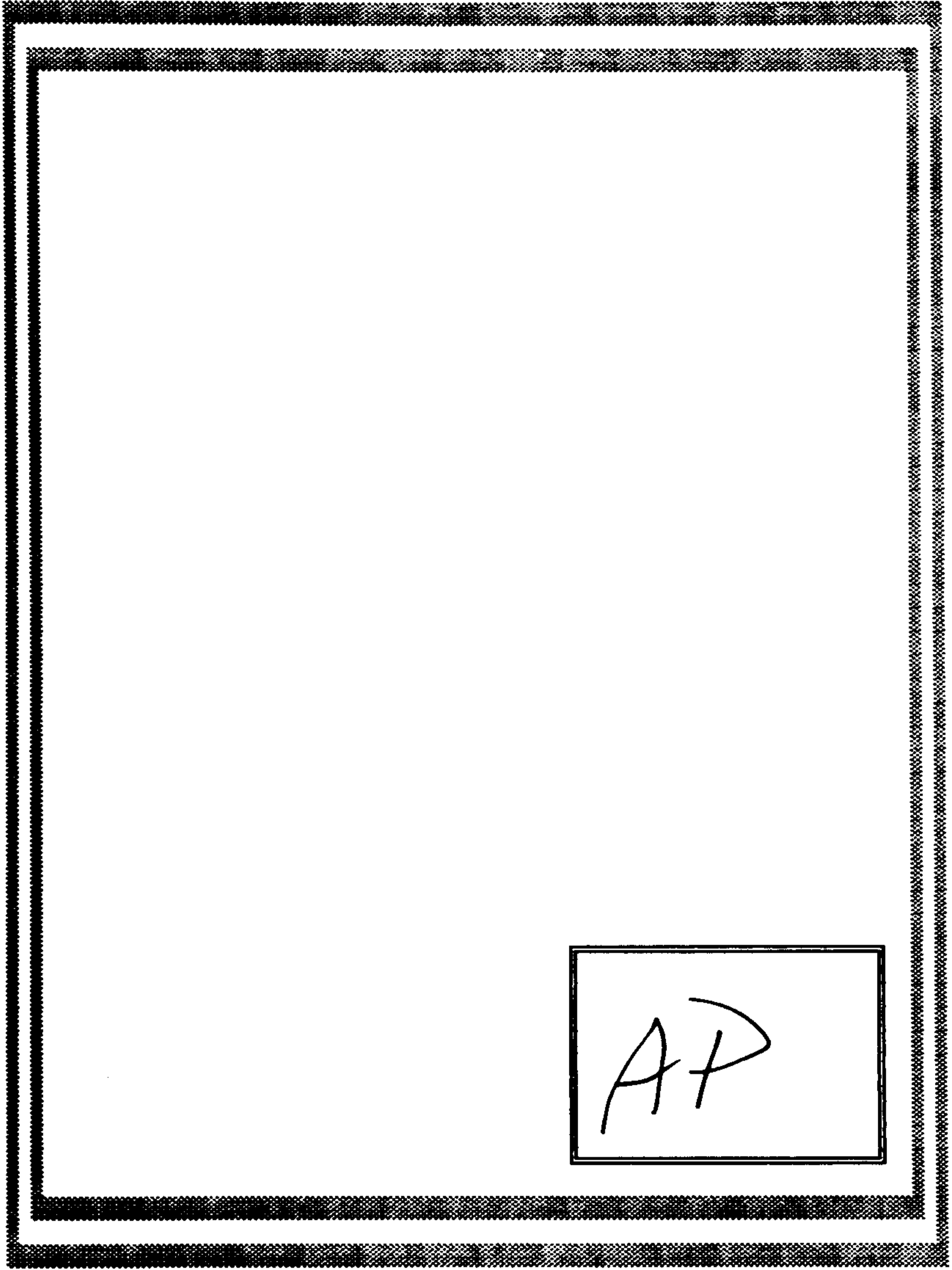


Phillips Petroleum  
Company Marathon  
Oil Company

82-04-LNG

Part 1



AP

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ERA DOCKET NO.: 82-04-LNG

APPLICANT(S) : PHILLIPS PETROLEUM COMPANY/MARATHON OIL COMPANY  
 (Jones, Day, Reavis & Pogue, 1735 Eye Street, N.W., Washington, D.C. 20006)  
 Kevin McDonald--861-6843

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
1	PHILLIPS PETROLEUM CO. MARATHON OIL COMPANY	Application for authorization to export liquified natural gas	05/10/82	05/10/82
2		Filing fee of \$50.00	05/10/82	05/10/82
3		FR 47, p. 25177--Notice of Application published in Fed. Reg. 6/10/82	06/10/82	06/10/82
4	Robert J. Stern, Actg. Dir., Office of Environmental Compliance DOE	Memo re NEPA determination for Phillips/Marathon application to export LNG	06/21/82	06/21/82
5	Southern California Gas, Pacific Alaska LNG Co., and Pacific Gas & Electric Company	Permission to intervene in support of application	06/25/82	06/28/82
6	NORTHWEST NATURAL GAS	Petition for leave to intervene	07/12/82	07/12/82
7	PHILLIPS/MARATHON	Supplement to Application to Amend Authorization to Export LNG	08/04/82	08/04/82
8	F. Daigneault, Natural Gas Branch, ERA	Ltr. to petitioners in 82-04-LNG requesting additional information by 10/15/82.	09/15/82	09/15/82
9	DOE/ERA	OPINION & ORDER #49--Order Amending authorization of Phillips Petroleum Co., and Marathon Oil Co. to export LNG from Alaska	12/14/82	12/14/82
10	PHILLIPS PETROLEUM CO.	Re O&O #49--list of monthly prices received for LNG delivered at the Tokyo Flange for April 1982 - 12/1982	01/27/83	01/31/83
11	MARATHON OIL COMPANY	Re O&O #49--list of prices for LNG at delivery point in Japan for April 1982 - December 1982.	01/28/83	01/31/83

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ERA DOCKET NO.: 82-04-LNG

APPLICANT(S) : PHILLIPS PETROLEUM COMPANY/MARATHON OIL COMPANY  
 (Jones, Day, Reavis & Pogue, 1735 Eye Street, N.W., Washington, D.C. 20006)  
 Kevin McDonald--861-6843

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
12	PHILLIPS PETROLEUM CO.	Fourteenth Amendatory Agreement to LNG Sales Agreement dated 3/6/67 between Tokyo Elec. Power Co., Inc., & Tokyo Gas Company, Limited.	06/10/83	06/13/83
13	MARATHON OIL COMPANY	" " " " " " " " " " " "	06/10/83	06/16/83
14	Marathon Oil Co. and Phillips Petroleum	Ltr. in compliance with Ordering Paragraph D of DOE/ERA Opinion and Order 49	10/25/83	11/1/83
15	Marathon Oil Company	Ltr. stating the 15th Amendatory Agreement to that LNG Sales Agreement dated March 6, 1967 between Tokyo Elec. Power Co., Inc. and Tokyo Gas Company, Ltd.	1/15/85	1/22/85
16	Phillips Petroleum Marathon Oil Co.	Ltr. informing of 15th amendatory Agreement to LNG Sales Agreement dated March 6, 1967.	1/18/85	1/30/85
17	Phillips & Marathon	Ltr. in compliance with Order No. 49 submitting prices for LNG at the Japan delivery points for Oct. thru Dec. 1984.	1/25/85	1/25/85
18	Marathon Oil Company	Ltr. in compliance with Order No. 49 submitting price of LNG at the Japan delivery points for 1/85-3/85	4/25/85	4/25/85
19	Phillips Petroleum Co.	Ltr. in compliance with Order No. 49 submitting prices for LNG at Tokyo Flange for the 1st calendar qtr. ending 3/31/85	4/25/85	
20	Marathon Oil Co.	16th Amendatory Agreement to the LNG Sales Agreement dated 3/6/67	6/16/85	
21	Marathon Oil Co.	Prices for LNG for 4/85-6/85	7/30/85	
22	Phillips Petroleum Co.	Quarterly Report for Apr. May & June	8/5/85	

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ERA DOCKET NO.:  
 APPLICANT(S) : 82-04-MG

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ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
23	PHILLIPS PETROLEUM COMPANY	Quarterly Report for the 3rd calendar qtr ending 9/30/85	10/25/85	
24	MARATHON OIL CO	Quarterly Rpt. for 7/85 through 9/85	10/25/85	
25	MARATHON OIL CO	Change in prices for LNG at the delivery point in Japan for the months 7/85-9/85.	11/7/85	
26	PHILLIPS PETROLEUM CO MARATHON OIL COMPANY	Joint Application filed requesting a change to the liquefied natural gas (LNG) export authorization granted Phillips Petroleum Company (Phillips) & Marathon Oil Co.	5/20/86	5/20/86
27	DOE/ERA	Granting request for change in authorization filed 5/20/86	4/3/86	4/3/86
28	MARATHON OIL CO	Quarterly Report for Jan-Mar 1986	4/25/86	4/29/86
29	PHILLIPS 66 NATURAL GAS COMPANY	Quarterly Report for Jan-Mar 1986	4/24/86	4/30/86
<del>29</del>	<del>PHILLIPS 66 NATURAL</del>			
30	MARATHON OIL COMPANY	Quarterly Report for Apr May & Jun 1986	7/25/86	
31	PHILLIPS PETROLEUM	Quarterly Report for Apr May June 1986	8/4/86	
32	PHILLIPS PETROLEUM	Contract Amendment	8/28/86	
33	MARATHON OIL COMPANY	Quarterly Report Jul Aug & Sept 1986	10/24/86	10/27/86
34	MARATHON OIL COMPANY	Quarterly Report OCT NOV & DEC 1986	1/20/87	
35	MARATHON OIL CO	Quarterly Report JAN FEB & FEB	5/4/87	
36	Phillips Petroleum	17th Amendatory Agreement dated 3/6/87 between Tokyo Electric Power	5/15/87	

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ERD DOCKET NO.: 82-04-LNG

APPLICANT(S) : Phillips 66 Natural Gas Company

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
32	PHILLIPS 66 NATURAL GAS	Quarterly Report for Second Quarter 1987	7/31/87	
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ERA DOCKET NO.: 82-05-NG

APPLICANT(S) : TEXAS EASTERN TRANSMISSION CORPORATION  
 (E.H. Mowrey, Vice President, P.O. Box 2521, Houston, Texas 77252)

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
1		APPLICATION TO IMPORT NATURAL GAS FROM CANADA	05/14/82	05/14/82
2		Filing Fee of \$50.00	05/12/82	05/14/82
3	NATURAL GAS PIPELINE	Petition for leave to intervene	06/18/82	06/22/82
4		Notice of Application published in FR 47, p. 30279	07/13/82	07/13/82
5	TRANSCONTINENTAL GAS PIPE LINE CORPORATION	Petition for leave to intervene	07/19/82	07/19/82
6	BROOKLYN UNION GAS COM.	Permission to intervene as a party	07/28/82	07/28/82
7	TENNESSEE GAS PIPELINE	Petition for leave to intervene	08/09/82	08/09/82
8	MIDWESTERN GAS TRANS.CO.	Petition for leave to intervene	08/09/82	08/09/82
9	PUBLIC SERVICE ELECTRIC & GAS COMPANY	Petition for leave to intervene	08/09/82	08/09/82
10	NORTHWEST PIPELINE	Petition for leave to intervene	08/11/82	08/12/82
11	BOUNDARY GAS, INC.	Petition for leave to intervene	08/12/82	08/12/82
12	CONSOLIDATED EDISON COMPANY OF NEW YORK	Petition for leave to intervene	08/12/82	08/12/82
13	NO, NATURAL GAS CO.	Petition for leave to intervene	08/12/82	08/12/82
14	NORTHERN BORDER PIPELINE	Petition for leave to intervene	08/12/82	08/12/82
15	TRANSCANADA PIPELINES LIMITED	Petition for leave to intervene	08/12/82	08/12/82
16	NORTHWEST ALASKAN PIPE LINE COMPANY	Petition for leave to intervene	08/12/82	08/12/82
17	ASSOCIATED NATURAL GAS CO.	Petition to intervene	08/12/82	08/12/82
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ERA DOCKET NO.: 82-05-NG

