U.S.C. 3301 et seq. Among other things, the NGPA provided for the phased decontrol of over 50 percent of natural gas at the wellhead. The Supreme Court has characterized the NGPA as a Congressional determination "to move toward a less regulated national natural gas market" which "give[s] market forces a more significant role in determining the supply, demand, and the price of natural gas" and has found that "the change in regulatory perspective embodied in the NGPA rested in significant part on the belief that direct federal price control exacerbated supply and demand problems by preventing the market from making long-term adjustments." Transcontinental Gas Pipe Line Corporation v. State Oil and Gas Board of Mississippi, 474 U.S. 409, 422-4. (1986); see also FERC v. Martin Exploration Management Co. (NGPA denotes legislative preference for deregulatory treatment rather than (continued)

price controls, thereby encouraging producers to find and develop more gas. In July 1989, the NGPA was amended to remove all remaining wellhead price controls by 1993.11/ In addition to the removal of wellhead controls, Congress has acted to remove demand restraints that attempted to dictate how natural gas should be consumed.12/

In conjunction with these statutory actions, the Federal Energy Regulatory Commission (FERC), exercising functions formerly vested in the FPC, has taken numerous regulatory steps to increase the competitiveness of the natural gas market. The centerpiece of the FERC's regulatory efforts has been the establishment of an open-access transportation system that permits producers and consumers to deal directly and establish market-responsive prices for gas supplies.13/ The FERC also has acted in other areas to remove regulatory barriers to competition.14/

The shift to a competitive marketplace was not confined to the domestic market. Both the U.S. and Canadian Governments developed a market-based approach to their respective import and export policies. The continuing surplus of gas supplies and, with it, the increasing pressure for greater competition in gas markets in the U.S., led the Secretary of Energy to issue new policy guidelines in

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(footnote continued)
regulatory support of practices not responsive to market conditions), 108 S. Ct. 1765 (1988); Pennzoil Company v. FERC ("The NGPA is a fundamental change in regulatory outlook."), 645 F.2d 360, 378 (1981).

11/ Natural Gas Wellhead Decontrol Act of 1989, Pub. L. No. 101-60.

12/ Congress repealed oil and gas restrictions imposed by the Fuel Use Act that prohibited new electric powerplants and new large industrial boiler facilities from using natural gas or petroleum as a primary source of energy. It also repealed the incremental pricing provisions of Title II of the NGPA. See Pub. L. No. 100-42.

13/ Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol (Order 436), 50 FR 42408 (October 18, 1985), vacated, Associated Gas Distributors v. FERC, 824 F.2d 981 (D.C. Cir. 1987). The FERC issued interim Order 500 on August 7, 1987, readopting most of the provisions of Order 436, 52 FR 30334 (August 14, 1987). On October 16, 1989, the D.C. Circuit remanded the record for the FERC to issue a final rule within 60 days, 1989 WL 120705.

14/ See e.g., Final Rule, Elimination of Variable Costs from Certain Natural Gas Pipeline Minimum Commodity Bill Provisions, 27 FERC Para. 61,318 (1984); Ceiling Prices; Old Gas Pricing Structure, 51 FR 22168 (June 18, 1986).

1984 relating to gas imports.15/ The DOE's policy guidelines established new criteria for review of import applications and defined the "public interest" as enhanced competition in markets served by imports, reduced federal intervention in the marketplace, and encouragement of negotiated arrangements between buyers and sellers, thereby allowing greater flexibility in individual contracts. The objective of this policy was to complement domestic initiatives toward market oriented gas regulation by allowing market forces, in lieu of regulatory constraints, to define supply and demand. In effect, the guidelines represented a determination that it is in the public interest to let market forces, with a minimum of regulatory constraints, define efficient energy production and consumption.

Paralleling the U.S. move toward greater competition in gas markets, Canada progressively liberalized its procedures for review of natural gas export applications. In 1984, Canada shifted away from regulated, uniform, volumetric prices for exports that had been instituted in 1975, to a policy that offered exporters the option of negotiating the sales price in export contracts. As of 1986, the Canadian National Energy Board (NEB) no longer required that it give prior approval of export prices. In 1987, the NEB adopted new procedures that allowed market forces to determine export levels as long as Canadian needs are served adequately and fairly.

Finally, the U.S./Canada Free Trade Agreement came into force January 1, 1989. It was a reflection of the changes that had taken place in both countries' energy policies. It formalized the principle that free and open trade is in the best interests of the citizens of the U.S. and Canada.

This evolution in natural gas trade has not been confined to Canadian imports. In 1983, President Ronald Reagan and Japanese Prime Minister Yasuhiro Nakasone indicated their interest in private commercial efforts to bring North Slope natural gas to Pacific Rim countries, including Japan. They recognized the benefits in the free trade of energy resources, as demonstrated by the gas export project operated jointly by Phillips 66 Natural Gas Company and Marathon Oil Company which, for about 20 years, has liquefied and shipped gas from the Cook Inlet area of southern Alaska to markets in Japan.16/

In 1982, Yukon Pacific began exploring the concept of a trans-Alaska pipeline, combined with a liquefied natural gas (LNG) terminal in southern Alaska, for marketing North Slope gas in Japan and other Pacific Rim countries. In 1984, after studying the

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15/ New Policy Guidelines Relating to the Regulation of Imported Natural Gas, 49 FR 6684 (February 22, 1984).

16/ Currently, approximately 52 trillion Btu's (52 Bcf) of LNG annually is authorized to be exported by Phillips 66 Natural Gas Company and Marathon Oil Company. See Phillips 66 Natural Gas Company; Marathon Oil Company, 1 ERA Para. 70,130 (July 28, 1988).

feasibility of the project, Yukon Pacific applied to the Bureau of Land Management (BLM) and the U.S. Army Corps of Engineers (USACE) for the necessary permits to build the TAGS pipeline. A right-of-way grant for the TAGS project was issued by BLM on October 17, 1988.

On January 12, 1988, President Reagan removed the section 12 impediment to exports of North Slope natural gas by issuing a finding that such exports would not affect adversely the quantity, quality, or price of the energy supplies available to U.S. consumers.17/ In particular, the President found that "there exist adequate, secure, reasonably priced supplies of natural gas to meet the domestic demand of American consumers for the foreseeable future." The President acted to let "the marketplace undertake a realistic consideration of various options concerning Alaska natural gas" by allowing "any private party to develop this resource" and setting "up competition for this purpose." The President's Finding stated that "the operation of market forces is the best guarantee that Alaska natural gas will be developed efficiently and that there will be an incentive to find additional reserves."

In conclusion, North Slope natural gas is a major energy resource whose efficient development has been a goal of U.S. energy policy since its discovery in 1968. In response to changing conditions in the domestic and international energy markets, there have been various proposals for developing this resource. Legislative and regulatory policy changes in the past decade and market forces have combined to increase competitiveness of natural gas in the U.S. market. As of yet, however, North Slope gas has been left undeveloped. It is in this historical context that the DOE considered Yukon Pacific's application to export North Slope gas.

III. Procedural History

A. Application and Project Description

On December 3, 1987, Yukon Pacific filed an application with the Economic Regulatory Administration (ERA),18/ for authority under the Natural Gas Act (NGA) to export up to 14 million metric tons of LNG annually (660 Bcf regasified) to the countries of Japan, South Korea, and Taiwan for 25 years, beginning on the date of first delivery. The natural gas would be transported from the North Slope by means of the proposed TAGS pipeline to a tidewater site at Port Valdez, Anderson Bay, on Alaska's southern coast. At Valdez, the gas would be converted to LNG for ocean transport to the Pacific Rim markets.

17/ See Presidential Finding Concerning Alaska Natural Gas, 53 FR 999 (January 15, 1988).

18/ On January 6, 1989, certain functions, including the regulation of natural gas imports and exports, were transferred from the ERA to the Office of Fossil Energy.

According to Yukon Pacific, construction of the proposed TAGS facilities will require five years and will commence when all required governmental approvals are obtained and LNG sales contracts are signed with the Pacific Rim customers. The first exports of LNG are expected to occur in 1996 when construction of TAGS is scheduled to be completed and Yukon Pacific would be able to initiate operations. The principal components of the TAGS project are: (1) a 796.5-mile, 36-inch outside diameter, buried and chilled natural gas pipeline from Prudhoe Bay to Port Valdez, with a design capacity of 2.3 Bcf of natural gas per day; (2) ten compressor stations along the pipeline; (3) a liquefaction plant at Port Valdez that would include four LNG processing units to remove impurities from incoming gas, and to reduce the temperature of the gas to -259 degrees Fahrenheit, condensing it to the liquid state for storage and shipping; (4) four LNG storage tanks, each with an individual capacity of 800,000 barrels (bbls); (5) a marine terminal to berth and load two LNG tankers; and (5) 15 LNG ocean transport vessels having individual cargo capacities of a nominal 125,000 cubic meters. In addition to the above facilities proposed by Yukon Pacific for the TAGS project, a gas conditioning plant would be required in the Prudhoe Bay area to deliver to the TAGS pipeline natural gas of a quality suitable for subsequent conversion to LNG at Anderson Bay.

Yukon Pacific states that it has entered into discussions with the owners (certain producers and the State of Alaska) for their North Slope gas. These discussions are focusing primarily on purchasing gas from the principal reservoir in the Prudhoe Bay Field, the Sadlerochit formation. According to Yukon Pacific, the contract terms with each producer would be established through arms-length negotiations and would be flexible over the term of the agreements to reflect market conditions. The purchase price to be paid to producers would be determined by a formula using a base price per MMBtu adjusted for variations in the LNG price at the point of destination. With respect to the sale of this gas, Yukon Pacific expects to negotiate in arms-length transactions 25-year contracts that would be responsive to international gas market conditions. Yukon Pacific anticipates that the delivered price of LNG sold under the proposed export arrangement would start with a base price per MMBtu and would vary each month according to a formula based upon changes in the average selling price of selected major crude oils.

B. Notice and Interventions

The DOE issued a notice of the application on February 1, 1988, inviting protests, motions to intervene, notices of inter-

vention, and comments to be filed by March 11, 1988.19/ Seven timely motions to intervene were filed: by Northwest Pipeline Corporation (NPC), the State of Alaska, Pacific Gas Transmission Company (PGT) and Pacific Gas and Electric Company (PG&E) (jointly), Alaskan Northwest Natural Gas Transportation Company (Alaskan Northwest), Foothills Pipe Lines (Yukon) Ltd. (Foothills), the TAPS Carriers and Alyeska (jointly),20/ and the Exxon Corporation (Exxon). Statoil North America, Inc. (Statoil) filed a late motion to intervene on March 25, 1988. Air Products and Chemicals, Inc., filed comments supporting the TAGS project but did not seek to intervene. The U.S. Department of State (State Department) submitted a letter 21/ it received from the Canadian Embassy concerning the application. Alaskan Northwest and Foothills opposed the application, requested its dismissal, and in the event that the application was not dismissed, Foothills requested a trial-type hearing and discovery procedures. (Hereafter in this order, where their views coincide, Alaskan Northwest and Foothills are referred to collectively as the ANGTS sponsors.) NPC did not express an opinion on the merits of the export proposal.