APPLICANT(S) : TEXAS EASTERN TRANSMISSION CORPORATION  
(E.H. Nowrey, Vice President, P.O. Box 2521, Houston, Texas 77252)

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED.
18	MISSOURI UTILITIES CO.	Petition to intervene	08/12/82	08/12/82
19	CENTRAL ILLINOIS PUBLIC SERVICE COMPANY	Petition to intervene	08/12/82	08/12/82
20	ALGONQUIN GAS TRANS. CO.	Petition for leave to intervene	08/12/82	08/12/82
21	COLUMBIA GAS TRANS. CORPORATION	Petition for leave to intervene	08/13/82	08/13/82
22	NEW JERSEY NATURAL GAS	Petition for leave to intervene out of time	08/16/82	08/16/82
23	GREAT LAKES TRANS. CO.	Petition for leave to intervene out of time	08/18/82	08/23/82
24	LONG ISLAND LIGHTING CO.	Petition for leave to intervene	08/18/82	08/24/82
25	TEXAS EASTERN TRANS. CORP.	Answer to petition to intervene of No. Border Pipeline Co.	08/27/82	08/27/82
26	" " "	Answer to petition to intervene of NO. NATURAL GAS COMPANY, Div. of Internorth, Inc.	08/27/82	08/27/82
27	TEXAS EASTERN TRANS. CORP.	Supplement to application for authorization to import NG from Canada	09/30/82	09/30/82
28	PROGAS LIMITED	Petition for leave to intervene	10/19/82	10/19/82
29	TEXAS EASTERN TRANS. CORP.	Amendment to application	05/13/83	05/17/83
30		Filing fee of \$50.00 to accompany amendment	04/29/83	05/17/83
31		Memo to Finance & Accounts--German-town--transmitting filing fee	05/17/83	05/17/83



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ERA DOCKET NO.: 82-05-NG

APPLICANT(S) : TEXAS EASTERN TRANSMISSION CORPORATION  
(E.H. Mowrey, Vice President, P.O. Box 2521, Houston, Texas 77252)

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
32	DOE/ERA	Amendment to Application--F.R. Notice June 22, 1983--pp. 28534	6/22/83	6/22/83
33	ALGONQUIN GAS TRANS.CO.	Petition for leave to intervene	07/06/83	07/06/83
34	DOE/ERA	Order directing applicants w/pending gas import applications to supplement those applications, directing importers w/existing authorizations to report on conformance of arrangements with guidelines, providing guidance on ANGST filings, and terminating suspended proceedings	02/16/84	02/16/84
35	DOE/ERA	New Policy Guidelines and Delegation Orders on the Regulation of Imported Natural Gas (Delegation Orders No. 110, 111 and 112)	02/17/84	02/17/84
36	TEXAS EASTERN TRANS.	Supplement to application per ERA 2/16/84 Procedural Order	04/16/84	04/16/84
37	OHIO INTERSTATE PIPELINE COMPANY	Petition for leave to intervene out of time	04/18/84	04/18/84
38	Foothills Pipe Lines (Yukon) Ltd.	Petition for leave to intervene out of time.	10/19/84	10/19/84
39	Ohio Interstate Pipeline Company	Combined Motion for Establishment of Procedures and Request for an Oral Presentation	10/19/84	10/19/84
40	Tennessee Gas Pipeline Company, A Division of Tenneco, Inc.	Answer to Motion of Ohio Interstate Pipeline Company for Establishment of Procedures	11/05/84	11/05/84
41	Texas Eastern Trans. Corp.	Answer to Motion of Ohio Interstate Pipeline Company for Establishment of Procedures.	11/05/84	11/05/84

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ERA DOCKET NO.: 82-05-NG

APPLICANT(S) : TEXAS EASTERN TRANSMISSION CORPORATION

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
42	Boundary Gas, Inc.	Answer to motion of Ohio interstate Pipeline Company for Establishment of Procedures and request for oral presentation	11/05/84	11/05/84
43	TEXAS EASTERN	Second Amendment to Application to import natural gas from Canada \$50.00 check to cover application fee.	7/15/85	
44	TEXAS EASTERN	Letter Agreement dated 6/11/85 between ProGas Limited and Texas Eastern	7/18/85	
45	TEXAS EASTERN	Ltr. clarifying initial request in filing of Second Amendment of 7/15/85	8/7/85	
46	DOE/ERA	F.R. notice issued 8/13/85; published in F.R. 8/21/85 pp. 33822-23		
47	ALGONQUIN CUSTOMER GROUP	Motion to Intervene	9/19/85	
48	PUBLIC SERVICE ELECTRIC AND GAS COMPANY	Motion to Intervene	9/20/85	
49	LONG ISLAND LIGHTING CO	Petition for Leave to Intervene	9/20/85	
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ERA DOCKET NO.: 82-05-NG

APPLICANT(S) : TEXAS EASTERN TRANSMISSION CORPORATION

ITEM	PREPARED OR FILED BY:	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED:
50	PUBLIC SERVICE COMM. OF THE STATE OF NEW YORK	Notice of Intervention and Protest & Request for Hearing	9/20/85	
51	PHILADELPHIA GAS WORKS	Motion to Intervene, Protest, and Request for Hearing	9/20/85	
52	PROGAS LIMITED	Comments and Request for Leave to Intervene	9/20/85	
53	NEW ENGLAND FUEL INSTITUTE	Motion to Intervene	9/20/85	
54	FOOTHILLS PIPE LINES (YUKON) LTD.	Letter requesting that Motion filed 10/19/84 be treated as a timely motion to intervene with respect to Texas Eastern's second amendment.	9/20/85	
55	WASHINGTON GAS LIGHT CO, FREDERICK GAS CO. INC. AND SHENANDOAH GAS CO	Joint Motion for Leave to Intervene	9/20/85	
56	PANHANDLE PRODUCERS AND ROYALTY OWNERS ASSOCIATION	Comments and Petition for Leave to Intervene	9/20/85	
57	PHILADELPHIA ELECTRIC COMPANY	Motion to Intervene and Protest	9/20/85	
58	PROGAS LIMITED	Reply Comments	10/7/85	
59	TEXAS EASTERN TRANS.	Reply Comments	10/7/85	
60	THE MUNICIPAL DEFENSE GROUP	Motion to Intervene, Protest and Comments	11/7/85	
61	DOE/ERA	ORDER Requesting Certain Additional Information from the Applica	3/21/86	

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ECONOMIC REGULATORY ADMINISTRATION  
NATURAL GAS DIVISION  
DOCKET INDEX

ERA DOCKET NO.: 82-05-NG

APPLICANT(S):

REPRESENTED BY: TEXAS EASTERN TRANSMISSION CORPORATION

ITEM	PREPARED OR FILED BY	FILING TYPE	DESCRIPTION OF DOCUMENT	DATED	DATE FILED OR ISSUED
62	DOE/ERA	PROCEDURAL ORDER	Order Requesting Certain Additional Information from the Applicant, Providing Opportunity for Further Comment from all Intervenor, and Granting Interventions	3/21/86	
63	TEXAS EASTERN TRANSMISSION CORPORATION	MI	Extension of Time (Motion) 45 days	4/18/86	4/18/86
64	TEXAS EASTERN	MI	Indefinite Extension of Time (Motion)	05/23/86	05/23/86
65	DOE/ERA	PROCEDURAL ORDER	Order Granting an Extension of Time for the Applicant to Provide Certain Additional Information (indefinite )	05/29/86	05/29/86
66	DOE/ERA	MISC	Letter Requesting Applicant to Withdraw and File At Later Date	12/22/87	
67	TEXAS EASTERN	MISC	Requesting ERA delay dismissal of Application until Texas Eastern Files Its Restructured Application	1/11/88	

UNITED STATES OF AMERICA  
ECONOMIC REGULATORY ADMINISTRATION

In the matter of )

Phillips Petroleum Company )  
Marathon Oil Company )

) Docket No. 82-04-LNG

APPLICATION TO AMEND AUTHORIZATION  
TO EXPORT LIQUEFIED NATURAL GAS

Phillips Petroleum Company ("Phillips") and Marathon Oil Company ("Marathon") hereby make application pursuant to Section 3 of the Natural Gas Act, 15 U.S.C. § 717b, and DOE Delegation Order 0204-54 (1979), for an extension of and amendment to the order issued by the Federal Power Commission ("FPC") on April 19, 1967 authorizing the exportation by Phillips and Marathon of liquefied natural gas ("LNG") to Japan. Order Authorizing Exportation of Liquefied Natural Gas and Dismissing Application for Permit, FPC Docket Nos. CI67-1226 & 1227, 37 FPC 777 (April 19, 1967) (hereinafter "1967 Order"). In support hereof, applicants submit the following:

I. GENERAL INFORMATION.

The exact legal name of applicant Phillips is Phillips Petroleum Company. Phillips is a Delaware corporation with principal offices in Bartlesville, Oklahoma. Phillips is authorized to do business in all fifty states of the United States.

The exact legal name of applicant Marathon is Marathon Oil Company. Marathon is an Ohio corporation with principal offices in Findlay, Ohio. Marathon is authorized to do business in all states except Connecticut, Delaware, Hawaii, Idaho, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, Rhode Island and Vermont.

All correspondence and communications regarding this application, including service of pleadings and notices, should be directed to the following persons:

Mr. John Horn  
Manager, Natural Gas and LNG Sales Division  
Gas and Gas Liquids Group  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004  
(918) 661-5690

Kenneth Heady, Esquire  
Vice President and General Counsel  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004  
(918) 661-3832

Mr. S.C. Sandusky  
Manager, Natural Gas Division  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840  
(419) 422-2121

C.O. Robinson, Esquire  
Associate General Counsel-Production  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840  
(419) 422-2121

J.F. Bell, Esquire  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N.W.  
Washington, D.C. 20006  
(202) 861-3939

II. AUTHORIZATION REQUESTED.

Phillips and Marathon seek an ERA order which will approve the continued exportation of LNG from 1984 to 1989 in accordance with the attached Amendatory Extension Agreement (the "Extension Amendment") to the original LNG sales agreement pursuant to which these applicants have been exporting LNG to Japan since 1969. (See Liquefied Natural Gas Sales Agreement (March 6, 1967) (the "Basic Agreement," Appendix D).) The principal features of the Extension Amendment, which is attached hereto as Appendix B, are:

- (1) an extension of the term of the Basic Agreement for an additional five years, that is, through May 31, 1989, pursuant to a renewal option contained therein; and
- (2) the establishment of a mechanism whereby authorized quantities of LNG which are not delivered in any of the five contract years shall be delivered in subsequent contract years or during a maximum seven-month make up period beginning June 1, 1989.

In addition to approval of the Extension Amendment, Phillips and Marathon also request that the ERA expressly authorize applicants, in accordance with the provisions of the Basic Agreement, to make up for the underdeliveries of LNG which have occurred during the term of the Basic Agreement. Make-up provisions are customary in natural gas sales contracts.

III. BACKGROUND.

Phillips and Marathon have been delivering LNG manufactured from natural gas produced in Alaska for export to Japan since November 1969. As indicated above, these sales have been made pursuant to the Basic Agreement between Phillips and Marathon as sellers and The Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited as buyers.

In 1967, pursuant to Section 3 of the Natural Gas Act ("NGA"), 15 U.S.C. § 717b, Phillips and Marathon sought an order from the FPC authorizing the exportation of LNG. They also sought a permit, pursuant to Executive Order No. 10485 and 18 CFR § 153.10, authorizing the construction, operation and maintenance of facilities for the proposed exportation at the border of the United States. On April 19, 1967, the FPC issued an order, which is attached hereto as Appendix C, finding that the project would not be inconsistent with the public interest. The FPC also ruled that the permit sought under Executive Order No. 10485 was unnecessary.

The information required by 18 CFR § 153.3,<sup>\*/</sup> which was submitted to the FPC with the original application of Phillips

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<sup>\*/</sup> The ERA has employed the procedural regulations of the former FPC contained in 18 CFR Chapter 1 in proceedings governed by section 3 of the National Gas Act. See 42 Fed. Reg. 61856 (December 7, 1977). These applicants are aware that ERA has proposed new procedural regulations, Docket No. ERA-R-81-05, 46 Fed. Reg. 44696 (September 4, 1981), and thus have endeavored to include in the instant application the information required by the proposed rules. See proposed regulation, § 590.202.



and Marathon on March 8, 1967 (the "Original Application"), is hereby incorporated by reference in Appendix D. The material information in that Original Application with respect to the legal names of the applicants, their states of incorporation and principal places of business, the name and location of the fields in which the natural gas exported is produced, the names of the purchasers of the exported LNG, its proposed use in the foreign country, and the facilities utilized in the export operation is still accurate, except as noted herein. In addition, pursuant to 18 CFR § 153.4(b), the exhibits submitted with the original application in this proceeding are also incorporated by reference in this application.

The natural gas liquefied for exportation to Japan is produced in the Cook Inlet Basin Area of Alaska. Seventy percent has been produced from reserves owned or controlled by Phillips in the North Cook Inlet Field; thirty percent has been produced from reserves owned or controlled by Marathon in the Kenai Field. During the balance of the term of the Basic Agreement and the Extension Amendment, it is contemplated that gas for this project will come principally from these two fields, although other gas reserves in the Cook Inlet Basin Area owned or controlled by the applicants may also be utilized. The most recent estimate of the natural gas reserves remaining in the North Cook Inlet and Kenai Fields is approximately 2.1 trillion cubic feet. Of such gas, applicants own or control approximately 1.05

trillion cubic feet of uncommitted reserves, which is more than adequate to fulfill applicants' obligations during the remaining term of the Basic Agreement and the Extension Amendment. (See attached report of National Economic Research Associates, Appendix A, Table 14.)

The gas is delivered by pipeline to the liquefaction plant at Nikiski, Alaska, approximately ten miles north of the city of Kenai. The plant is indirectly owned by Phillips and Marathon,<sup>\*/</sup> and was constructed specifically for this project. The LNG is delivered to Japan in two ships also indirectly owned by the applicants and designed for this project.<sup>\*\*/</sup> These facilities have operated efficiently, safely and without adverse environmental impact throughout the life of this project. No addition to or alteration of these facilities is necessary for the continuation of this export project under the Extension Amendment, nor are such additions or alterations contemplated by the applicants.

The 1967 Basic Agreement under which exports are presently being made has periodically been revised with respect to price. There have been thirteen amendments to the pricing provision of Article 9 of the Basic Agreement. Each such amendment replaced

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<sup>\*/</sup> The plant is owned by Kenai LNG Corporation, which is owned 70% by Phillips and 30% by Marathon.

<sup>\*\*/</sup> The Arctic Tokyo is owned by Arctic LNG Transportation Corp. The Polar Alaska is owned by Polar LNG Shipping Corp. Each corporation is owned 70% by Phillips and 30% by Marathon.

and superceded the prior amendments to Article 9, and each was filed with the FPC or the Federal Energy Regulatory Commission ("FERC") pursuant to 18 CFR § 153.8.\* / Since 1980, information copies of such agreements have been filed with the Economic Regulatory Administration. The Basic Agreement, as amended, provides for a base price of 592.8 U.S. cents per million Btu's, indexed in accordance with a formula based upon changes in the weighted average of the Government Selling Prices of the top twenty crude oils (by volume) imported into Japan. Application of that formula produced a delivered price for LNG exported during the month of April 1982 of approximately \$5.76 per million Btu's.

The Basic Agreement provided that the annual contract volume of LNG exported (after the first year) would be 50,570,000,000,000 (or 50.57 trillion) Btu's. The FPC's 1967 Order included the same contract volumes in finding paragraph (1)(f) and ordering paragraph (B). 1967 Order at 3-4.

With respect to the term of the contract, and of particular relevance to this application, the Basic Agreement, Article 14 at 12, provided in part as follows:

The term of this Agreement may be extended for an additional period of five (5) years if between June 1, 1981, and June 1, 1982, Buyers and Sellers are able to mutually agree in writing upon the price to be paid for such LNG and the other terms and provisions of such extension.

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\* / The most recent amendment to Article 9 is set forth in Appendix E.

The FPC demonstrated its awareness of that provision of the contract, and anticipated the routine continuation of this project for an additional five years in ordering paragraph C of the 1967 Order:

Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan and for any other contractual changes including the exercise of the option for renewal.  
[emphasis added]

Accordingly, the parties have executed the above referenced Extension Amendment, dated April 15, 1982, extending the term of the contract through May 31, 1989 pursuant to Article 14 of the Basic Agreement, and have filed this Application. An information copy of the Application has also been sent to FERC.

IV. EXTENSION OF THIS EXPORT PROJECT IS NOT INCONSISTENT WITH THE PUBLIC INTEREST.

The Phillips/Marathon Alaskan LNG export project has been in successful operation for more than twelve years. This application seeks approval of the routine continuation of that service with the same facilities and the same method of operation for an additional five years from and after May 31, 1984, as provided in the Basic Agreement and as contemplated by both parties and the FPC in 1967.\*/

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\*/ Phillips and Marathon consider that the language used by the FPC in ordering paragraph C and finding paragraph 1(c), of the 1967 Order strongly implies that the FPC intended

[Footnote continued on next page]

Section 3 of the Natural Gas Act ("NGA") provides in part that "[t]he Commission shall issue such order [to export natural gas] upon application, unless, after opportunity for hearing, it finds that the proposed exportation . . . will not be consistent with the public interest." 15 U.S.C. § 717b. For the reasons stated herein, Phillips and Marathon believe that there continues to be no basis in fact or law for a conclusion other than that reached by the FPC in 1967 -- that the exportation of this liquefied natural gas to Japan from Alaska is wholly consistent with the public interest.

The controlling issue in this proceeding is whether a five-year extension of the project would be inconsistent with the public interest. The appropriate starting point for consideration of that issue is the recognition that, for the past twelve years, the project continually has improved both the economy of the state of Alaska and the balance of payments position of the United States vis-a-vis Japan. In addition, because the LNG exported from Alaska has been an important and reliable source of energy for the Japanese customers of applicants, its continued exportation is extremely beneficial to the relations of the United

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[Footnote continued from previous page]

that the only condition precedent to continuation of the export authorization was the filing (required by 18 CFR § 153.8) of the agreement exercising the option for the five-year renewal. Nonetheless, in light of the continuing authority granted to the Secretary of Energy under section 3 of the Natural Gas Act, Phillips and Marathon believe that it is desirable and appropriate to obtain express approval of the continued exportation provided in the Extension Amendment.

States with an important ally and co-participant in the International Energy Program -- Japan. Indeed, it is apparent that discontinuation of this project would be detrimental to the public interest.

A. Continued Exportation of Alaskan LNG Benefits Japan, Alaska and the American Public.

Since 1969, the LNG exported by Phillips and Marathon has been an important and reliable source of natural gas for Japan. The purchase of Alaskan LNG promotes Japan's goal of diversifying the sources of its imported energy supplies. By reducing the dependence of Japan upon OPEC oil and other less stable sources of energy supplies, the Phillips/Marathon project has had, and will continue to have, a beneficial impact upon U.S./Japan trade relations. Recently, alternative sources of LNG for Japan have greatly increased. Nonetheless, the Japanese customers of applicants have indicated their desire and willingness to extend the contract for an additional five years by exercising the renewal option.

In addition to the general benefit of this project to U.S./Japan trade relations, the revenue from the project also helps to ameliorate the otherwise deplorable balance of payments position of the United States with Japan. Continuation of this project will provide annual revenues approaching \$300 million or more for an additional five years. This represents one of the largest U.S. exports to Japan from Alaska.

The state of Alaska has benefitted significantly from the operation of this project. The construction and operation of the liquefaction plant and pipeline facilities have provided jobs for workers in the Kenai area and have generated demand for supplies and services of other Alaskan business entities. In addition, the citizens of Alaska as a whole have benefitted from the royalties from natural gas production and various tax revenues which have been received by the state since the inception of the project.

B. There is No National or Regional Need for the Natural Gas Which Will Be Exported.

The national supply of natural gas in the United States is stronger than it has been in many years. Given national and international developments, including the return in many cases to free market pricing for natural gas, there is no basis for a conclusion that there would be a national need for the LNG proposed to be shipped to Japan in 1984-89. In addition, the lack of an LNG receiving facility on the Pacific coast of the lower 48 states makes marketing of the Phillips/Marathon LNG there infeasible during the period of this extension. Applicants know of no U.S. flag LNG tankers which could pass through the Panama Canal; thus, delivery of this supply to U.S. facilities on the East Coast on a continuous basis is uneconomic under present circumstances.

With respect to the regional need for the natural gas, all of Alaska's natural gas uses are presently being supplied, and

its needs for the foreseeable future easily can be satisfied, by a fraction of the proven reserves in the Cook Inlet Area. In addition, Alaska has taken great strides in recent years to develop its abundant coal and hydroelectric energy resources. These alternatives conceivably could replace natural gas as the primary source of electricity generation in Alaska.

At the request of Phillips and Marathon, National Economic Research Associates has done a thorough economic analysis of the proposed extension of the Phillips-Marathon LNG export to Japan. NERA's report is attached to this application as Appendix A. This detailed study supports the conclusion that the proposed extension is unlikely to have any significant effect on Alaskan, United States, or international markets for natural gas. Moreover, the study clearly demonstrates that there is no need either on a regional or national basis for the relatively small amount of gas involved in this export; consequently, the proposed extension is not inconsistent with the public interest.

C. The Price to be Charged for the LNG Delivered to Japan is Consistent with the Public Interest.

The price to be charged for the LNG delivered by these applicants under the five-year continuation of this authorization is determined by Article 9 of the Basic Agreement, as amended. Presently, the base price of the LNG delivered is 592.8 cents per million Btu's as adjusted by a formula indexing that base to the weighted average of the Government Selling Prices of the twenty



crude oils imported into Japan in the greatest quantities. That formula resulted in an April 1982 price of approximately \$5.76 per MMBtu.

Thus, both the base price and the indexing formula are reasonably related to the free market price of alternative sources of equivalent energy. Furthermore, as previously stated, the price charged by applicants generates substantial revenue beneficial to the U.S. balance of payments position with Japan.

D. Discontinuation of This Project Poses a Threat to the Public Interest.

Consideration of the foregoing, as well as the analysis in the attached NERA report, demonstrates that it would be the failure to continue this project, rather than its continuation for five years, which might cause severe adverse consequences. First, failure to continue the project may strain foreign relations with Japan, since the Japanese would be required to obtain LNG from other exporting nations, most of which are far less stable and reliable sources of supply than the U.S. However, as pointed out above, such competitive alternative supplies are currently available to Japan if the U.S. should force their use by denying the approval sought by this application. For the U.S. to force Japan to take such action would be especially inappropriate at a time when important and delicate trade negotiations between the U.S. and Japan are ongoing, and when both countries are working through the International Energy

Program to provide stable sources of energy supplies during times of shortage for all member nations. The U.S. would also lose the beneficial effect of this project on our trade deficit with Japan.