C. Order Requesting Additional Comments

On July 25, 1988, the DOE issued a procedural order requesting further information from Yukon Pacific, providing opportunity for further comment from all parties, and granting intervention to all eight movants who responded to the DOE's February 8, 1988, Federal Register notice of the application. The DOE denied several motions filed by the parties requesting: (1) dismissal of the application; (2) denial of interventions; (3) a trial-type hearing; (4) rehearing; and (5) an opportunity to conduct discovery. The requests for additional procedures were denied without prejudice to the filing of similar requests at a later stage in the proceeding.22/ The procedural order requested submission of comments by August 24, 1988, reply comments by September 23, 1988, and requests for

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19/ 53 FR 3617, February 8, 1988.

20/ The TAPS Carriers are seven companies that own the Trans-Alaska Pipeline System. They are: Amerada Hess Pipeline Corporation, ARCO Pipe Line Company, Exxon Pipeline Company, Mobil Alaska Pipe Line Company, Phillips Alaska Pipeline Corporation, Sohio Alaska Pipeline Company, and UNOCAL Pipeline Company.

21/ Letter dated March 9, 1988, from Mr. Leonard H. Legault, Charge d'affaires, Canadian Embassy to Mr. John P. Ferriter, Deputy Assistant Secretary for International Energy and Resources Policy, Department of State.

22/ See the DOE's July 25, 1988, procedural order, at 11-15.

additional procedures by October 10, 1988. The DOE received comments from Alaskan Northwest, Foothills, Yukon Pacific, the State of Alaska, PGT and PG&E (jointly), and Statoil.

D. Alaska Public Conference

Following submission of comments in response to the DOE's July 25, 1988, procedural order, Foothills filed a request for a trial-type hearing, or alternatively, a public conference. In addition, Alaskan Northwest renewed its earlier request expressed in its motion to intervene for dismissal of Yukon Pacific's application

On December 5, 1988, the DOE issued a procedural order that denied the requests for dismissal of the application and for a trial-type hearing but granted the request for a public conference.23/ The order set January 25, 1989, as the date for the public conference to be held in Anchorage, Alaska. Alaskan Northwest, Foothills, the TAPS Carriers, Exxon, the State of Alaska, and Yukon Pacific filed written statements or made oral presentations at the public conference.

E. Other Filings

The State Department submitted on January 11, 1989, a letter to be added to the record from the Charge d' affaires of the Canadian Embassy in Washington D.C., expressing the Canadian Government's renewed concern about the impact of the proposed export project on the ANGTS project.24/ On February 7, 1989, the State Department submitted for the record its reply to the Canadian Charge's letter in which it pointed out that the U.S. had, as originally agreed, undertaken all actions necessary to facilitate construction of the ANGTS and eliminate regulatory obstacles to private financing.25/ Since both the State Department and Canadian Embassy letters merely restate their views that are already part of the record in this proceeding and since no one opposed the inclusion of their correspondence in the record, the DOE hereby admits these letters into the record.

Foothills filed on March 17, 1989, a motion to enter into the record a statement presented to the Alaska State Legislature by an official of Exxon Company, U.S.A. (Exxon U.S.A.), that expressed the view that it is not economically feasible at today's prices to develop North Slope gas for either the domestic or the Pacific Rim markets. Exxon U.S.A. stated that "[a]n assured market and a

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23/ DOE's December 5, 1988, procedural order, at 1-2.

24/ Letter dated January 9, 1989 from Mr. L.H. Legault to Mr. J.P. Ferriter.

25/ Letter dated January 30, 1989, from Mr. J.P. Ferriter to Mr. L.H. Legault.

substantial real growth in energy prices will be required before a project to commercialize North Slope gas reserves can be economic" and that such conditions most likely will not exist until after the year 2000 and then will be much more likely for the domestic market than for the export market.26/ On March 21, 1989, Exxon U.S.A. also filed a copy of this statement to be added to the record. Yukon Pacific requested that the DOE reject the statement on the grounds that the issues enumerated are irrelevant to this proceeding and the statement was filed late. The DOE concludes that admission of the statement would not adversely impact the proceeding or harm any party since it does not contain any relevant material that was not contained in prior submissions. Accordingly, the statement is hereby admitted into the record of this proceeding.

Finally, on June 28, 1989, a letter enclosing a "Third Amendment to Application" was submitted by Yukon Pacific. Although termed an amendment, Yukon Pacific's filing consisted entirely of newspaper and trade press articles concerning prospective LNG trade between Indonesia and certain Pacific Rim countries. On July 27, 1989, the DOE returned Yukon Pacific's filing after determining that it did not qualify as an amendment under the DOE's procedural rules because the information did not constitute a substantial change in the application and the material was not relevant and material to the resolution of the issues in this proceeding.

IV. COMMENTS RECEIVED

A. Alaskan Northwest and Foothills

The ANGTS sponsors opposed the application in their interventions, in their responses to the July 25 procedural order, and at the public conference held in Anchorage. Their positions are fundamentally the same and are based primarily on their view that the proposed export could have an adverse impact on the ANGTS project. They advance several arguments. First, they argue that the application does not comply with the DOE's administrative regulations because it does not contain enough meaningful information for it to be properly evaluated. Specifically, they argue that the application does not include gas purchase or resale contracts, information on the gas conditioning facility expected to be used for the TAGS project, a study regarding the feasibility of constructing both the proposed TAGS and ANGTS pipelines through

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26/ See statement of Mr. Judd Miller, Vice President of Exxon Company U.S.A., presented to the Senate Special Committee on Oil and Gas of the Alaska State Legislature on March 10, 1989.

Atigun Pass,27/ a complete environmental impact analysis of the project, a detailed description of the project's participants, and verifiable data demonstrating that the gas is not needed in the U.S.

Second, based on several energy supply studies and reports submitted with their comments, the ANGTS sponsors argue that North Slope gas would be needed and economically competitive in the lower-48 states by the mid-1990's. They contend that the excess demand in the lower-48 states cannot be met by other energy resources as or more efficiently than by the proposed export volumes. The ANGTS sponsors assert that substitute fuels for North Slope gas, such as coal and oil, would be environmentally inferior to natural gas, which burns cleaner. They maintain that increasing dependence on coal and oil would contribute to ozone layer depletion in the atmosphere, "acid rain", and the "greenhouse" problem of global warming,28/ and alternative gas supplies, such as development of Canadian frontier gas, would be more costly. In addition, they assert that the commitment of North Slope gas reserves to foreign interests would jeopardize national energy security by depriving the U.S of a source of available reserves to offset the declining energy base in the lower-48 states, and by increasing U.S. dependence on oil imports.

Third, they contend that the TAGS project would impair completion of the ANGTS because there are not enough proven reserves of gas on the North Slope to support both the TAGS and the ANGTS projects. The ANGTS sponsors assert that they need 26-30 Tcf of reserves to justify construction. They argue that such an impairment would violate section 9 of ANGTA and also harm relations between the U.S. and Canada since it would constitute a breach of the 1977 U.S./Canada Agreement on Principles.

Fourth, they contend that the proposed TAGS project would be economically and environmentally detrimental due to construction of the TAGS and the ANGTS in close proximity to each other and due to the duplication of facilities. (The northern portion of the TAGS pipeline would parallel the proposed route of ANGTS). They maintain that the TAGS Final Environmental Impact Statement (FEIS)

27/ Atigun Pass is the highest point to be crossed by the TAGS pipeline in the Brooks Range. It is a narrow pinch point that currently accommodates the TAPS pipeline and a state highway, and is part of the ANGTS pipeline route.

28/ Natural gas produces less carbon dioxide during combustion than does oil or coal, and carbon dioxide is one of the "greenhouse" gases that some scientists believe is a major contributor to possible global climate change. High emissions of sulphur dioxide and nitrogen oxide from burning coal are precursors to "acid rain."

issued by BLM in June 1988, is incomplete.29/ In particular, they assert that it does not address the environmental impact of or identify the gas conditioning facility that Yukon Pacific plans to use as part of the TAGS project.

Finally, the ANGTS sponsors contend that, if an export authorization is issued to Yukon Pacific, then the following conditions must be attached thereto: (1) that Yukon Pacific files in the record gas purchase, sales, and transportation contracts specifying the gas reserves to be purchased, transported, and sold; (2) that proven reserves needed to supply ANGTS will not be depleted by TAGS; (3) that ANGTS has first call on North Slope gas for delivery to the lower-48 states, if needed to meet contractual obligations and to preserve the project's economic viability; (4) that construction of ANGTS shall have priority over TAGS in order to avoid incurring additional costs that would have to be borne by U.S. customers; (5) that Yukon Pacific submit definitive data on the gas conditioning facility to be constructed and used by TAGS; and that Yukon Pacific also submit definitive data on Atigun Pass demonstrating the feasibility of constructing TAGS at that location; (6) that Yukon Pacific identify any planned simultaneous construction of TAGS and ANGTS, proposed cost sharing and joint use arrangements, and provide a definitive analysis of the net economic benefits of the proposed export; and (7) that any final authorization issued be subject to suspension, modification, or revocation upon a showing that continuation of the proposed export is no longer in the public interest.

B. PGT and PG&E (jointly)

PGT and PG&E, which initially did not comment on the application, subsequently submitted comments recommending that the proposed export authorization be denied, citing studies that indicate that gas supplies in the lower-48 states will not be able to satisfy domestic demand during the term of Yukon Pacific's proposed export. They contend that the proposed export will leave insufficient proven reserves to economically justify completion of ANGTS which depends on the availability of adequate Alaska reserves. In addition, they assert that conserving North Slope gas for domestic use enhances the energy security of the U.S., reduces U.S. reliance on imported oil, and provides an environmentally preferable energy source over oil and coal.

C. State of Alaska

The State of Alaska intervened because of its proprietary and governmental interests in the proposed TAGS project. The State supports Yukon Pacific's export proposal because the project would

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29/ The BLM and USACE published a draft EIS for the TAGS project (52 FR 34424, September 11, 1987). An FEIS was issued June 11, 1988 (53 FR 24357, June 28, 1988).

increase employment in the state, develop and broaden the market for North Slope gas, yield revenues to the state from gas royalties and production taxes, and diversify the state's economy from industries servicing the TAGS project. However, it has no preference for TAGS over ANGTS and asserts that the market will decide which (or how many) systems should be built. The State opposes the imposition of conditions on any export authorization issued to Yukon Pacific that would favor one gas development project over another.

D. Government of Canada

The Canadian Government expressed concern through the State Department that the TAGS project could impair the financial viability of the ANGTS in that there may not be adequate quantities of North Slope gas to support both the TAGS and ANGTS projects. Canada urged the U.S. to ensure the availability of adequate North Slope gas in order to maintain the commercial viability of the ANGTS project.

E. Exxon

Exxon, an owner and producer of North Slope gas, endorsed the President's Finding concerning North Slope gas. Exxon urged that, if Yukon Pacific's application is approved, the authorization should be consistent with open, market-responsive development of Alaskan natural gas and not impose terms and conditions that would, in effect, place a stamp of approval on only one project or approach to development of Alaskan resources and discourage other projects or approaches.

F. TAPS Carriers and Alyeska (jointly)

The TAPS Carriers, users of the TAPS facilities, and Alyeska, operator of TAPS, took no position on whether the export authorization should be granted to Yukon Pacific but urged that any authorization be conditioned on review and approval of the engineering details of the TAGS facilities by the TAPS Carriers and by Alyeska. They stated that Yukon Pacific had not presented enough technical details for the commentors to be able to assess whether the proposed facilities would impede the safety, operation, or maintenance of TAPS.

G. Statoil

Statoil, which owns substantial reserves of natural gas on the Norwegian continental shelf, and plans to export and market LNG to the U.S. East Coast, stated that its LNG exports and those of other overseas suppliers would be able to meet any U.S. gas demand that might go unserved if North Slope gas is exported.

H. Yukon Pacific's Position

In support of its application, Yukon Pacific contends that there is no present or future domestic need for natural gas from the North Slope. To support its argument, Yukon Pacific submitted a study by the consulting firms of Dames & Moore and Decision Focus, Inc. (D&M study).30/ Yukon Pacific asserts that this study demonstrates that there are adequate gas supplies in the lower-48 states, Canada, and Mexico sufficient to meet U.S. demand in the foreseeable future without the Alaska gas that would be exported. The D&M study concludes that there will be no economic need for North Slope gas in the lower-48 states for at least 30 years and that nearer supplies of Canadian Arctic gas would become competitive before North Slope gas.

Yukon Pacific also maintains that the export of North Slope natural gas to Pacific Rim countries would serve the public interest by reducing the U.S. trade deficit, strengthening international relations, and promoting Alaska's economic development. In addition, Yukon Pacific asserts that authorization of the TAGS project will inject an element of competition into the development of North Slope gas reserves that should prove healthy for both U.S. and Canadian natural gas markets. Further, Yukon Pacific argues that the TAGS project would not be detrimental to the interest of American consumers because the risks and costs associated with the construction and operation of the TAGS project, including the marketing of the gas, would be borne by the project's private sponsors and the foreign purchasers of the gas.

With respect to the availability of North Slope gas for TAGS and ANGTS, Yukon Pacific asserts that TAGS and ANGTS are not competitors since there are sufficient gas reserves on the North Slope for both projects. Moreover, Yukon Pacific asserts that the ANGTS project does not have an exclusive right to or first call on the reserves. Yukon Pacific argues that section 12 of ANGTA demonstrates that the U.S. Congress envisioned that North Slope gas might be exported and that the President's Finding determined that the public interest will be served by exports of North Slope gas.

With regard to construction compatibility between TAGS and ANGTS, as well as construction priority and cost allocation for jointly used facilities, such as the proposed Alaska Gas Condition-

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30/ See Dames & Moore and Decision Focus, Inc., Analysis of Alaska Gas Market Potential In The Lower 48 States: Domestic Effect of Yukon Pacific's Proposed LNG Export (August 22, 1988), included as Exhibit R to Initial Comments of Yukon Pacific Corporation, filed August 24, 1988.

ing Facility,31/ Yukon Pacific contends that these matters are outside the jurisdiction of the DOE. Further, Yukon Pacific states that the gas conditioning facility is not part of the export project because it expects to purchase the gas from the North Slope producers after the gas is conditioned.

Yukon Pacific states that it would accept two conditions on any grant of export authority: one condition would require that the LNG sales contracts be filed with the DOE after they have been executed, and the second condition would prohibit Yukon Pacific from passing on to consumers in the lower-48 states any of the risks or costs associated with the TAGS project. Yukon Pacific opposed the other conditions that the ANGTS sponsors requested because those conditions are either outside the DOE's jurisdiction and have no basis in law, or constitute improper government financing assistance to the ANGTS.

Finally, Yukon Pacific asserts that the information submitted in its application meets the requirements of section 590.202 of the DOE's administrative procedures and notes that those procedures give the DOE the flexibility to determine what information is required from an applicant based on the nature of the import or export requested.

V. DECISION

Yukon Pacific filed its application for authorization to export North Slope gas under section 3 of the NGA.32/ Section 3 creates a statutory presumption in favor of the approval of an export application, a presumption that must be overcome by evidence

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31/ As part of the ANGTS, Alaskan Northwest holds a conditional certificate from the FERC to construct and operate a gas conditioning plant, designated the Alaska Gas Conditioning Facility, on the North Slope at Prudhoe Bay.

32/ Section 3 provides:

> [N]o person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order from the [Federal Power] Commission authorizing it to do so. The Commission shall issue such order upon application, unless, after opportunity for hearing, it finds that the proposed exportation or importation will not be consistent with the public interest. The Commission may by its order grant such application, in whole or in part, with such modification and upon such terms and conditions as the Commission may find necessary or appropriate .... 15 U.S.C. Sec. 717b.

(continued)

in the record of the proceeding that the proposed export will not be consistent with the public interest.33/ Opponents of an application bear the burden of overcoming this presumption.

In judging whether to authorize a proposed export, the DOE is guided by Delegation Order No. 0204-111.34/ This order designates domestic need for the natural gas proposed to be exported as the only explicit criterion that must be considered in determining the public interest. In addition to domestic need, the DOE will consider other factors to the extent they are shown to be relevant to a public interest determination. Furthermore, in evaluating exports, the DOE is mindful of the broad energy policy principles set forth in the DOE's natural gas import policy guidelines. While those guidelines deal with imports, the principles are applicable to exports as well. The guidelines establish the policy that market forces will generally bring about results more in the public interest than will extensive regulation.

In addition to the framework of the NGA, this particular export proposal must also be viewed in light of the framework of

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(footnote continued)
With the adoption of the Department of Energy Organization Act in 1977 (DOE Act), Pub. L. No. 95-91, Congress transferred authority for all regulation of natural gas imports and exports under the NGA, including section 3, from the FPC to the Secretary of Energy. See sections 301(b) and 402(f) of the DOE Act, 42 U.S.C. 7151(b) and 7172(f). In Delegation Order No. 0204-127, the Secretary delegated to the Assistant Secretary for Fossil Energy the authority "to regulate natural gas imports and exports, pursuant to the Natural Gas Act." (Issued February 7, 1989, published at 54 FR 11436, March 20, 1989.)

33/ In Panhandle Producers and Royalty Owners Association v. ERA, 822 F. 2d 1105 (D.C. Cir. 1987), the Court found that section 3 of the NGA "requires an affirmative showing of inconsistency with the public interest to deny an application" and that a "presumption favoring...authorization...is completely consistent with, if not mandated by, the statutory directive."

34/ 49 FR 6690, February 22, 1984. In granting the Assistant Secretary for Fossil Energy the NGA authority over natural gas imports and exports, the Secretary directed the Assistant Secretary to exercise this authority in accordance with the policies and practices that the ERA followed in regulating natural gas imports and exports under Delegation Order No. 0204-111. Thus, while the Assistant Secretary is granted the NGA authority entirely by Delegation Order No. 0204-127, the exercise of this authority takes into account the same factors prescribed by the Secretary to the ERA for consideration in connection with Delegation Order No. 0204-111.

ANGTA. ANGTA generally affects all actions that might relate to the ANGTS and, in particular, provides an additional statutory requirement for the export of North Slope gas.

A. Domestic Need

Yukon Pacific proposes to export up to 16.5 Tcf of gas as LNG over a 25-year period. This amount would be equivalent to about three percent of the total U.S. consumption of natural gas projected between 1996 and 2021. In the July 25 procedural order, the DOE set forth its three-pronged approach for evaluating domestic need. First, the DOE determines whether national or regional demand can reasonably be expected to exceed anticipated available domestic supplies over the term of the proposed export.35/ If there is a reasonable expectation of demand in excess of available domestic supplies, the DOE determines the extent to which this excess demand can be met by other energy sources as or more efficiently than by the proposed export. If there are sufficient alternative sources, the DOE analyzes whether there is any reason the public interest requires the proposed export, in particular, be used to meet the excess demand.

Yukon Pacific, Alaskan Northwest, and Foothills presented evidence concerning the need for North Slope natural gas. For the most part, this evidence relates to studies which purport to demonstrate when North Slope natural gas would become competitive in the lower-48 states. These studies differ greatly in their findings. In general, the studies submitted by Yukon Pacific indicate that North Slope gas would not be competitive during the entire term of the proposed export, while those submitted by the ANGTS sponsors indicate that it would be competitive as early as the 1990's.

While studies such as those submitted in this proceeding are useful in assessing overall macro-economic conditions and probable market trends under certain scenarios, they are not as useful in assessing the future of particular energy projects.36/ As Alaskan Northwest stated in its reply comments, "The world is simply too complex, too subject to change from unforeseeable actions by others

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35/ Regional need is not an issue in this proceeding since no one asserts North Slope natural gas could be used to meet the energy needs of the populated areas of Alaska. There is no existing or contemplated delivery system to bring North Slope natural gas to these areas.

36/ The DOE is aware that many economic predictions do include North Slope gas as a supply used to meet domestic demand at some point in the future. The DOE does not equate these predictions with a demonstration that North Slope gas is needed in domestic markets. A prediction by an economic model that a particular gas supply will be used to meet demand does not mean that there are not adequate supplies of reasonably priced gas from other sources to meet the (continued)

and from uncontrollable forces to forecast with confidence 20 years or so into the future. Projections even 12 years ahead, to the turn of the century, realistically must be viewed with great

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(footnote continued)
demand or that the other supplies may not actually cost less. Rather, it means the economic model has classified that particular supply as more "competitive" than supplies from other sources. Such a "competitive" classification is based entirely on the assumptions of the model and, at best, is only a rough approximation of the decisions that a competitive market actually will make. Unlike the real world where private parties take a hard look at the actual costs of bringing competing supplies to market, an economic model selects the "competitive" supply on the basis of assumptions about the general costs of broad categories of gas, expected exploration and drilling activity, the availability of transportation systems, and other factors, including the anticipated export policies of foreign governments many years in the future. In the case of ANGTS, most economic models put the cart before the horse since they automatically assume North Slope gas will be used in the domestic market and then speculate when producers, pipeline sponsors, and financial institutions will agree that the market justifies the commitment of billions of dollars to provide the means necessary to make this "a priori" modeling assumption feasible in the real world.

Rather than demonstrate that a gas supply is needed, economic models indicate when the market may consider the use of a particular gas supply. In the case of North Slope gas, this function is especially suspect. Unlike other gas supplies, North Slope gas is predicted to be used in domestic markets not on the basis of comparisons to other supplies, but rather on the basis of the assumption when market conditions will justify the construction of ANGTS. In light of the history of ANGTS, this substitution of conjecture by economists for actual decisions by the private parties directly involved with ANGTS cannot be treated as having a high degree of certainty. ANGTS originally was scheduled to bring North Slope gas to the domestic market by the mid-1980's. Work on ANGTS, however, was suspended in 1982 and no commitments concerning its resumption have been made. Indeed, the uncertainty surrounding when and where North Slope gas will ultimately be used was emphasized in the recent action by the Energy Information Administration of the DOE to drop North Slope gas from U.S. proved reserves "because large uncertainties exist about the availability of a gas transportation system or other marketing alternatives for the bulk of North Slope gas." See advance summary, U.S. Crude Oil, Natural Gas, and Natural Gas Liquid Reserves, 1988 Annual Report, DOE/EIA-0216(88), September 1989, at 1.

caution."37/ In fact, the inherent imprecision of using economic studies to predict the performance of a particular project is one reason that led to the shift from a government-mandated regulatory approach to a market-oriented approach that leaves private commercial parties with the flexibility to determine the basics of their projects.

The submitted studies have been helpful, however, in evaluating domestic need since they all contain extensive information on supplies of various energy sources and anticipated demand. The DOE's review of the studies, set forth below, indicates that there are sufficient energy sources to meet domestic need without the use of North Slope natural gas.