The impact on the state and local economies in Alaska would also be significant. The lack of any viable domestic market for the Alaskan gas would probably lead to the idling of the ships and closing of the liquefaction plant, a huge waste of capital in and of itself. As a result, one of the largest economic entities in the area would disappear from the local Kenai economy, and a number of Kenai citizens would be out of work. In addition, a substantial and traditional source of Alaskan state revenue -- taxes on the liquefaction facilities and royalties and taxes on the natural gas used in the Phillips/Marathon project -- would no longer be available. Phillips and Marathon seek by this application to maintain the status quo as it has existed since 1969, and thus to avoid such consequences.

V. SHIPMENT OF THE FULL VOLUME OF LNG  
AUTHORIZED BY THE FPC TO BE EXPORTED  
IS CONSISTENT WITH THE PUBLIC INTEREST.

The terms of Article 13 of the Basic Agreement require the parties to ship additional quantities of LNG as soon as possible to make up for underdeliveries caused by circumstances beyond the reasonable control of the parties. Such provisions authorizing make up of underdeliveries are accepted terms commonly negotiated

between buyers and sellers in both international and domestic natural gas contracts.\*/

Applicants have been unable to deliver the full contract amount of LNG authorized in 1967 to be exported. This failure was due to delays in the delivery of the LNG ships, to occasional disruption of shipping schedules caused by unfavorable weather conditions and, especially in the 1979-80 and 1980-81 contract years, to unexpected dry-dock delays experienced in the applicants' ship maintenance program. The total volume of these underdeliveries is relatively small, less than 4% of the contract

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\*/ As a result of their experience since 1969, the parties have included in the Extension Amendment a new Section 6.3 to the Basic Agreement which deals in far greater detail with the issue of underdeliveries during the five-year period of the Extension Amendment. Section 6.3(a) provides that the Buyers and Sellers shall consult and establish a schedule for the delivery of contract amounts of LNG which are not delivered due to unforeseen circumstances (not including force majeure as defined in the Basic Agreement or negligence of the parties) during any contract year after June 1, 1984.

Section 6.3(b) provides that the Buyers may reduce the amount of LNG received in a given contract year under certain circumstances. Such reductions may not exceed the additional amounts which Sellers would be able to deliver as make up volumes in subsequent contract years and during a seven month extension period after May 31, 1989. If such reductions take place, additional deliveries will be made as soon as reasonably possible in subsequent contract years. If the full contract amount of LNG for the entire five-year period is not delivered on or before May 31, 1989, then Sellers will make additional deliveries until the full contract amount is delivered or until seven months from May 31, 1989, whichever comes first.

quantity.\*/ The Buyers have requested that additional LNG be shipped to make up for such underdeliveries, and Phillips and Marathon believe that they are required by the terms of the Basic Agreement to make such additional deliveries if possible. Accordingly, Phillips and Marathon seek express authority, in accordance with the provisions of the Basic Agreement, to export on a best-efforts basis the underdelivered contract amounts during the remainder of the extended contract term.

It should be noted that the shipment of such limited make up quantities during the remaining years of this project is consistent with the public interest. The additional revenue generated will further benefit the U.S. balance of payments position with Japan. If such additional quantities of LNG are in fact delivered it would only serve to bring the parties closer to exporting the amount of LNG originally determined by the FPC in 1967 to be consistent with the public interest. The delivery of such relatively small quantities will have no impact upon the export operations.

#### VI. ENVIRONMENTAL IMPACT AND SAFETY OF OPERATIONS.

This application seeks an order approving a five-year extension of export operations by Phillips and Marathon which was

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\*/ As of May 31, 1982, Phillips and Marathon expect to have delivered 96.8% (621,413,000 MMBtu's) of the cumulative contract quantity authorized by the 1967 Order for delivery by that date (642,135,000 MMBtu's).

clearly contemplated in the Basic Agreement and 1967 Order. Since the same LNG facilities as proposed in the Original Application will continue to be utilized without change, it should be found (as in similar Section 3 cases), that approval of this application will not constitute a major Federal action having a significant effect on the quality of the human environment.\*/

The export facilities utilized in this project have been operated safely since start-up in substantial compliance with applicable federal safety standards. See 49 CFR Part 193 (Subparts F-J).

#### VII. EXPEDITION

Applicants respectfully request expeditious consideration of and action on this application. Although the present export authority does not expire until May 31, 1984, the requested authorization for delivery of make-up quantities of LNG starts with the 1982-83 contract year, which runs from June 1, 1982 through May 31, 1983. While shipping schedules can be modified somewhat during the year, substantial advance planning is required for scheduling of LNG deliveries. There is an additional factor of even greater concern. In the absence of reasonably prompt regulatory action, applicants' Japanese LNG buyers may

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\*/ DOE/ERA Opinion and Order No. 39, Vermont Gas Systems, Incorporated, ERA Docket No. 81-33-NG issued March 1, 1982, p. 6. See also, Columbia LNG Corporation, et al., FERC Docket No. CP80-68-000 et al., issued March 4, 1981, p. 5.

feel obliged to seek alternative supplies of LNG substantially in advance of the May 31, 1984 expiration of the current authorization.

#### VIII. APPENDICES

Attached hereto are the following appendices, including, as Appendix G, a proposed notice for publication in the Federal Register summarizing the amendment to the 1967 Order sought by this Application:

- Appendix A: Report of National Economic Research Associates (May 1982).
- Appendix B: Amendatory Extension Agreement, dated April 15, 1982.
- Appendix C: Order Authorizing Exportation of Liquefied Natural Gas and Dismissing Application for Permit, FPC Docket Nos. CI67-1226 & 1227, 37 FPC 777 (April 19, 1967).
- Appendix D: Application for Authorization to Export Liquefied Natural Gas, including the Basic Agreement, FPC Docket No. CI67-1226 (March 8, 1967) (incorporated by reference).
- Appendix E: Thirteenth Amendatory Agreement, dated March 24, 1982.
- Appendix F: Restated LNG Sales Agreement Including All Presently Effective Amendments.
- Appendix G: Proposed Federal Register Notice.

IX. CONCLUSION

For the foregoing reasons, these applicants respectfully request that the ERA issue an order extending and amending the 1967 Order which approves the Extension Amendment of April 15, 1982 and authorizes the delivery of make-up quantities of LNG as herein described.

Respectfully submitted,  
PHILLIPS PETROLEUM COMPANY

By *Paul W. Tucker*  
Paul W. Tucker  
Vice President

MARATHON OIL COMPANY

By *J.H. Herring*  
J.H. Herring  
Senior Vice President

Dated: May 7, 1982

VERIFICATION

STATE OF OKLAHOMA )  
COUNTY OF WASHINGTON ) SS:

BEFORE ME, the undersigned authority, on this day personally appeared PAUL W. TUCKER, who, having been by me first duly sworn, on oath says that he is Vice President of Gas and Gas Liquids Group for Phillips Petroleum Company and duly authorized to make this Verification; that he has read the foregoing instrument and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

Paul W. Tucker  
Paul W. Tucker

Subscribed and sworn to before me this 6th day of May, 1982.

Patricia Radefeld  
Notary Public

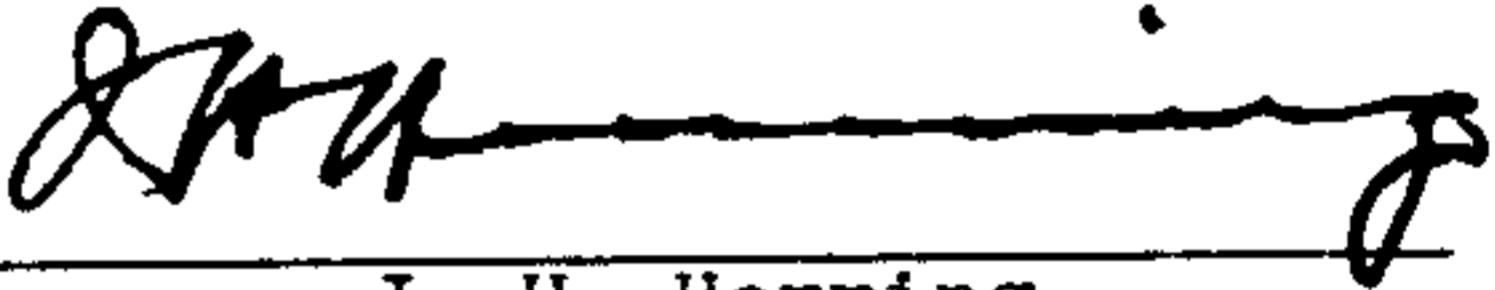
My commission expires:  
April 26, 1983



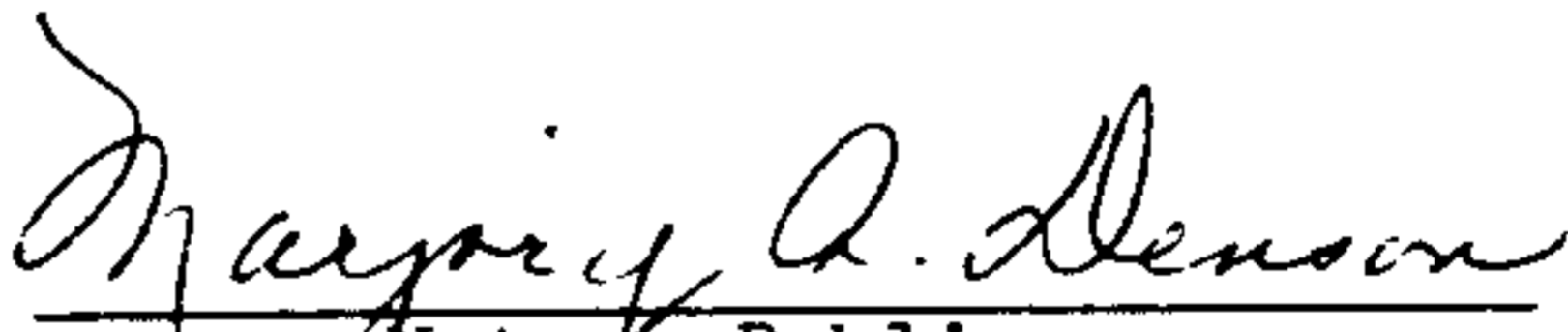
VERIFICATION

STATE OF OHIO            )  
                                  ) SS:  
COUNTY OF HANCOCK )

BEFORE ME, the undersigned authority, on this day personally appeared J. H. HERRING, who, having been by me first duly sworn, on oath says that he is Senior Vice President of Marathon Oil Company and duly authorized to make this Verification; that he has read the foregoing instrument and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
J. H. Herring

Subscribed and sworn to before me this 7<sup>th</sup> day of May, 1982.

  
\_\_\_\_\_  
Notary Public

My commission expires:  
August 28, 1982

**AN ECONOMIC ANALYSIS OF  
THE PROPOSED EXTENSION  
OF THE PHILLIPS-MARATHON  
LNG CONTRACT WITH TOKYO  
GAS AND TOKYO ELECTRIC**

**Prepared by  
National Economic Research Associates, Inc.**

**May 1982**

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**AN ECONOMIC ANALYSIS OF THE PROPOSED EXTENSION  
OF THE PHILLIPS-MARATHON LNG CONTRACT  
WITH TOKYO GAS AND TOKYO ELECTRIC**

**EXECUTIVE SUMMARY**

Phillips Petroleum Company and Marathon Oil Company have requested a five-year renewal of their license to liquefy and export natural gas from Cook Inlet, Alaska to Tokyo, Japan. It is our opinion, after reviewing and analyzing the relevant economic data, that such a renewal is not inconsistent with the public interest. The continuation of LNG export for an additional five years will have little or no effect on Alaskan, national, or international markets for natural gas, and is consistent with the goals of United States trade and energy policy.

Background. The Cook Inlet natural gas fields, which now contain about 3.6 trillion cubic feet of proven reserves, were discovered in the 1950s and 1960s as a byproduct of oil exploration in Southern Alaska. For the last 20 years they have supplied Anchorage-area residents--about half the population of Alaska--with low-cost gas for heating and electricity generation. Because Cook Inlet gas is expensive to transport, it has never been regularly marketed directly in the lower 48 states. Some of it is shipped there after being converted to petrochemicals: an ammonia-urea plant on the Inlet uses about the same amount of gas, on an annual basis, as the Alaskan population consumes. A slightly larger share is liquefied and shipped by Phillips and Marathon to Japan as LNG. Total sales are about 176 billion cubic feet per year.

The 1967 contract between Phillips and Marathon and Tokyo Gas and Tokyo Electric was the first Japanese purchase of LNG. It brought about the recognition in Japan that LNG could be a desirable substitute for oil, and paved the way for Japan's subsequent, much larger purchases of LNG from other countries.

Findings. The extension of the LNG export contract from 1984 to 1989 is unlikely to have any direct effect on Alaskan or United States energy markets because there is no alternative demand during this period for the gas proposed to be exported. Similarly, we do not expect any adverse effects in the 1990s, as the continuation of the export contract to 1989 will not have a decisive impact on the future development of Cook Inlet gas reserves or other Alaskan resources. Specifically, we find:

- Cook Inlet gas has been in chronic oversupply for two decades, and is likely to remain so for at least the remainder of the 1980s. The current reserve to production ratio is more than double the national average.
- The quantity of proven gas reserves in the Inlet is very large relative to local demand for gas for space heating and electricity generation, and will still be large even if local demand grows rapidly during the 1980s.

- It is unlikely that gas will be shipped from Cook Inlet to the lower 48 states before 1990, or that there will be any other large-scale industrial use of the gas.
- The quantity of gas proposed to be used for the LNG contract extension represents 9 percent of proven reserves and 3 percent of total gas resources in Cook Inlet, and a fraction of a percent of southern Alaska's total energy supply.
- Even with the LNG contract extension, we expect proven reserves of gas in Cook Inlet to be sufficient to meet local demand until the end of the century in the absence of any major new development.
- If no new markets for Cook Inlet gas are developed, the reserves will be depleted early in the next century (with or without the extension of the LNG contract) since there will be little or no incentive for exploration for the Alaskan market alone.
- If Cook Inlet gas becomes marketable in the lower 48 states during the 1990s, new supplies will be elicited and the price of gas for local use will rise to national levels net of transportation costs. Local demand for gas can be met from the state royalty share from new discoveries. This situation will not be materially affected by the continuation of the LNG export contract.
- If Cook Inlet gas resources are developed in the 1990s and their local price rises, alternative fuels may become competitive for local electricity generation. The chief possibilities for substitution are gas from the Alaskan North Slope, coal from the Nenana or Beluga fields, and hydropower from the upper Susitna basin. It is likely that one or more of these vast energy reserves will become commercially available in the Anchorage area in the 1990s. In this case local demand for Cook Inlet gas will be sharply reduced.
- The proposed extension of the LNG export to Japan will have a small but favorable impact on the overall United States balance of trade and on the bilateral trade balance with Japan. It will also contribute to Japan's efforts to diversify its energy imports and reduce its reliance on politically unstable regions.
- The proposed extension of the LNG export contract is consistent with United States efforts to reduce energy imports, since the gas proposed for export could not be used anywhere in the United States in the 1980s and would not significantly reduce supplies in the 1990s.



In summary, there is no plausible set of circumstances in which the extension of the Phillips and Marathon LNG export to 1989 will affect the price or availability of gas in any United States market or cause the United States to increase its imports of fuel. Furthermore, the continued export will be helpful in view of the chronic United States trade deficit, and is consistent with other United States trade policies.

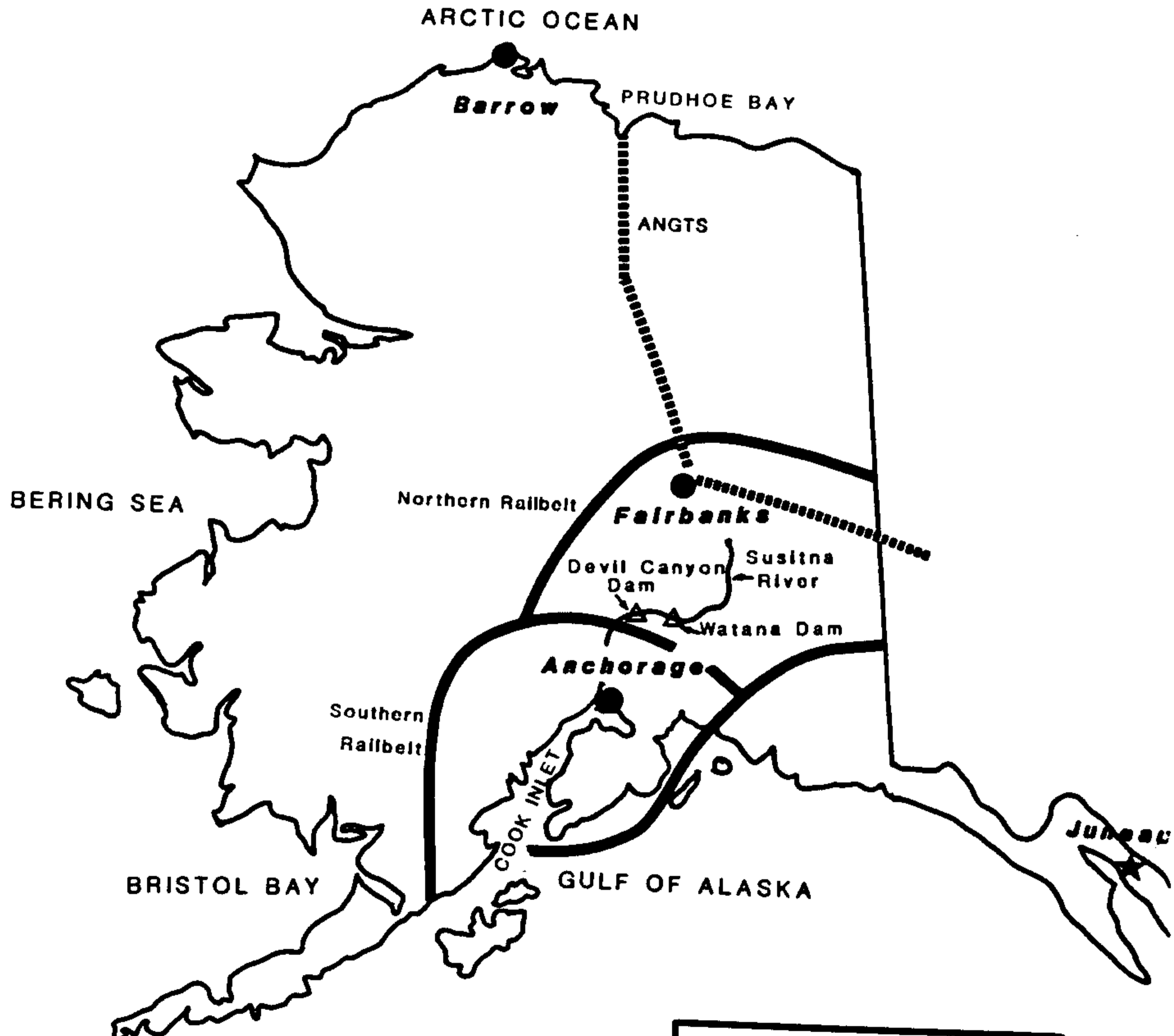
## I. INTRODUCTION

This report contains an economic analysis of a continuation (1984-1989) by Phillips Petroleum Company and Marathon Oil Company of the exportation of liquefied natural gas from Alaska to Japan. Phillips and Marathon requested NERA to consider whether a continuation of this service, detailed in the accompanying application, is not "inconsistent with the public interest," the finding required by Section 3 of the Natural Gas Act (15 U.S.C. 717b). Based on our review of the application and of extensive economic data, we conclude that the proposed LNG export is unlikely to have any significant effect on Alaskan, United States, or international markets for natural gas and is thus not inconsistent with the public interest. In fact, approval of the continued export of LNG from Alaska to Japan will be of general benefit to U.S./Japan trade relations, and the revenue from the project also will help to ameliorate the balance-of-payments position of the United States with Japan; therefore, approval of the project is wholly consistent with the public interest.

### A. Background

The southcentral portion of Alaska, particularly the Cook Inlet region, was the first part of the state to be developed for hydrocarbons on a large scale. Exploration began even before statehood, in the 1950s, and oil was discovered in 1957. As the oil producers continued to drill, they also discovered natural gas, some of it associated with the oil, but the greater part of it dry gas in separate accumulations. More than 20 gas fields have been identified in the Cook Inlet region. (The region and gas fields are shown in Figure 1, p. 2, and Figure 2, p. 3, and the history of discovery and production is summarized in Table 1, p. 4.) Until recently, however, there has been little demand for this gas.