1. Domestic Supplies

The D&M study, which was provided by Yukon Pacific, analyzed and compared several domestic gas resource forecasts published by various agencies and organizations. In particular, the D&M study focused on assessments produced by the DOE's Office of Policy, Planning, and Analysis (DOE/Argonne),38/ the Potential Gas Committee (PGC),39/ and the U.S. Geological Survey (USGS).40/ These three assessments estimate that there is in the lower-48 states a natural gas reserve and resource base that could be recovered ranging from 534 Tcf (USGS) to 1,059 (DOE/Argonne).41/ PGC's estimate of 778.6 Tcf lies between the USGS and DOE totals. The USGS based its estimate of economically recoverable resources on a significantly lower wellhead price ($1.80/Mcf) than the price upon which the DOE/Argonne estimate is based. The lower price assumption in the USGS estimate, therefore, reduces the quantity of gas that is economically viable and leads to a lower total resource estimate. In addition, the varying estimates include different components of the resource base.

The DOE made a comparative evaluation of the results of the particular resource appraisals using the DOE/Argonne assessment as a benchmark because it contained resource categories not included in other gas resource estimates. The DOE/Argonne study used a new

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37/ See Reply Comments of Alaskan Northwest, at 27.

38/ An Assessment of the Natural Gas Resource Base of the United States (May 1988), prepared by Argonne National Laboratory for the DOE's Office of Policy, Planning, and Analysis.

39/ PGC, Potential Supply of Natural Gas in the United States, Colorado School of Mines, December 1986 and April 1987.

40/ USGS Circular 860 (1981), Estimates of Undiscovered Recoverable Conventional Resources of Oil and Gas in the United States.

41/ See D&M study, at 4-3.

resource category "reserve growth," which refers to the additions to reserves that result from tapping additional gas sources located within known reservoirs, but not previously counted as reserves. In addition, the DOE/Argonne study estimates the potential for unconventional gas sources. The USGS study, for example, excludes all unconventional gas, including gas from tight sands, Devonian shale, coal seams and enhanced recovery -- despite the fact that such gas is now being produced commercially. To put the USGS and PGC appraisals on an equivalent basis with the DOE/Argonne appraisal, 439 Tcf of gas from unconventional reserves and gas from infill drilling was added to the USGS estimate and 180 Tcf from infill drilling was added to the PGC estimate (the PGC estimate already includes an undefined quantity of unconventional resources). Adjusted, the USGS estimate (973 Tcf) and the PGC estimate (958.6 Tcf) are comparable to the DOE/Argonne estimate (1059 Tcf).

The demand forecasts that DOE examined to compare with the USGS, DOE/Argonne, and PGC resource appraisals were developed by the Gas Research Institute (GRI),42/ the American Gas Association (AGA),43/ and the Data Research Institute (DRI).44/ Portions of the studies by GRI, AGA, and DRI are appended to the comments of Alaskan Northwest and Foothills. Domestic natural gas consumption according to GRI was 17.6 quadrillion Btu (quads) in 1987 (a quad is approximately equivalent to a Tcf).45/ GRI projects consumption to grow at an average annual rate of 0.4 percent and reach 19.4 quads in 2010. According to projections by the AGA and DRI, natural gas consumption by 2010 is expected to be 21.7 quads and 17.6 quads, respectively.46/

The DOE adopted the highest of the projections for U.S. gas consumption in 2010 of 21.7 quads (that by AGA), which assumes a 1.0 percent increase per year in consumption after 1987, as a basis for comparing available supply to expected demand. Using 18.0

42/ See 1988 Baseline Projection of U.S. Energy Supply and Demand, attached as Exhibit H to Reply Comments of Alaskan Northwest.

43/ See the 1988 American Gas Association T.E.R.A. Analysis (January 15, 1988) attached as Appendix F to Additional Comments of Foothills Pipe Lines (Yukon) Ltd., filed August 24, 1988.

44/ See Data Research Institute Natural Gas Review (Summer 1988) attached as Appendix G to Additional Comments of Foothills.

45/ See GRI 1988 Baseline Projection of U.S. Energy Supply and Demand, at 5-6, supra.

46/ See AGA T.E.R.A. Analysis, at 24, supra. See also, DRI Natural Gas Review, at 7, supra.

quads for consumption in 1988 as a starting point,47/ if expected growth is 1.0 percent per year, the DOE calculated that annual consumption would reach 25.0 quads by 2021 (the final year of the export project assuming Yukon Pacific begins exports in 1996 and operates for 25 years). Under this premise, cumulative consumption during the period 1988-2021 would be 725 quads (Tcf), well below the most conservative of the resource estimates.

The DOE also considered the economics of exploring for and developing new domestic supplies, focusing on the wellhead acquisition price of gas produced in the lower-48 states. In addition to its estimates for recoverable gas resources, the DOE/Argonne study provided an estimate of their availability by wellhead price. The results of the DOE/Argonne assessment reveal that more than half of the total gas resources evaluated in the lower-48 states, or 583 Tcf of gas, would be economically recoverable (including finding costs) at less than $3.00/Mcf (1987 dollars). An additional 174 Tcf of gas was judged economically recoverable in a price range of $3.00 to $5.00/Mcf. That would be enough gas (757 Tcf) that could potentially be recovered in the lower-48 states at costs below $5.00 per Mcf (1987 dollars) to meet projected U.S. demand through the year 2021, whether or not North Slope gas is exported to the Pacific Rim.

The ANGTS sponsors assert that DOE should only consider proven natural gas reserves, rather than estimates of the total resource base, in assessing domestic need because the amount of non-proven reserves is subject to wide disagreement and periodic fluctuation. That approach would represent an overly conservative view of available natural gas supplies. The level of reserve additions, and ultimately the level of reserves, is dependent upon the amount of drilling which, in turn, is sensitive to advances in gas recovery technologies and is stimulated by the price of gas. Gradual shrinkage and eventual disappearance of the present supply surplus or "gas bubble" over the next few years, combined with the prospects for substantial increases in gas demand in certain market sectors should materially improve incentives to drill new wells. In addition, although the USGS, PGC, and DOE/Argonne resource estimates do not address the timing of production or the availability of transportation, all volumes of future natural gas supply beyond proven reserves included in the studies are based on information derived from past and current experience in gas production and reservoir development and reflect a conservative view of recoverability. Gas supply assumptions that focus solely on proved reserves and do not take into account the potential for reserve additions and production experience would severely distort forecasts of domestic need.

To support its argument that the proposed exports will be needed in the lower-48 states, Alaskan Northwest quotes from a

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47/ See DOE, Energy Information Administration, Natural Gas Monthly, July 1989, at 6.

report by Jensen Associates, Inc. (Jensen study).48/ Jensen Associates, Inc., was retained by Alaskan Northwest to analyze Yukon Pacific's application. The quote indicates that by 1996, "at present rates of consumption, the U.S. will have consumed a volume of gas equivalent to 79% of [its] present lower-48 proved reserves," implying that the supply of proven reserves will be nearly depleted.49/ In addition, a second Jensen report indicates that, in each of the last 20 years but one, the gas industry has not added enough gas reserves to replace production and that production is expected to continue to decline in certain regions.50/

It is true that if there are no reserve additions, then proved reserves would be zero at the end of the next decade. However, no expert we know of expects that U.S. reserves will be depleted by the year 2000. Even the Jensen study conditions the statement about consumed proven reserves by concluding that the existence of a gas surplus in 1996 "will be dependent on the effectiveness of the industry in exploring and developing [the Nation's] remaining gas resource base."51/ The fact is, over time, more reserves are added to offset proven reserves drawdown. As Yukon Pacific points out, "[a forecaster] could have made an alarmist statement back in 1977 that by 1986, 85% of the U.S. proven reserves will be

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48/ See Assessment of the Domestic U.S. Need For North Slope Natural Gas Reserves, Jensen Associates, Inc., included as Exhibit A to Comments of Alaskan Northwest Natural Gas Transportation Company in Response to Order of the Economic Regulatory Administration, filed August 24, 1988.

49/ Id., at 10. Reserve and production statistics of the DOE's Energy Information Administration (EIA) show that the reserves-to-production ratio (R/P), that is, the relationship between natural gas proved reserves and production rates, over the years 1977-1988 fluctuated between 10 to 1 and 12 to 1 each year (increasing production rates relative to proved reserves or a decline in proved reserves causes a falling R/P ratio). See advance summary, U.S. Crude Oil, Natural Gas, and Natural Gas Liquid Reserves, 1988 Annual Report, DOE/EIA-0216(88), September 1989, at 3. With this in mind, all that the 79% figure in the Jensen study actually indicates is that in 1988 the U.S. R/P ratio was about 10 to 1 and, therefore, the U.S. could be expected to consume about 10 percent of its proved reserves each year through 1996.

50/ See A Critique of Yukon Pacific Corporation's Analysis of Domestic Need For North Slope Natural Gas, attached as Exhibit G to Reply Comments of Alaskan Northwest, at 5.

51/ Id.

consumed, and that statement would be proven correct."52/ The reality is that, during the same period, additions to proven reserves in the lower-48 states were such that as of December 31, 1988, the amount of proven reserves was 159 Tcf, down only 9 percent from 1977.53/

Furthermore, over the last nine years (1980-1988), proved gas reserves in the lower-48 states in fact declined only a total of about 4 percent.54/ The relatively stable reserve level has been due to the high reserve replacement rate which, during this period, averaged 93 percent in the lower-48 states.55/ The high average gas reserve replacement factor indicates the success of exploration and development activity in adding new gas reserves. Although drilling activity has declined since 1981, the DOE believes that statutory and policy changes in the regulatory framework for natural gas will open up marketing opportunities for companies throughout the industry and, as the "gas bubble" disappears, this should encourage the exploration necessary to stem the downward trend in levels of drilling.

Based on its analysis of the submitted studies, the DOE concludes that domestic need for natural gas during the term of Yukon Pacific's export proposal could be met by production from reservoirs in the lower-48 states without North Slope natural gas.

2. Alternative Supplies

The DOE believes that it is not necessary for the purpose of its section 3 determination to find that all future U.S. natural gas demand will be met entirely by production in the lower-48 states. Although gas produced in the lower-48 states is currently the primary source of natural gas supply, imports (mostly from Canada) meet about seven percent of U.S. gas requirements and they are projected to play an increasing role. The AGA, GRI, and DRI forecasts indicate that by the year 2010, from 3 to 4 Tcf annually of domestic market requirements will be supplied from sources

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52/ See Reply Comments of Yukon Pacific, at 26.

53/ See U.S. Crude oil, Natural Gas, and Natural Gas Liquid Reserves, DOE/EIA-0216(87), 1987 Annual Report, at 82; see also advance summary to 1988 Annual Report, at 8.

54/ Id.

55/ See U.S. Crude Oil, Natural Gas, and Natural Gas Liquid Reserves, (1977 through 1987) annual reports, DOE/EIA-0216; see also advance summary to 1988 annual report, supra.

external to the lower-48 states.56/ Yukon Pacific asserts that future domestic need in excess of lower-48 states' supplies can be met by non-Alaskan sources. The ANGTS sponsors maintain that both foreign imports and North Slope gas will be needed to meet future excess domestic need.