# ALASKA



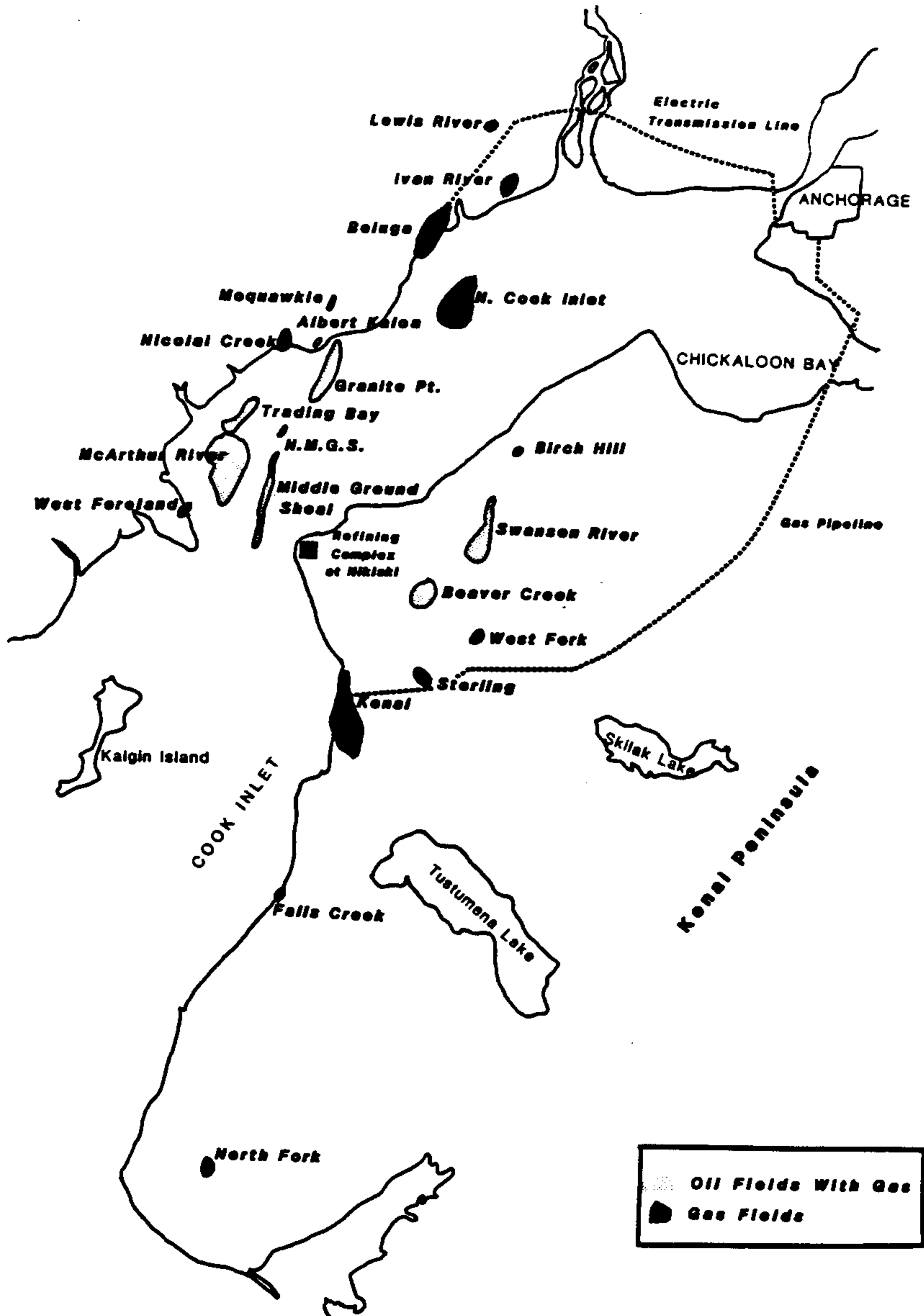
Proposed

△ △ Dam Site

==== Transportation System

-3-  
**COOK INLET REGION**

Figure 2



**GAS RESERVES AND CUMULATIVE PRODUCTION IN COOK INLET BASIN  
AS OF JANUARY 1, 1982<sup>1</sup>**

<u>Field</u>	<u>Proven Reserves</u>	<u>Cumulative Production</u>	<u>Year of Discovery</u>
	-----(Bcf)-----		
	(1)	(2)	(3)
Kenai	1,109	1,200	1959
North Cook Inlet	950	549	1962
Beluga River	743	125	1962
Swanson River	268 <sup>2</sup>	(206)	1957
Beaver Creek	240	2	1967
McArthur River	84	225	1968
Ivan River	26	-	1966
Sterling	23	2	1961
Granite Point	22	78	1965
Lewis River	22	-	1975
West Foreland	20	-	1962
Nicolai Creek	17	1	1966
Middle Ground Shoal	14	65	1962
Falls Creek	13	*	1961
Trading Bay	12	54	1979
North Fork	12	*	1965
Birch Hill	11	*	1965
West Fork	6	1	1960
<b>Total</b>	<b>3,592</b>	<b>2,096</b>	

\*Less than .5 Bcf.

<sup>1</sup> Reserves were calculated by subtracting 1981 production figures from January 1, 1981 proven reserves.

<sup>2</sup> Primarily injected gas for pressure maintenance.

Source: State of Alaska, Alaska Oil and Gas Conservation Commission, February 1982 Bulletin, pp. 33-35.  
State of Alaska, Alaska Oil and Gas Conservation Commission, 1980 Statistical Report, p. 27.

Unlike the region's oil, which could easily be shipped anywhere, Cook Inlet gas proved difficult to market. The quantity of gas discovered was far in excess of what producers needed to pressurize wells and to fuel production and refining operations. Other than the producers themselves, the only nearby market was Anchorage. No time was lost in getting Cook Inlet gas to Anchorage: an 80-mile pipeline was built shortly after the 1959 discovery of gas at Kenai, the first major nonassociated gas field. Within a few years, Kenai gas was used to heat homes in Anchorage and to generate electricity for Anchorage Municipal Light and Power and for two military bases. (Table 2, p. 6, shows the recent growth in local use of gas; Table 3, p. 7 and Table 4, p. 8 show the conversion to gas space heating and the rising demand for electricity that underlie the growth shown in Table 2.)

However, Anchorage had only a small population and could not use all the gas the region was capable of producing. By 1962 two more large fields and several smaller ones had been discovered, and small fields continued to be discovered throughout the 1960s. Without access to the Anchorage market, gas from these new fields was virtually unmarketable. The cost of transporting the gas to the lower 48 states, by pipeline or by insulated tanker, was far greater than its value in lower 48 markets. Consequently, Kenai remained the only producing field for some years; many of the smaller fields were shut in without having been thoroughly evaluated. Even Kenai was underutilized throughout most of the 1960s, while the producers looked for new ways to deliver the gas to distant markets.

There were two possible methods for converting natural gas to a more easily transportable form: by chemical reaction or by liquefaction.

**LOCAL CONSUMPTION OF GAS IN THE ALASKAN SOUTHERN RAILBELT**

**1971 - 1981**

<u>Uses of Gas</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u> <sup>1</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Electric Utility Sales	10.3	13.2	15.5	17.1	19.6	22.2	23.6	24.6	28.2	28.7	29.5
Gas Utility Sales	8.2	9.0	9.7	9.8	12.0	12.6	12.7	13.5	14.0	15.5	17.1
Military Sales	6.5	6.5	6.1	5.7	5.8	5.4	5.1	5.1	5.0	4.8	4.8
Total <sup>2</sup>	25.1	28.6	31.2	32.6	37.5	40.2	41.4	43.2	47.2	49.0	51.4

<sup>1</sup> 1981 figures are estimates.

<sup>2</sup> Totals may not sum due to independent rounding.

Source: Battelle Pacific Northwest Laboratories, Alaska-Historical and Projected Oil and Gas Consumption, prepared for State of Alaska, Department of Natural Resources, Division of Minerals and Energy Management, January 1982, Table 2.7, p. 2.15.

N/E/R/A

-6-

TABLE 2

**GAS HOUSEHEATING CUSTOMERS AND TOTAL  
HOUSEHOLDS IN ANCHORAGE**

**1960 - 1980**

	<u>Gas Househeating Customers</u>	-----(Thousands)-----	<u>Anchorage Households</u>
	(1)		(2)
1960	0		21.9
1965	4.9		-
1970	14.4		35.0
1975	24.0		-
1978	29.0		51.0-52.9
1979	34.2		-
1980	36.2		60.0

**Source:**

**Gas Heating Customers:** American Gas Association, Gas Facts, various years.

**Households 1960-1978:** Scott Goldsmith and Lee Huskey, Institute of Social and Economic Research (Anchorage, Alaska), Electric Power Consumption for the Railbelt: A Projection of Requirements, Technical Appendices, prepared jointly for State of Alaska, House Power Alternatives Study Committee and Alaska Power Authority, Tables D.1, D.2 and D.4, pp. D-2, D-3 and D-6.

**Households 1980:** Alaska Department of Labor, Alaska Population Overview 1981, Table II.24, p. 26.



**ELECTRIC POWER GENERATED BY MAJOR UTILITIES  
SERVING THE ALASKAN SOUTHERN RAILBELT**

1965 - 1980

<u>Year</u>	<u>Energy Generation</u> (10 <sup>3</sup> Mwh) (1)
1965	366.5
1970	700.4
1971	838.0
1972	962.1
1973	1083.4
1974	1165.0
1975	1352.6
1976	1589.6
1977	1773.6
1978	1901.2
1979	2017.9
1980	2077.6

Source: U.S. Department of Energy, Alaska Power Administration, Alaska Electric Power Statistics 1960-1980, August 1981, p. 39.

Union Oil, one of the principal Kenai field producers, opted for the first route, building an ammonia and urea plant near Kenai in 1968 and shipping its product mainly to the west coast of the United States. This plant accounts almost entirely for the industrial use of gas in the region, as shown in Table 5, p. 10. Marathon Oil, the other principal Kenai producer, and Phillips Petroleum, the Operator of the North Cook Inlet field, chose the second method, jointly building a liquefaction plant and shipping LNG to Japan beginning in 1969. (The recent history of this export operation is shown in Table 6, p. 11.) The Japanese, at that time as in the present, had few indigenous energy sources and were willing to pay high prices for delivered LNG.

The third large gas field, Beluga River, was not exploited until 1968, when an electric generating plant was built at the field itself by the Chugach Electric Association. A transmission line from the plant supplies Chugach's customers in Anchorage and its environs with electricity. The generating plant's use of gas was very small until the mid-1970s, and even today the Beluga River field is largely unused.

With the rising fuel prices and shortages of natural gas in the 1970s, shipment of Cook Inlet gas to the lower 48 states began to look increasingly feasible. In the mid-1970s Phillips and Marathon made a proposal to liquefy gas from the Kenai and North Cook Inlet fields for distribution in Oregon, but the project did not materialize. A second proposal was made by California utilities to liquefy gas from Beluga River and several small fields for distribution in California. This proposal, which will be discussed in more detail below, stimulated the first intensive exploration for gas in the area. To date, however, Cook Inlet gas has not been regularly shipped in LNG form to California or any other lower 48 markets, and the prospects for such a scheme are still cloudy.

**INDUSTRIAL GAS CONSUMPTION IN THE  
ALASKAN SOUTHERN RAILBELT**

1969 - 1981

	<u>Ammonia- Urea Production</u>	<u>Refinery Fuel Consumption</u>	<u>Total</u>
	----- (1)	----- (Bcf) (2)	----- (3)
1969	12.2	0.9	13.1
1970	17.9	0.9	18.8
1971	19.5	0.8	20.3
1972	20.6	0.9	21.5
1973	20.6	0.9	21.5
1974	22.1	0.9	23.0
1975	23.9	0.9	24.8
1976	24.3	1.3	25.6
1977	28.6	0.9	29.5
1978	48.9	0.9	49.8
1979	51.7 <sup>1</sup>	0.9	52.6
1980	53.7 <sup>1</sup>	0.8	54.5
1981	55.4 <sup>1</sup>	0.8	56.2

<sup>1</sup>Derived from Kenai field sales to Collier and total gas sales from the McArthur River field.

Source:

Col. 1, 1969-1970 and Col. 2, 1969-1976: SRI International, Natural Gas Demand and Supply to the Year 2000 in the Cook Inlet Basin of South-Central Alaska, prepared for Pacific Alaska LNG Company, Los Angeles, California, November 1977, Table 2, p. 10.

Col. 1, 1971-1979: Battelle Pacific Northwest Laboratories, Alaska - Historical and Projected Oil and Gas Consumption, prepared for State of Alaska, Department of Natural Resources, Division of Minerals and Energy Management, January 1982, Table 2.7, p. 2.15.

1980-1981: State of Alaska, Alaska Oil and Gas Conservation Commission, February 1982 Bulletin, p. 33.

State of Alaska, Alaska Oil and Gas Conservation Commission, xerox sheet, "Kenai Gas Sales," 1980 and 1981.

State of Alaska, Alaska Oil and Gas Conservation Commission, xerox sheet, "Report of Gas Disposition for 1980."

Col. 2, 1977-1979: NERA estimates.

**PHILLIPS AND MARATHON GAS USE FOR  
LNG SALES TO JAPAN<sup>1</sup>**

**1969 - 1981**

	Plant Inlet Volume --(Bcf)-- (1)
1969	9.1
1970	57.1
1971	63.2
1972	59.9
1973	61.0
1974	61.9
1975	64.8
1976	63.5
1977	66.9
1978	60.9
1979	64.1
1980	55.3
1981	68.0

<sup>1</sup>Volumes shown are per calendar year, not per contract year.

**Source:**

1969-1970: SRI International, Natural Gas Demand and Supply to the Year 2000 in the Cook Inlet Basin of South-Central Alaska, prepared for Pacific Alaska LNG Company, Los Angeles, California, November 1977, Table 2, p. 10.

1971-1980: Battelle Pacific Northwest Laboratories, Alaska - Historical and Projected Oil and Gas Consumption, prepared for State of Alaska, Department of Natural Resources, Division of Minerals and Energy Management, January 1982, Table 2.7, p. 2.15.

1981: Communication from Phillips and Marathon.

In summary, development of the Cook Inlet basin gas resources has been slow and uncertain. As late as 1980, with production at record levels, the region's ratio of proven reserves to marketed production was still 20.8, more than double the lower 48 average of 9.0. Even this measure underestimates the slowness of the development, since it does not take into account the slow pace of additions to the reserve base.

The problems of transporting gas from Cook Inlet have led to low prices as well as low production. The long buyers' market in the Anchorage area kept prices there well below regulated levels in the lower 48 states. And low prices, in turn, meant that gas became the preferred fuel for virtually every stationary use. Although southern Alaska is exceptionally well endowed with coal and hydroelectric resources, these resources have been somewhat neglected in recent years. The data in Table 7, p. 13, indicate that as the use of natural gas became more widespread, consumption of coal and hydropower failed to grow and, in the case of coal, declined steadily from the late 1960s.

The legacy of the 25-year buyers' market can still be seen in Cook Inlet today. Sales of gas are still low--about 176 billion cubic feet in 1981--and are divided nearly evenly among the local market, the Japan LNG export, and the ammonia-urea plant. The Kenai field is still used more intensively than any of the others: with 31 percent of the area's reserves, it accounts for 55 percent of sales. And local prices are still low: in 1981 the Anchorage pipeline bought gas at \$0.64 per thousand cubic feet, or about one-quarter the average United States wellhead price, and the Beluga River generating plant bought gas at \$0.20 per thousand cubic feet, or about one-twelfth the United States wellhead price. For this reason Anchorage area consumers enjoy very low retail gas and electric prices, as shown in Table 8, p. 14.

**TOTAL CONSUMPTION OF ENERGY IN ALASKA  
BY TYPE AND YEAR**

**1960 - 1979**

Year	Natural Gas	Petroleum	Coal	Hydro-Electric	Total	Natural Gas Consumption As a Percent of Total
	(1)	(2)	(3)	(4)	(1)+(2)+(3)+(4) (5)	(1)+(5) (6)
------(Trillion Btu)-----						
	(1)	(2)	(3)	(4)	(5)	-(Percent)- (6)
1960	2.034	58.101	8.485	0	68.620	2.96
1961	2.300	64.456	14.005	0	80.761	2.85
1962	4.048	64.322	16.745	0	85.115	4.76
1963	5.677	64.882	15.779	3.410	89.748	6.33
1964	6.954	67.825	15.465	3.374	93.618	7.43
1965	7.837	71.339	12.393	3.655	95.224	8.23
1966	12.687	71.286	21.225	3.293	108.491	11.69
1967	12.269	82.773	24.418	3.786	123.246	9.95
1968	18.092	86.495	21.147	3.781	129.515	13.97
1969	44.050	96.486	17.443	3.562	161.541	27.27
1970	65.701	100.008	17.020	3.807	186.536	35.22
1971	69.805	113.705	18.637	3.807	205.954	33.89
1972	76.674	121.560	16.552	3.594	218.380	35.11
1973	64.398	115.725	17.641	2.973	200.737	32.08
1974	64.349	120.150	16.284	3.407	204.190	31.51
1975	86.564	126.045	18.577	3.713	234.899	36.85
1976	91.922	146.414	16.862	3.978	259.176	35.47
1977	118.723	159.592	12.858	5.343	296.516	40.04
1978	147.785	168.293	4.698	4.924	325.700	45.37
1979	160.500	128.600	4.600	4.800	298.500	53.77

Source: U.S. Department of Energy, Energy Information Administration, Energy Statistics Branch, State Energy Data Report, April 1980, pp. 31-37, and update by telephone.

**GAS AND ELECTRIC PRICES IN THE ALASKAN  
SOUTHERN RAILBELT AND U.S.**

**1980**

	<u>Alaskan Southern Railbelt</u> (1)	<u>U.S.</u> (2)
<u>Gas (\$/MMBtu)</u>		
Residential	1.73	3.61
Commercial	1.48	3.34
<u>Electricity (¢/kWh)</u>		
Residential	3.68	4.93
Commercial	3.08	5.09

**Source:**

Gas: American Gas Association, Gas Facts, 1980, Table 95, p. 119.

Electric: Alaska: U.S. Department of Energy, Alaska Power Administration, Alaska Electric Power Statistics 1960-1980, August 1981, p. 40.

U.S.: Edison Electric Institute, Statistical Yearbook of the Electric Utility Industry 1980, November 1981, Tables 59 and 41, pp. 59 and 46.

In one respect, however, the situation has changed over the last few years: there have been enormous increases in world prices of natural gas and gas-based products. For example, in mid-1981 the Japanese were paying from 9 to 12 times as much for LNG, in current dollars, as when they first started importing it in 1969. What this means to Cook Inlet producers is that the gap between world and local prices for gas is far wider than ever before. We will return to this point later in discussing the future developments of the Cook Inlet gas reserves.

**B. The Phillips-Marathon Proposal**

The export continuation proposed by Phillips and Marathon consists of a five-year extension, to 1989, of the 1967 LNG contract with Tokyo Gas and Tokyo Electric under which shipments have been made since 1969. Such an extension was contemplated in the contract itself and in the FPC authorization order in 1967. To deliver the annual contract quantities, Phillips Petroleum supplies about 43.6 billion cubic feet of gas per year from the North Cook Inlet field and Marathon Oil supplies about 18.6 billion cubic feet per year from the Kenai field to a liquefaction plant at Nikiski Point on the Inlet. The LNG is shipped in two tankers to Tokyo. Because gas is used to fuel the liquefaction process and the tankers, the amount of LNG actually delivered to Japan is only about 50 billion cubic feet per year. It is our understanding that the export contract will continue to operate in substantially the same way that it has in the past.

**C. Summary of Findings**

It is our opinion that the extension into 1989 of the Phillips-Marathon LNG contract is unlikely to have any substantial effects at all, for two reasons. First, it will have no short-term effects on the price or availability of Cook Inlet



gas since we expect the buyers' market, or oversupply of gas, to continue in the Cook Inlet area at least through 1989. We foresee no alternative demand in the 1980s for the gas that Phillips and Marathon propose to send to Japan; thus, the LNG does not have to be bid away from some other potential user. In fact, if the LNG contract were not extended, the gas would probably stay in the ground during the 1980s.

Of course, in the long run all of the reserves in the Cook Inlet basin will probably be depleted. If the LNG export contract were not extended, the gas now set aside for the contract extension will eventually be sold to someone. In other words, it might appear that the proposed sale of gas to the Japanese market in the 1980s should be weighed not against alternative uses in the 1980s but against alternative uses in the 1990s. Here again, however, it is our opinion that the proposed LNG contract extension will make very little difference to the future development of the Cook Inlet gas reserves.

The quantity of gas to be committed to the proposed contract extension is very small. At an average of 62.2 billion cubic feet per year, a five-year extension calls for 311 billion cubic feet of gas. This is about 9 percent of the proven reserves in the area, and only 3 percent of the area's potential gas resources. It is simply not large enough to have a decisive impact on the course of future development.

We foresee two possibilities for the future of the Cook Inlet gas reserves in the 1990s: maintenance of the status quo or more intensive development. If there is no change in fundamental conditions, then the local Anchorage market and the ammonia-urea plant will continue using today's known reserves until they run out. If, on the other hand, world market conditions are favorable, new demands from distant markets (Japan, United States West Coast, or

elsewhere) could justify exploration in Cook Inlet and elicit new supplies of gas. In either case--status quo with no additions to proved reserves or intensive development--gas would be available to the Anchorage area beyond the year 2000. Moreover, at prices necessary to elicit intensive exploration, the area's abundant coal and hydropower resources should prove to be economic substitutes for gas.

Phillips' and Marathon's proposed extension of the Japan LNG contract is consistent with either of these scenarios; it does not by itself determine the decision between them. Any effect it will have on the Anchorage market, therefore, is well into the twenty-first century, too speculative and too small to have any near term adverse impact on the public interest.

We do not expect the contract extension to affect national gas markets in any way. Because Cook Inlet gas is not now sold in lower 48 markets and probably cannot be sold there before 1989, the proposed export does not directly affect the national market. Furthermore, it is unlikely that it will be feasible to ship gas to lower 48 markets in the 1990s without substantial dedicated reserves--which would require new discoveries. In the event of a major exploratory effort, the 311 billion cubic feet proposed to be exported will not make a critical difference. In other words, continuing to export gas to Japan will not require the United States to import an equivalent amount of fuel from some other country, nor will it affect the United States market price for gas.

Finally, we note that national policy today favors exports in general, exports to Japan in particular, and encouragement of our allies to diversify their energy sources and minimize their reliance on politically unstable regions. The proposed extension of the LNG contract is consistent with all these expressions of national policy.

In summary, we cannot conceive of any plausible set of circumstances in which the proposed export of LNG might divert natural gas from a more appropriate use, raise the price of gas significantly in any American market, cause a shortage of gas in any American market, or increase United States dependence on imported fuel.

## II. DIRECT EFFECTS OF THE PHILLIPS-MARATHON LNG EXPORT DURING THE 1980s

Phillips and Marathon propose to use approximately 311 billion cubic feet of gas from their Cook Inlet fields to deliver LNG to Japanese utilities between 1984 and 1989. It is our opinion that this gas will not be diverted from other uses during this period, nor will its sale to Japanese buyers drive up gas prices in the Cook Inlet region. It seems probable, in fact, that the chronic oversupply of gas in the region will continue throughout the 1980s. To show why this is the case, we will examine in turn each component of demand and compare the total demand with the available supplies. It will be seen that no new uses for Cook Inlet gas are likely to be found during the 1980s and that the only increase in demand is likely to come from the growth of the Anchorage area population and the resultant increase in gas used for heating and electric generation. Moreover, even under generous assumptions--substantial population and economic growth and no real increases in retail prices of gas or electricity--Anchorage area demand is unlikely to grow fast enough to put any strain on Cook Inlet reserves in the 1980s.

Before discussing demand projections in detail, we should explain their significance. Demand for any product, in the present or the future, is not independent of price. If gas is attractively priced, consumers will use a great deal of it; if the price rises, they will find it worthwhile to conserve or (depending on what happens to prices of substitutes) to switch to other fuels altogether. Thus it cannot be said that Alaskan consumers will "need" or "require" a certain amount of gas in the 1980s; all that we can say is that if prices are at a given level, consumers will try to buy a certain amount. Estimates of future demand may vary considerably, therefore, depending on what one assumes will happen to prices.

Assumptions about prices may vary depending on the purpose of the projections being made. If, for example, a utility system planner is projecting demand growth for his service area, he will want to use the most realistic price assumptions possible, because overinvestment in capital equipment is a danger as much to be avoided as underinvestment. In this case, however, there is no danger in overprojection--the only risk at issue here is the possible shortage of gas in the area--and we have accordingly used the lowest plausible price assumptions, i.e., that gas will continue to be sold at its real 1980 price. For this reason, our demand projections are likely to be overestimates and should not be used for any purpose where overestimation might prove costly.

A. Gas Utility Sales

Residents of Anchorage and of the two military bases, Elmendorf Air Force Base and Fort Richardson, are able to buy gas from the Anchorage utility (Alaska Gas and Service) to heat their homes and places of business. (Three small towns near the Kenai gas field also have their own utility, but they account for only a small fraction of gas utility use.) Gas has been available for home and commercial use for 20 years, since the Kenai-Anchorage pipeline was built, and over that period area residents have taken advantage of the large price differential between gas and other fuels by converting their heating systems and by installing gas heat in new buildings. In Anchorage today, for example, over half of all homes have gas heat. (See Table 3, p. 7.) There are still many older, oil-heated buildings that could be converted, but most of the growth in demand will come from the growth of Anchorage itself.