Pipeline deliveries from Canada are expected to remain the predominant supplemental supply source, with other imports, such as gas from Mexico or LNG from Algeria, Norway, or other foreign sources also contributing to total U.S. supply. Canada's present natural gas situation may be characterized as one of supply excess to that country's internal needs. The D&M study presented by Yukon Pacific examined assessments and projections of Canada's natural gas supply and resource base published by AGA,57/ the Canadian Energy Research Institute (CERI),58/ the U.S. Office of Technology Assessment,59/ the Canadian NEB,60/ and the Energy Modeling Forum.61/ The CERI report also estimated domestic Canadian demand. The estimates of marketable natural gas range from about 97 Tcf to 197 Tcf. Recoverable resource estimates range from 205 Tcf to 426 Tcf. With a projected domestic demand of approximately 65 Tcf (CERI) between 1985 and 2010 and an R/P ratio of greater than 30, the DOE concludes that Canada has a large quantity of natural gas potentially available for export to the U.S. over the next few decades.

Although Mexico's current energy export policy favors using natural gas for its domestic energy needs while reserving oil for exports, Mexico has a large natural gas resource base potentially available to the U.S. market. Mexico's annual domestic consumption

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56/ See Appendix F to Additional Comments of Foothills, the Table entitled "Natural Gas Supply", at 24 and Appendix G, at 7. See also Exhibit H to Reply Comments of Alaskan Northwest, at 13.

57/ The Gas Energy Supply Outlook 1987-2010, (October 1987).

58/. Towards a Continental Natural Gas Market: Historical Perspectives and Long-Term Outlook. Executive Summary, Study No. 26 (February 1988).

59/ U.S. Natural Gas Availability, Gas Supply through the Year 2000, February 1985.

60/ Canadian Energy: Supply and Demand 1985-2005, October 1986. See also, National Energy Board Reasons for Decision in the Matter of Review of Natural Gas Surplus Determination Procedures, September 1987a.

61/ EMF9 Summary Report-North American Natural Gas Market-Preliminary Draft, August 1988.

is about 1.25 Tcf.62/ The D&M study indicates that Mexico's proved reserves totaled 76.5 Tcf in 1986 with a R/P ratio of 61. There are no recent estimates for undiscovered recoverable resources, but they were estimated to be over 289 Tcf in 1985. Mexico's policy of limiting gas exports might well change in the longer term to take into account general gas availability, gas export revenue considerations, and physical limitations on using the gas internally.

Numerous countries are capable of supplying LNG to the U.S. and have expressed a serious interest in doing so. There are four LNG receiving and gasification terminals in the U.S. located on or accessible to the East Coast. They have a combined daily capacity of about 2 Bcf. Of these four, only Distrigas of Massachusetts Corporation's facility at Everett, Massachusetts, is currently operating. It brings Algerian LNG imports into the lower-48 states. Trunkline LNG Company has requested FERC permission to begin operating its facility at Lake Charles, Louisiana, in late 1989 to receive Algerian LNG. There is a potential for further LNG supplies for the U.S. after 1990, especially in the Atlantic region, from Algeria, Norway, Nigeria, Venezuela, and the Caribbean, because of the surpluses that exist in these relatively low-cost production areas. For example, development of the North Sea fields has resulted in vast additional reserves of gas that could be marketed in the U.S. Statoil is in the formulative stages of arranging for importation and marketing of LNG on the East Coast. In the case of Statoil, Norwegian reserves currently amount to about 110 Tcf. Of this total, only 30 Tcf are presently committed by contract to existing purchasers. According to Statoil, "when the U.S. market requires additional gas supplies, Statoil and other overseas LNG interests will be able to meet some or all of this demand."63/

In light of the data submitted by all of the parties, the DOE concludes that there would be sufficient North American and overseas gas supplies to meet potential domestic demand without North Slope gas.

3. Effects on Quantity, Quality, and Price

Since the record indicates that available energy supplies are sufficient to meet domestic need, the DOE has considered whether there is any reason that North Slope natural gas, rather than other energy supplies, should be used to meet the anticipated demand. The public interest lies in ensuring the availability of adequate

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62/ See Exhibit A attached to January 24, 1989, Prepared Statement of Vernon T. Jones, Chairman of Board of Partners, Alaskan Northwest, which was submitted at the Alaska public conference, at 9.

63/ See Initial Comments of Statoil North America, Inc., filed August 24, 1988, at 5.

supplies at competitive prices. Therefore, the DOE has considered whether there are any effects on supplies or prices that would result directly and uniquely because of the proposed export. The DOE also has considered whether the proposed export might have a direct and unique effect on matters such as the environment or energy security.

For the most part, the examination of these potential considerations corresponds to the provisions of section 12 of ANGTA, which prohibit exports of North Slope natural gas unless the President finds such exports will not affect American consumers adversely by diminishing the quantity or quality of available energy supplies or increasing the total price of available energy. President Reagan fulfilled this statutory condition precedent in 1988 when he issued the Finding in which it was determined that exports of North Slope natural gas will not affect American consumers adversely because there are adequate supplies of secure, reasonably-priced energy available to American consumers. While this generic finding by the President necessarily provides the DOE with significant guidance, the DOE has examined these matters of supply, price, and qualitative effect in the particular context of Yukon Pacific's application under section 3 of the NGA.

a. Quantity

The quantity of energy available to American consumers is not necessarily diminished merely because a particular energy supply is exported. Depending on the market, the alternative to export may be to leave an energy supply unused altogether. Moreover, in the context of global energy interdependence, the export of a certain energy source may, by increasing worldwide supplies of energy, result in making other energy supplies available to American consumers. Accordingly, with respect to North Slope gas, it would be unduly simplistic to conclude that exports will necessarily diminish the quantity of energy available to American consumers. In this case, the alternative to exporting North Slope gas may be that it remains undeveloped, and therefore available to no one; conversely, exporting such gas may make available on the American market gas from foreign sources that would otherwise have gone to the Pacific Rim.

In the final analysis, the question whether the proposed export of North Slope gas will adversely affect the quantity of energy available to American consumers depends on whether the export will cause available supplies to be inadequate to meet domestic demand. As discussed previously, there is an adequate supply of domestic gas other than North Slope natural gas to meet domestic need; furthermore, alternative supplies, such as Canadian gas, are more than adequate replacements for any North Slope natural gas that might be exported. The DOE therefore believes that the quantity of energy available to American consumers will not be adversely affected by the proposed export.

b. Quality

There is no evidence that the export of North Slope natural gas will diminish the "quality" of energy available to American consumers. Quality is an amorphous term that can denote a wide range of effects. For the most part, the ANGTS sponsors assert that the proposed export could result in detrimental qualitative effects in the areas of the environmental and energy security.

The purported harm to the environment would result from the use of other fossil fuels, such as coal, to meet excess demand. While the DOE does not dispute that some excess demand may be met by energy sources other than natural gas, it does not believe the proposed export will be the reason for such a decision. Since the DOE has found that natural gas demand in the lower-48 states can be satisfied by supplies exclusive of the North Slope, any decision by American consumers to use other forms of energy will result from factors that relate to the desirability of natural gas when compared to other energy options, not because the proposed export makes gas unavailable.64/

The ANGTS sponsors also assert that U.S. energy security would be impaired from consequent importing of natural gas or crude oil if the volumes proposed for export were unavailable to meet domestic demand. Even if the proposed export tends to increase energy imports, the DOE does not necessarily equate such a situation with energy insecurity. Energy security must be viewed in global terms: "Individual nations cannot go it alone; they are inevitably affected by the decisions and reaction of all other major market participants."65/

Finally, North Slope natural gas is an integral part of the North American energy market resource base. The efficient development of North Slope gas, which includes potential exports, will contribute to the overall performance of the North American energy market. Any decision to export some North Slope gas will result from a market decision that other portions of the energy market can

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64/ A study prepared by Argonne National Laboratory for the ERA was included in the TAGS EIS that analyzed the environmental effects of exporting North Slope gas instead of using it domestically. The analysis concluded that using other fossil fuels, such as coal, to meet a shortfall in supply equivalent to the proposed exports would have minimal effect on air pollution levels. See An Assessment of the Potential Environmental Residuals in the Lower-48 States Arising from Alaskan Natural Gas Exports (July 30, 1987), attached as Appendix D to the draft EIS. The study was incorporated by reference in Appendix K of the FEIS.

65/ U.S. Department of Energy, Energy Security: A Report to the President of the United States, March 1987, at 222.

better serve the needs of American consumers. DOE believes that true energy security lies in encouraging the most efficient operation of the North American and global energy market.

c. Price

In determining whether the proposed export would result in higher prices to American consumers, the DOE has focused on the structure of the natural gas market to evaluate the likelihood that the proposed export will affect market conditions so that consumers pay more than they would if North Slope gas were not exported.66/ In general, conditions in the domestic market will establish the price for whatever natural gas is used to meet domestic need, regardless of the source of the gas. Neither North Slope gas nor any other specific supply will be the tail that wags the market price of natural gas. The export of a particular gas supply, such as North Slope gas, would exert upward pressure on the market price only if there were not adequate alternative supplies of energy to meet domestic need at a market-responsive price. Even then, the export would exert upward pressure only if the costs of producing and delivering the exported gas to the domestic market would be less than the costs of the energy supplies actually used to meet the marginal demand.

The DOE's supply/demand analysis indicates there are adequate supplies to meet future demand without North Slope gas. While future market prices will be determined by a variety of factors (including the highly variable cost of crude oil), the DOE believes that it is reasonable to assume that these supplies will be available at a market-responsive price. The DOE/Argonne study indicates that 583 Tcf of gas will be available from reserves in the lower-48 states at less than $3.00/Mcf, while an additional 174 Tcf of gas will be available in a price range of $3.00 to $5.00/Mcf.

Even if imports of gas are used to meet some demand, the DOE does not believe that they would be more costly than North Slope gas. In light of the location of North Slope natural gas and the conditions under which it would be produced and delivered to the lower-48 states, the DOE believes that the costs of producing and delivering most alternative supplies, especially Canadian gas, would be comparable to or lower than the cost of North Slope gas. Accordingly, if North Slope gas is exported, there should not be any marginal upward price pressure and thus, there should be no disruption in market conditions which would effect the efficient operation of market forces and result in higher prices to American consumers.

The DOE has reviewed very carefully the economic analyses submitted by Yukon Pacific and the ANGTS sponsors that purport to

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66/ Action under the NGA may "rely on reasonable economic propositions." See Michigan Consolidated Gas Company v. FERC, No. 88-1062, slip op, at 14-15 (D.C. Cir. August 18, 1989).

show whether North Slope gas will be competitive with other gas supplies and whether its price will be higher or lower than other supplies.67/ For the most part, the DOE finds these analyses represent a duel between economists over economic models, rather than a comparison of the actual production and delivery costs of North Slope gas with other gas supplies. Neither Yukon Pacific nor the ANGTS sponsors have analyzed the costs of North Slope gas and alternative supplies in a manner that sets forth the rationale for calculating those costs or the actual cost factors used in the calculations.68/ Their conclusions are not persuasive concerning the comparative costs of North Slope gas and other supplies or the effects of the proposed export on domestic prices and do not constitute the substantial evidence necessary to overcome the DOE's analysis of the fundamental market conditions, the section 3 presumption in favor of export approval, and the President's Finding.

In summary, the DOE has determined that North Slope natural gas is not required to meet domestic need because there are adequate supplies of gas available in the lower-48 states, as well as secure foreign supplies, and that the proposed export will not adversely affect the quantity, quality, or price of energy sources available to American consumers.

B. Other Public Interest Considerations

Although domestic need is the only factor specified by Delegation Order No. 204-111, the DOE considered the potential effects of the proposed export on other aspects of the public interest. In particular, the DOE examined the effects on American consumers, energy production, the State of Alaska, international relations, and the environment.

67/ As discussed previously, "competitive" under the assumptions of an economic model does not necessarily translate into competitive in the real world. See supra note 37.

68/ For example, no party has provided any reason to believe that producers (and the State of Alaska) would be willing to receive wellhead prices for North Slope gas that are substantially lower than the wellhead price of other gas supplies. See Table 6-7 of the D&M study. Likewise, the DOE can find no discussion in the record that compares the actual costs of delivering North Slope gas and Canadian gas to the lower-48 states or that provides a basis for assuming that the same factors that might lower the delivery costs of North Slope gas would not also operate to lower the delivery costs of Canadian gas. Rather than discuss such basic issues, the economic experts representing Yukon Pacific and the ANGTS sponsors chose to spar over whether to use the cost of service tariff for the ANGTS project that is on file with the FERC or a levelized cost tariff.

1. American Consumers

A primary purpose of the NGA is protection of American consumers. In essence, the evaluation of domestic need is an examination of the effects of the proposed export on American consumers. As discussed in Section V.A., supra, the proposed export will not result in inadequate supplies or higher prices and thus will not be inconsistent with the public interest because of adverse effects on consumers.

During this proceeding, the ANGTS sponsors asserted that the proposed export may be inconsistent with the public interest because American consumers might somehow subsidize the export project. The DOE believes that those involved in the proposed export should bear the risk of the project and that none of the costs of the project should be borne by American consumers. Yukon Pacific has indicated that it does not expect American consumers to bear any of the risks or costs of the project and will not object to a condition that sets forth this principle. Accordingly, the DOE is attaching a condition to its approval of the proposed export that no cost of the export project may be recovered from American consumers. To assist in monitoring compliance with this condition, the DOE is requiring the submission of all contracts and other documents for the acquisition, transportation, and sale of North Slope gas in connection with the export project, when these documents are executed.

The DOE recognizes that situations may arise where American consumers could receive natural gas directly as a result of the export project. For example, consumers in Alaska may receive some North Slope natural gas transported through TAGS. The condition against the recovery of costs from American consumers is not intended to prevent Yukon Pacific from receiving payment for the sale of North Slope gas in the U.S. and from recovering the cost associated with those facilities used and useful for supplying such gas to consumers.

2. Energy Production

The U.S. public has a strong interest in the efficient production of the Nation's energy resources. While the interest of consumers and producers sometimes must be balanced in proceedings under the NGA, they coincide in this proceeding. Approval of the proposed export will have the beneficial effect of encouraging increased development of energy resources in Alaska.

The ANGTS sponsors question whether competition will spur exploration for and development of North Slope natural gas and they have indicated that the proposed export might result in the non-production of some North Slope gas. The DOE does not accept this contention.

Thirteen years have passed since the passage of ANGTA and no North Slope natural gas has been produced commercially. The introduction of competition will encourage a realistic assessment of the potential of North Slope natural gas and its early and more

efficient development. It also will provide an incentive for discovering and developing additional reserves of natural gas on the North Slope. Several estimates have been published concerning the amount of North Slope proven reserves. Estimates published by the DOE's Energy Information Administration (EIA), the Alaska Oil and Gas Conservation Commission (AOGCC), and the Alaska Department of Natural Resources (ADNR) indicate a range of proven reserves from 22.5 Tcf (AOGCC) to 33.9 Tcf (ADNR)).69/ The EIA estimate of 24.6 Tcf lies between the AOGCC and ADNR estimates. The DOE/Argonne appraisal estimates the undiscovered recoverable gas for the onshore and offshore areas of the North Slope to be 89 Tcf. By combining these figures for proven reserves and potential gas reserves, the total gas resources of the North Slope would be in a range of 111.5 Tcf to 122.9 Tcf.

Producers of North Slope natural gas have supported approval of the proposed export. This support has not been based on their involvement in the export project, but rather on their belief that competition for North Slope natural gas is the best means to ensure its expeditious and efficient development. Indeed, Exxon has supported approval of the export in order to spur market competition and development efforts, even though its current analysis indicates the most likely market for North Slope gas is the lower-48 states.

3. State of Alaska

In making the public interest determination in this proceeding, the DOE has been especially mindful of the effects of the proposed export on the State of Alaska and its citizens. The State strongly supports approval of the proposed export because it would promote the development of Alaska's natural resources. The State indicates that the export project would provide significant benefits to the local economy through increased jobs, tax revenues, and royalty payments. Specifically, the TAGS FEIS indicated that construction of the TAGS facilities would create up to 7,200 new jobs during the peak year. Operations would employ about 550 people directly, and support over 1,000 more jobs indirectly. Royalty payments, state taxes, and property taxes are expected to produce about $377 million in state government annual revenues. The benefits to Alaska are undisputed in the record.

69/ See EIA, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1987 Annual Report, DOE/EIA-0216(87); AOGCC, Bulletin, "Estimate of Gas Reserves in Alaska," May 1988, at 4; and ADNR, Historical and Projected Oil and Gas Consumption, January 1989, Table 2.1. (Copies of relevant pages attached as Exhibits A-C in Alaskan Northwest's Supplemental Comments Relating to January 24, 1989 Conference, submitted February 7, 1989.

4. International Effects

The international effects of a proposed export may also be significant in the public interest determination. In general, the DOE believes that the public interest is served best through a policy of free trade in energy resources. Such a policy promotes energy interdependence among all nations, rather than energy dependence on a few nations. Competition in world energy markets promotes the efficient development and consumption of energy resources, as well as lower prices, whereas economic distortions can arise from artificial barriers to the free flow of energy resources. Accordingly, the DOE believes that the public interest in free trade generally supports approval of proposed exports.

This particular export project has beneficial international effects in addition to those normally associated with free trade. The export project would serve markets in the strategically important Pacific Rim countries of Japan, South Korea, and Taiwan.70/ By increasing the energy security of these allies, the project, in effect, would strengthen our national security. In addition, the U.S. currently is experiencing a trade imbalance with these Pacific Rim countries. By increasing exports to these countries, the export project would tend to mitigate this trade imbalance.

Of course, the public interest in international energy markets also requires consideration of the North American energy market. Accordingly, the DOE has given special consideration to the concerns of Canada, our major partner in the North American energy market. The Canadian concerns about the proposed export center on the effects of the approval of the export project on the U.S. Government's commitment to ANGTS.71/

The U.S. Government has complied fully with its commitment to ANGTS by removing all regulatory impediments to the completion and

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70/ The U.S. Government has long recognized the potential strategic value of exporting North Slope natural gas to Pacific Rim markets. In 1983, President Reagan recognized the potential importance of North Slope gas to U.S. relations with Pacific Rim countries when he and Japanese Prime Minister Nakasone agreed to encourage private efforts to explore the possible export of North Slope gas. See Joint Statement of President Reagan and Prime Minister Nakasone on Energy Cooperation, November 11, 1983. See also June 17, 1983, letter from Secretary of Commerce Malcolm Baldridge to Bill Sheffield, Governor of Alaska in which the Secretary stated "The Administration views the development of Alaska North Slope natural gas as a major contribution to Western energy security, whether the gas is marketed in the United States or abroad, it reduces demand for OPEC and Soviet energy and clearly results in significant benefits to the U.S. economy."

71/ The U.S. Department of State also has considered the Canadian concerns and has found the proposed export would not breach any (continued)

operation of ANGTS by private parties. Moreover, it has assured Canada that it will not erect new regulatory barriers to the completion of ANGTS by private parties. In particular, the President's Finding reaffirmed all existing commitments to support the special regulatory treatment of the "prebuild" segments of the ANGTS, including the minimum revenue stream guarantees.

DOE does not believe approval of the proposed TAGS export to be inconsistent with the U.S. Government's commitment to ANGTS. Approval of the proposed export will create no regulatory impediments to the completion and operation of ANGTS.72/ The commitments of the U.S. and Canada to ANGTS did not include any pledges to impose a governmentally-dictated scheme of development on energy resources. To the contrary, the bilateral agreements on ANGTS were important first steps in the recognition that the

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(footnote continued)
agreement between the U.S. and Canada. In response to Canadian concerns about the viability of ANGTS, the State Department stated:

> The United States Government continues to support development of the ANGTS pipeline based on private sector financing. Its eventual development is a private sector decision, and must be based on private financing, as stated in the original 1977 Bilateral Agreement and repeated on many occasions since. Decisions on private sector financing can and should reflect the economic potential of the project as determined by market considerations. By the same token, the United States Government will not impede the private sector from developing other initiatives to develop Alaska North Slope gas. Like ANGTS, their development is a private sector decision, explicitly requiring private sector financing, and thus reflecting their economic potential as determined by the market place.... Other projects for developing [Alaska North Slope] gas resources will have to rise or fall on their economic merits, as determined by the market.... Our policy is that ANGTS, TAGS, or any other project for [Alaska North Slope] gas must be strictly private capital ventures, competing equally in the market place for financing. Such an approach would be consistent with our goal of allowing the market to determine how the gas is developed.

See letter from Mr. J.P. Ferriter to Mr. L.H. Legault, attached as Exhibit T to Reply Comments of Yukon Pacific.

72/ In fact, the DOE is including in this authorization a specific condition to ensure that the export will not be inconsistent with the framework adopted at the inception of ANGTA. See Section V.C., infra.

interests of both countries are best served by letting the marketplace decide the most efficient development of energy resources with minimal governmental interference. The DOE believes that continuation of the commitment to removal of governmental impediments and deference to marketplace decisions eventually will result in the efficient development of North Slope natural gas.

5. The Environment

Environmental concerns are an important element of DOE's public interest consideration. In general, DOE considers environmental issues in the context of the National Environmental Policy Act of 1969 (NEPA).73/ The DOE participated as a cooperating agency during the preparation of and has adopted the TAGS FEIS 74/ which examined the environmental effects of constructing and operating the TAGS pipeline, liquefaction facility, marine terminal, and related project components.75/ The publication of the FEIS was the culmination of a comprehensive process that began with Yukon Pacific's application for a right-of-way permit in 1984. During the scoping process the DOE participated in six public meetings in Alaska in 1986 designed to identify the environmental issues and concerns related to the project. Additionally, the DOE participated in eight formal public hearings on the draft EIS in 1987 and thoroughly reviewed the draft EIS prior to the issuance of the FEIS. The DOE has concluded that

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73/ 42 U.S.C. 4321, et seq.

74/ Trans-Alaska Gas System Final Environmental Impact Statement (FEIS BLM-AK-PT-88-003-1792-910, June, 1988). DOE/EIS-0139.

75/ The ANGTS sponsors questioned the treatment in the FEIS of the gas conditioning facility (GCF) that would be used by the TAGS project. The FEIS did not consider a GCF in the Prudhoe Bay area as part of the TAGS project. Rather, the FEIS considered the GCF as a connected action to be evaluated with regard to environmental effects when the plant configuration and technology are more certain. The FEIS conceptually described the GCF that would be needed to produce pipeline quality natural gas for TAGS and analyzed and discussed the potential environmental consequences as they presently exist for the construction and operation of the conceptual GCF if it was located at Prudhoe Bay adjacent to Atlantic Richfield Company's existing Central Gas Conditioning Facility.

As noted previously, the unconstructed ANGTS holds a conditional certificate from the FERC to build and operate the Alaska Gas Conditioning Facility (AGCF) at Prudhoe Bay to support the proposed ANGTS project. The FEIS is based on the assumption that the ANGTS facilities will be built. The FEIS indicated that no significant cumulative effects are expected from the construction and operation of the AGCF and a stand-alone conditioning facility for TAGS located several miles south of the area identified for the AGCF.

the TAGS FEIS is a complete document that complies with the NEPA process and provides an adequate basis to evaluate the environmental aspects of the section 3 public interest determination concerning the export project.

The DOE used that FEIS, as well as its independent review, in assessing the environmental consequences of granting the proposed export. The DOE's findings are discussed in its Record of Decision for the Yukon Pacific project which was issued in conjunction with this order and is being published in the Federal Register.76/ The DOE determined that the overall physical impacts anticipated to the natural environment are relatively minor and can be mitigated, and thus are environmentally acceptable, especially when balanced against the substantial economic benefits to be derived from the project.77/

The FEIS indicates that the proposed export project can be constructed and operated in an environmentally acceptable manner provided that the specific mitigation measures identified in the FEIS are implemented. These measures include compliance with the tiered review process 78/ set forth in the FEIS and any resulting environmental requirements, including the stipulations already required by BLM in the TAGS right-of-way. This compliance would

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76/ The Record of Decision was issued under the Council on Environmental Quality Regulations implementing the procedural provisions of NEPA and the DOE's guidelines for compliance with NEPA (52 FR 47662, December 15, 1987).

77/ The DOE notes that the physical impacts associated with the development of North Slope gas may occur regardless of whatever action the DOE takes since the ANGTS sponsors already have legislative and regulatory approval to construct ANGTS. As part of the approval process for ANGTS, the Council on Environmental Quality found the physical impacts of ANGTS (similar in nature to those predicted for TAGS) to be environmentally acceptable and this finding was ratified by the President and Congress. (See the President's Decision on ANGTS at 132-133).

78/ Yukon Pacific, BLM, and USACE are using a tiered approval system for the design and construction of the TAGS project. The fundamental approach used in the tiered mitigation process is: the development and approval of design criteria, final design, and the issuance of a "Notice to Proceed." Therefore, the discussion of mitigation measures in the FEIS tend to be generic and refer to site specific designs not yet done. Consistent with that tiered concept, BLM attached stipulations to its grant of a right-of-way for TAGS which specify that Yukon Pacific will submit for governmental approval certain plans and site specific designs before proceeding with field activities. These stipulations and subsequent plans will set forth the standards of performance for construction and operation of the pipeline, and termination of the (continued)

minimize any negative social, economic, and environmental effects and promote the positive effects of the proposed TAGS project.

Following issuance of the FEIS, Exxon Shipping Company's crude oil tanker, the Exxon Valdez, went off course and ran aground in Prince William Sound on March 24, 1989, spilling 242,000 bbls of North Slope crude. The resulting damage to shoreline and wildlife has emphasized the need for strict preventive and mitigative measures to maintain transportation safety and protect the environment, as well as for comprehensive monitoring to ensure compliance with these measures. The DOE believes that energy projects can and must be undertaken consistent with environmentally acceptable practices. To ensure this result, the DOE is attaching a condition to the export approval that all aspects of the export project must be undertaken in accordance with the appropriate environmental review process and must comply with any and all preventative and mitigative measures imposed by Federal or State agencies.

The DOE expects those agencies responsible for regulating the construction and operation of the proposed TAGS facilities to impose and strictly enforce all necessary measures to preserve and protect the natural environment and to incorporate within these measures the lessons that have been learned from the Exxon Valdez incident. In particular, the DOE is directing the FERC to consider the safety and environmental aspects of the export site and facilities, including the liquefaction plant, the marine terminal, the LNG tankers and their routes in Prince William Sound and U.S. territorial waters, prior to approving any export site or facilities.79/ This consideration should place particular emphasis on the need for the FERC to exercise the full extent of its section 3 authority to regulate the marine transportation of LNG if it approves an export site. Any FERC approval should

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(footnote continued)
right-of-way. The stipulations cover (1) protection of the environment; (2) integrity of the pipeline system; (3) integrity and protection of adjacent or intersecting facilities, in particular, the TAPS and ANGTS pipelines; (4) public health and safety; and (5) effects on socioeconomic, subsistence, and cultural resources. Mitigation of environmental impacts and monitoring of the project by BLM will be primarily through monitoring, enforcement, and action under these stipulations

79/ DOE Delegation Order 0204-112 delegated the FERC authority under section 3 of the NGA to approve or disapprove "the construction and operation of [export] facilities, the site at which such facilities shall be located, and the place of ... exit for exports" of natural gas, as well as the authority to exercise the functions under sections 4, 5, and 7 of the NGA with respect to exports. See 49 FR 6690 (February 22, 1984). Any exercise of authority under this delegation order, however, must be consistent with the terms and conditions under which the DOE authorizes an export and with the DOE's policies.

include all appropriate preventive and mitigation measures to protect the public health, safety, and environment.

C. ANGTA

In addition to the public interest determination of section 3 of the NGA, the DOE has considered the proposed export in light of the statutory framework of ANGTA as it relates to exports of North Slope natural gas. Section 12 of ANGTA prohibits the export of North Slope gas in the absence of a finding that the export will not affect American consumers adversely. Section 9 of ANGTA requires the DOE to assess whether a regulatory action would significantly impair the construction or initial operation of ANGTS.

The ANGTS sponsors argue that the proposed export is inconsistent with the framework of ANGTA because it would make completion and operation of ANGTS more expensive or impractical and thus cannot be approved. In particular, they assert that the proposed export would affect ANGTS adversely because (1) there are insufficient proven reserves of North Slope gas to support the proposed export and ANGTS, (2) the export project would increase the costs of ANGTS, and (3) in certain locations, the construction and operation of two natural gas pipelines would be impractical or impossible.

The DOE evaluated these concerns in light of the framework of ANGTA. As discussed in the July 25 procedural order, this evaluation focused on the direct effect that regulatory action might have on the ability of the ANGTS sponsors to proceed with its expeditious construction and operation. ANGTA was intended to remove regulatory roadblocks that could impede the prompt commencement and completion of the ANGTS. However, ANGTA neither contemplates the insulation of ANGTS from all competition nor requires the creation of regulatory obstacles to other North Slope gas projects.

The DOE does not think that ANGTA mandates the rejection of a proposed export because there may be insufficient proven reserves for both the proposed export and ANGTS. Neither does it require the imposition of a condition to set aside certain reserves for ANGTS.80/ Such actions would be inconsistent with the framework

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80/ In this regard, DOE notes the statement of Senator Henry Jackson when the Senate approved ANGTA that "ANGTA is a procedural bill which, unless otherwise explicitly stated, does not modify existing rights and obligations of affected persons." 122 Cong. Record 22018, 22023 (July 1, 1976).

of ANGTA. ANGTA neither grants ANGTS an exclusive license to North Slope gas nor dedicates any particular reserves to ANGTS.81/

ANGTA was enacted to establish a process for selecting a transportation system to bring natural gas from the North Slope of Alaska to the lower-48 states and to facilitate its construction and operation. Contrary to the assertions of the ANGTS sponsors, ANGTA was not intended to somehow mandate the use of North Slope gas in the domestic market or to limit its export to formal exchanges of energy supplies. In fact, section 12 of ANGTA explicitly addresses the export of North Slope gas and permits the export on the same basis as any other gas once the President finds, as has occurred, that the export will not be detrimental to American consumers. There is no hint in ANGTA or its legislative history that Congress intended sub silentio to link the export of North Slope gas to the effect on ANGTS. To the contrary, decisions concerning ANGTS were to be made by private parties on the basis of actual market conditions without any governmental subsidies.

Currently Yukon Pacific, the ANGTS sponsors, or any other private party is free to negotiate and sign contracts with the producers of North Slope gas. Regulatory approval of the proposed export will not change this situation. Rejecting the proposed export or imposing a condition on the proposed export to set aside certain North Slope gas for ANGTS would not be a measure to mitigate the effects of regulatory action, but rather the creation of a regulatory obstacle to competition for North Slope gas. Such action is not mandated by ANGTA and, in fact, would be inconsistent with the explicit language in ANGTA that permits exports of North Slope natural gas if the requirements of section 3 of the NGA and section 12 of ANGTA are met.

Unlike the asserted concerns about reserves, the effects of TAGS on the costs and physical feasibility of constructing and operating ANGTS do come within the intended framework of ANGTA since they could directly impair its construction and operation. The ANGTS sponsors have presented sufficient evidence to demonstrate that the proximity of the TAGS pipeline to ANGTS in many locations creates the potential that ANGTS may become significantly more expensive, or even impossible to construct and operate because of the proposed export. There is no evidence, however, that this potentiality cannot be managed in a manner that permits TAGS to be constructed and operated without impairing the construction and operation of ANGTS.

The DOE does not believe that it is either feasible or necessary to resolve the management of every potential interaction

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81/ Mr. George McHenry, representing Foothills, stated at the public conference in Anchorage on January 25, 1989, that "we have never suggested that the ANGTS sponsors own the North Slope reserves or they were given by Congress to the sponsors of the ANGTS. What we have said is that producers own those reserves and obviously they have the right to enter into contracts with whomever they please." See Transcript, at 148.

between TAGS and ANGTS prior to the approval of the proposed export. Such an effort would be enormously time-consuming and inefficient since, while a large number of potential situations for adverse interaction between TAGS and ANGTS could be hypothesized, the number of actual situations most likely will be small. The DOE has decided that the export can be approved consistently with the framework of ANGTA, and in particular section 9, if it exercises its plenary authority under section 3 of the NGA to attach to the approval a condition that incorporates the requirements of section 9. In particular, this "ANGTA condition" will prohibit Yukon Pacific from taking any action that would compel a change in the basic nature and general route of ANGTS or otherwise prevent or impair in any significant respect its expeditious construction and initial operation.82/

Since the DOE is exercising its plenary authority under section 3, the "ANGTA condition" extends to the pipeline and related facilities, such as a gas conditioning plant or any support facility or resource. It does not extend to natural gas reserves. As discussed previously, the ANGTA framework draws a clear distinction between the construction and operation of ANGTS and market decisions concerning the development of North Slope natural gas.

The DOE does not intend the "ANGTA condition" to be used as a means to delay or otherwise burden the proposed export project unnecessarily. The ANGTS sponsors must demonstrate the adverse effect on ANGTS of an action by Yukon Pacific. This demonstration may not be speculative, but rather should be based on facts which clearly show that an action directly will increase the cost of constructing or operating ANGTS or will make constructing or operating ANGTS impractical. Where the ANGTS sponsors demonstrate increased costs, Yukon Pacific will be presumed to satisfy the "ANGTA condition" if it agrees to compensate the ANGTS sponsors by paying the larger of the increased costs or its proportionate share of the overall costs of the measures necessary to mitigate the effects of TAGS on ANGTS. Where the ANGTS sponsors demonstrate that TAGS will make constructing or operating ANGTS impracticable, Yukon Pacific will be presumed to satisfy the "ANGTA condition" if

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82/ The DOE has not included a similar condition with respect to TAPS because the oil pipeline already is constructed and there is no statutory provision for TAPS comparable to ANGTA. Moreover, the TAPS right-of-way, like the ANGTS right-of-way, prohibits any incompatible uses by holders of subsequent rights-of-way on or adjacent to the right-of-way. In addition, the TAGS right-of-way makes the proposed export project subject to the pre-existing rights-of-way for TAPS and ANGTS. Enforcement of these provisions will prevent actions by Yukon Pacific that are incompatible with TAPS.

it agrees to modify its project to avoid the problem or, where appropriate, to construct joint facilities which accommodate the needs of ANGTS.83/

D. Other Matters

Section 3 of the NGA provides plenary authority over all aspects of an export where the public interest requires the exercise of such authority.84/ In general, the DOE refrains from exercising the full extent of its section 3 authority unless it determines action is necessary to avoid a regulatory gap inconsistent with the public interest or to preserve the integrity of the export approval and the underlying public interest determination.

The DOE has examined all aspects of the export project to determine the extent to which it should exercise its plenary

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83/ ANGTA established the Office of Federal Inspector (OFI) to coordinate and monitor Federal activity concerning ANGTS. Reorganization Plan No. 1 of 1979 (Reorganization Plan) (44 FR 33663, June 12, 1979) transferred to OFI exclusive responsibility for enforcing all Federal statutes, regulations, and authorizations relevant in any manner to the preconstruction, construction, and initial operation of ANGTS. In areas where TAGS and ANGTS would interact, OFI would have responsibility to determine the compatibility of TAGS with ANGTS, to review and approve designs, plans, and schedules, and to enforce the provisions and requirements of Federal authorizations such as the TAGS right-of-way when it is on or adjacent to the ANGTS right-of-way.

Since the "ANGTA condition" in this authorization is directly relevant to ANGTS, OFI will be responsible for its enforcement. Pursuant to Section 2-202(c) of the Reorganization Plan, OFI is required to follow the policies of the agency that otherwise would be responsible for the enforcement function and the DOE reserves the right to announce specific policy measures to enforce this condition. The DOE emphasizes that its general policy is that this condition shall not be enforced in a manner that unduly delays or hinders any aspect of Yukon Pacific's export project and that expeditious procedures should be followed to resolve any disputes concerning this condition.

84/ In Distrigas Corporation v. FPC, 495 F.2d 1057 (D.C. Cir. 1974), cert. denied, 419 U.S. 834 (1974), the court found that section 3 of the NGA provides the authority for "comprehensive regulation" where such power is "responsibly exercised" to protect the public interest. "Section 3 supplies ... not only ... the power necessary to prevent gaps in regulation, but also ... flexibility in exercising that power." 495 F.2d at 1064. The court also made clear that power under section 3 extends equally to imports and exports. 495 F.2d at 1063; see also, Border Pipe Line Company v. FPC, 171 F.2d 149 (1948).

authority in this proceeding. Since the proposed export project will be subject to comprehensive regulatory oversight by the State of Alaska, BLM, USACE, FERC, and other Federal agencies, DOE has determined that the need to exercise its plenary authority is limited.85/ DOE has determined, however, that there are certain situations where the exercise of this authority is appropriate.86/

The gas conditioning facilities have been the subject of much controversy in this proceeding. Yukon Pacific asserts that the conditioning plant is not part of its project and should not be considered in this proceeding. The ANGTS sponsors argue that the conditioning plant should be considered because of its potential effects on the environment and because of the issues that would arise if TAGS and ANGTS share a conditioning plant. Since the DOE's regulatory authority over exports extends to the wellhead, the conditioning plant comes within its purview.

The DOE believes that any environmental concerns can be mitigated in an acceptable manner whether TAGS and ANGTS share a gas conditioning plant or they construct separate facilities. DOE expects the tiered process contemplated in the FEIS will take place for all aspects of the TAGS project, including the conditioning plant and production facilities that will be used to supply the gas to be exported. As discussed in section V.B.5 supra, the DOE is attaching a condition to the export approval that all aspects of the export project, regardless of whether they are undertaken by Yukon Pacific, must be undertaken in accordance with the appropriate environmental review process, and must comply with any and all environmental preventive and mitigative measures imposed by federal or state agencies.

The potential for sharing a gas conditioning plant also raises another issue for which action by DOE is appropriate. In general, the cost and practicality aspects of sharing such a facility are covered by the "ANGTA condition." However, the question of the jurisdiction of the FERC makes additional action appropriate. The DOE Organization Act gives the Secretary of Energy all NGA authority over natural gas imports and exports. The FERC cannot exercise any authority over imports or exports unless the Secretary assigns such a function to the FERC. While the Secretary has delegated to the FERC some authority over the siting, construction, and operation of import and export facilities and over imports and

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85/ See Appendix S to Initial Comments of Yukon Pacific at 36-55 for a description of the regulatory oversight by various federal and state agencies to which TAGS will be subject.

86/ As discussed previously, the "ANGTA condition" will extend to all aspects of the export project.

exports once they are in interstate commerce,87/ the exercise of that authority is subject to any terms or conditions attached by the DOE to the import or export approval.88/ In order to avoid overlap with enforcement of the "ANGTA condition" and to relieve the export project from duplicative and unnecessary regulation, the DOE has decided to exercise its authority to limit any jurisdiction the FERC might otherwise acquire over the export project in the event TAGS and ANGTS share a facility that is subject to the FERC's interstate commerce jurisdiction, such as the Alaska Gas Conditioning Facility proposed by the ANGTS sponsors. The FERC shall only exercise such authority over the export project to the extent necessary to ensure that the shared facility is constructed and operated in accordance with FERC's regulations, including those concerning the environment. The FERC shall have no other authority over Yukon Pacific's export project, including its rates, except to the extent necessary to ensure that Yukon Pacific pays its part of the costs of any shared facility. The DOE intends this limitation on the FERC's authority to apply not only to the gas conditioning plant, but also to any other facility subject to the FERC's jurisdiction that the export project might utilize. This limitation does not apply to the FERC's section 3 authority over the liquefaction plant, marine terminal, and transportation of the LNG.

With respect to the liquefaction plant and marine terminal, the Secretary delegated to the FERC section 3 authority over the siting and construction of new import/export facilities. This delegation stipulates that the FERC cannot approve any site that the DOE disapproves. On the basis of its environmental review, the DOE has concluded that the Valdez export site is preferable to all other export sites that were considered in the FEIS, including the Cook Inlet site. Three factors discussed in the FEIS indicate that Port Valdez is environmentally preferable to the Cook Inlet alternative. First, the Cook Inlet alternative creates new disturbances in Minto Flats, an important subsistence use area. By contrast, the impacts of the proposed project are in an existing transportation and utility corridor. Second, the Cook Inlet alternative crosses Denali National Park and Preserve, and would impact visitors traveling to and from the park. While the proposed project would impact visitors and travelers elsewhere, Denali has the greater concentration. Finally, the Cook Inlet alternative includes a 15-mile subsea crossing, an impact to an ecosystem that does not occur under the proposed project. Accordingly, the DOE

87/ See DOE Delegation Order No. 0204-112, supra note 79.

88/ In TransCanada Pipelines v. FERC, No. 87-1229, June 16, 1989, the D.C. Circuit Court of Appeals found "Congress specifically precluded FERC from exercising its general ratemaking authority over imported [and exported] gas except to the extent that the Secretary expressly delegates the task to FERC." Slip op., at 11; see also id., at 7-9.

disapproves all sites other than the Valdez site. This action should not be interpreted as approval of the Valdez site. As discussed previously in Section V.B.5. supra, the DOE is requiring as Departmental policy that the FERC conduct its own examination of the health, safety, and environmental impacts associated with Yukon Pacific's use of the Valdez site for its proposed export project, including the liquefaction plant, the marine terminal, the LNG tankers, and the LNG tanker routes, and that it impose all appropriate conditions to mitigate the environmental effects resulting from the construction and operation of those facilities.

VI. Conclusion

After taking into consideration all the information in the record of this proceeding, I find that granting Yukon Pacific authority to export up to 14 million metric tons annually of liquefied North Slope natural gas for sale to the Pacific Rim countries of Japan, South Korea, and Taiwan during a term of 25 years has not been shown to be inconsistent with the public interest.

ORDER

For the reasons set forth above, pursuant to section 3 of the Natural Gas Act, it is ordered that:

A. Yukon Pacific Corporation (Yukon Pacific) is authorized to export for sale to Japan, South Korea, and Taiwan a total of up to 14 million metric tons of liquefied natural gas (LNG) annually from the North Slope of Alaska over a 25-year period beginning on the date of the first delivery, upon the conditions herein set forth.

B. For purposes of this Order, the "export project" means the Trans-Alaska Gas System (TAGS) and all appurtenant facilities, including production facilities, gas conditioning facilities, liquefaction plant, marine terminal, and LNG tankers.

C. With respect to the place of exportation for the LNG authorized in Ordering Paragraph A above, all locations other than Port Valdez, Alaska, are hereby rejected.

D. No cost of the export project shall be recovered from U.S. consumers of natural gas except to the extent that the cost relates to facilities and natural gas used and useful for supplying North Slope natural gas to U.S. consumers.

E. No action shall be taken in connection with the export project that would compel a change in the basic nature and general route of the Alaska Natural Gas Transportation System (ANGTS) or otherwise prevent or impair in any significant respect the expeditious construction and initial operation of ANGTS.

F. All aspects of the export project shall be implemented in accordance with all applicable environmental procedures and requirements and shall comply with all preventive and mitigative measures imposed by Federal and State agencies to protect the public health, safety and environment.

G. All contracts and other documents that underlie the acquisition, transportation, and sale of North Slope gas authorized herein shall be filed with the DOE within 30 days of their execution.

H. Within 48 hours after deliveries begin, Yukon Pacific shall notify the Office of Fuels Programs, Fossil Energy, Room 3F-056, FE-50, 1000 Independence Avenue, S.W., Washington, D.C. 20585, in writing of the date that the first export of LNG authorized in Ordering Paragraph A above occurs.

I. With respect to the exports authorized by this Order, Yukon Pacific shall file reports with the Office of Fuels Programs (1) after the first full calendar month of service, and (2) within thirty days following each calendar quarter, indicating, whether sales of exported natural gas have been made, and if so, giving by month, the total volume of exports in Mcf and the average price for exports per MMBtu delivered to each respective purchaser. The reports shall also provide the details of each export transaction, including the name(s) of the purchaser(s), LNG tankers utilized, volumes sold to each purchaser, and identification of markets served.

J. Except for the authority under DOE Delegation Order No. 0204-112 over the export site, including the liquefaction plant, marine terminal, and related transportation of LNG, the Federal Energy Regulatory Commission (FERC) shall exercise no authority over the export project except to the extent necessary to ensure that (1) any facility used for the provision of natural gas from Alaska to another state and thereby subject to the FERC's interstate commerce jurisdiction is constructed and operated in accordance with the FERC's regulations, including those concerning the environment, and (2) the export project pays its share of the costs of any such facility.

Issued in Washington, D.C., on November 16, 1989.

Michael R. McElwrath
Acting Assistant Secretary
Fossil Energy