The utility also supplies gas for cooking, clothes drying, hot water heating, and other appliances. Because of Alaskan weather conditions, however, space heating is by far the largest component of demand, accounting for about

80 percent of residential gas sales.<sup>1</sup> Choice of heating fuel and investment in heating conservation are the most important decisions affecting per customer consumption of gas.

Our projections of utility demand to 1989 are, for the reasons explained on p. 20 above, likely to be overestimates. They are based, in part, on projections of population and economic growth which were made several years ago and which forecast a 1980 statewide population about 5 percent higher than that revealed by the 1980 Census. (See the Technical Note for an explanation of the NERA gas demand model and the economic projections used.) They are also based on the assumption that real prices will not rise at all--during a period in which real gas prices in the lower 48 states are expected to double--and hence that there will be no price-induced conservation or fuel switching. We estimate, therefore, that gas utility sales are very unlikely to reach an annual rate of more than 27 billion cubic feet per year by 1989--approximately 60 percent higher than their 1981 rate--or to reach a cumulative level of more than 185 billion cubic feet for the years 1982 through 1989.

**B. Electric Utility Purchasers**

The two electric utilities serving the greater Anchorage area are almost entirely dependent on gas for generation. Municipal Light and Power, which serves downtown Anchorage, burns gas that it buys from the Kenai-Anchorage pipeline. It also buys power from the federally-owned hydroelectric plant at Eklutna. Chugach Electric Association, with a much larger service area and customers consisting largely of suburban and exurban residences, generates

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<sup>1</sup> Scott Goldsmith and Lee Huskey, Institute of Social and Economic Research (Anchorage, Alaska), Electric Power Consumption for the Railbelt: A Projection of Requirements, Technical Appendices, p. D31.

most of its electricity from a plant at the Beluga River gas field. It also buys gas from the Kenai-Anchorage pipeline to fuel smaller plants, operates one small hydroelectric plant, and buys and resells power from the Eklutna hydroelectric plant. Each utility has some backup oil capacity, but since residual oil prices have been many times higher than gas prices in recent years, oil is only used in emergency situations. The two utilities together generated or purchased 2.1 billion megawatt hours of electricity in 1980, of which 88 percent was generated by gas.<sup>2</sup>

These two large systems provide the bulk of the electricity generated by utilities in the southcentral region of Alaska, or the Southern Railbelt, as it is sometimes known. Several smaller utilities own emergency generating equipment but actually purchase all their power from Chugach. Only a few villages are too remote and small to be connected to the Anchorage grid and must rely on diesel oil generation. Thus the opportunities for extending the territory served by gas-fired generating plants are limited. Two such extensions, both of them small, are under consideration as of this writing:

- (1) Fairbanks Intertie. In 1981 the Alaska legislature appropriated \$76 million toward the construction of an electric transmission system connecting Anchorage and Fairbanks. This is merely a down payment; the Army Corps of Engineers estimated the cost of a similar intertie at \$338 million in 1978 dollars.<sup>3</sup> Thus it is by no means clear that the project will be completed. If it is

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<sup>2</sup> U.S. Department of Energy, Alaska Power Administration, Alaska Electric Power Statistics 1960-80, August 1981, p. 4.

<sup>3</sup> Southcentral Railbelt Area, Alaska, Upper Susitna River Basin Supplemental Feasibility Report: Hydroelectric Power and Related Purposes, prepared by the Alaska District, Corps of Engineers, Department of the Army, February 1979, p. 35.

completed on schedule and is operating by 1984, it may be used to supply from Anchorage all the power demanded by the Fairbanks region beyond what the currently operating coal-fired plants in Fairbanks can provide. The extra gas required by the Anchorage utilities to meet this Fairbanks demand has been estimated to range from 2.48 billion cubic feet in 1984 to 3.36 billion cubic feet in 1989, a cumulative total of 18.48 billion cubic feet for those years, as shown in Table 9, p. 24.

- (2) Move of the state capital to Willow. In November 1982, after the New Capital Site Planning Commission presents its report on the subject, citizens of Alaska will vote on whether to move their state capital from Juneau, in sparsely populated southeast Alaska, to Willow, close to Anchorage. If the move takes place, Willow will grow from a village of 134 people to a city of as many as 30,000 by 1994.<sup>4</sup> (Juneau's population in 1980 was 19,500, so that 30,000 may be an overestimate.) A 1978 planning report estimated that by 1994 the new capital would need 180 million kilowatt hours of electricity per year and 1.6 trillion Btu per year for building space heat.<sup>5</sup> The report estimates that a third of the electricity and two-thirds of the space heat will come from a coal-fired cogeneration plant.

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<sup>4</sup> Telephone conversation with spokesman at the Office of the Governor, Juneau, Alaska, October 27, 1981.

<sup>5</sup> Description of Energy Utilities for the New State Capital at Willow, prepared for the New Capital Site Planning Commission by the Alaska Department of Commerce, Division of Energy and Power Development, February 17, 1978, p. 5.



**PROJECTED GAS USE IN THE FAIRBANKS INTERTIE  
1984 - 1989**

<u>Year</u>	<u>Projected Gas Use --(Bcf)--</u>
1984	2.48
1985	2.98
1986	3.07
1987	3.27
1988	3.32
1989	<u>3.36</u>
Total	18.48

Source: Battelle Pacific Northwest Laboratories, Cook Inlet Natural Gas: Future Availability and Price Forecasts, Comment Draft, Working Paper No. 1.1 Preliminary, prepared for Office of the Governor, State of Alaska, February 1981, p. 3.12.

The remaining two-thirds of the electricity would be supplied by the Matanuska Electric Association (which buys power from the Chugach Electric Association) and the remaining third of the heat supplied by oil-fired district heating plants. Assuming that the state capital will be moved, that the move will begin in 1984, that energy requirements reach two-thirds of their projected peak by 1989, and that all heating and electric requirements are supplied by Cook Inlet gas, total annual gas requirements could be as high as 3.1 billion cubic feet in 1989. Cumulative requirements over the years 1984-89, as shown in Table 10, p. 26, could reach about 12.9 billion cubic feet. It should be stressed that the move itself is uncertain at this point, the projected growth rate for Willow is optimistic, and the decision to rely on Cook Inlet gas is doubtful. The estimate of 12.9 billion cubic feet, therefore, is the highest plausible estimate, not the most likely estimate.

Growth of Demand in the Existing Service Area. In forecasting the growth of Anchorage area demand for electricity, we have again tried to estimate the highest plausible rates of growth. We have assumed that the Anchorage area will undergo the same rapid development that we assumed in the gas utility demand projections, and that electric prices will be stable in real terms until 1989. In addition, we have assumed that the electric utilities will continue to generate a high proportion of their electricity from gas. The only new non-gas-fired generating plant we have forecast is the Bradley Lake hydroelectric project, currently under construction and scheduled to supply 318 million kilowatt hours per year beginning in 1988.<sup>6</sup>

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<sup>6</sup> Telephone conversation with spokesman of the Alaska Power Authority, April 5, 1982.

PROJECTED GAS USE IN NEW STATE CAPITAL AT WILLOW  
1984 - 1989

<u>Year</u>	<u>Projected Gas Use --(Bcf)--</u>
1984	1.0
1985	1.5
1986	2.0
1987	2.5
1988	2.8
1989	<u>3.1</u>
Total	12.9

Source: NERA calculations.

Finally, we have assumed that only small improvements will be made in the thermal efficiency of the gas-fired plants, so that the electric utilities' demand for gas will nearly keep pace with the demand for electricity from their gas-fired plants.

Under these assumptions, the electric utilities' demand for gas to supply the existing service area could reach 39 billion cubic feet by 1989--an increase of about 37 percent over 1981 levels--with a cumulative demand of 298 billion cubic feet for the years 1982 to 1989.

C. Military Demand

Fort Richardson Army Base and Elmendorf Air Force Base generate their own electricity instead of purchasing it from the electric utilities. Like the utilities, however, they use gas from the Kenai-Anchorage pipeline. While they had made some tentative plans to convert to coal-fired equipment, these plans have been shelved for the indefinite future.<sup>7</sup> For now, the two military bases expect to go on purchasing the same amount of gas for electric generation that they have purchased during the last few years. Accordingly, we have estimated that military demand for gas will remain stable at 5 billion cubic feet per year, with a cumulative demand of 40 billion cubic feet for the years 1982-1989.

D. Industrial Demand

Neither the gas utilities nor the electric utilities in southern Alaska have as customers any large industrial users of energy. Besides the Phillips-Marathon LNG plant, whose operations are at issue here, the Collier ammonia-urea plant and the two oil refineries are the only major industrial users. They

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<sup>7</sup> Telephone conversation with spokesmen at Fort Richardson and Elmendorf bases, October 30, 1981.

buy gas directly from Kenai and other fields, and use it for fuel, electric generation, and (in the case of the ammonia-urea plant) for feedstock.

The ammonia-urea plant will probably continue to operate through 1989, since the level of demand for its products is expected to remain high and since it is able to purchase gas (from fields owned by the parent company, Union Oil) at relatively low prices. The plant is now operating at full capacity and we have assumed that it will continue to do so through 1989.

We also assume that there will be no further expansion of the chemical plant's capacity during the 1980s. This assumption appears warranted for several reasons. First, there are no known plans for expansion of capacity. Second, the existing plant should function long enough for Union Oil to use up all or most of its proven reserves in Cook Inlet; there is no longer any pressure to get rid of unmarketable reserves. Finally, the long-term market for methane-based fertilizer is uncertain; demand for the Collier plant's product could be undercut by fertilizer manufactured at Middle Eastern gas fields or even by genetically engineered self-fertilizing crop plants. Thus, if the ammonia-urea plant continues to operate at current levels, it should use about 55 billion cubic feet per year and a cumulative total of 440 billion cubic feet in the years 1982-1989.

The two oil refineries, operated by Tesoro Alaska and Socal, use much less gas--approximately 1 billion cubic feet per year between them. The Tesoro refinery has recently undergone some expansion, but its supply of crude oil is uncertain, since Cook Inlet oil production has been declining for some years. Thus it is doubtful whether Tesoro will be able to operate at full capacity unless it receives crude oil from the state's royalty share of North Slope oil. Even with adequate supplies of oil, the refineries are unlikely to demand

more than 1.2 billion cubic feet of gas per year during the 1980s--a cumulative total of 10 billion cubic feet for the years 1982-89.

E. New Uses for Cook Inlet Gas

In the two decades since gas was discovered in Cook Inlet, there have been numerous proposals for using this resource more fully, either directly or as a source of cheap electric power. For example, nuclear fuel enrichment, coal gasification, and aluminum smelting have all been suggested as the sort of energy-intensive activities that might be drawn to southern Alaska by the availability of low-cost fuel. Today, however, only two projects are under serious consideration: the Dow-Shell petrochemical plants and the PacAlaska LNG project. Neither of these seems likely to materialize before the end of the decade.

PacAlaska. In 1972 two California utilities, anxious to secure new supplies of gas, determined to ship LNG from southern Alaska and Indonesia to a receiving and regasification terminal they planned to build on the California coast. (There are no such terminals on the West Coast today.) According to this plan, Cook Inlet fields were to provide a total of 3.2 trillion cubic feet of gas over a 20-year period. The utilities, and their subsidiaries PacAlaska LNG and PacIndonesia LNG, filed formal applications with the Federal Power Commission in 1974, and have spent much of the intervening period defending challenges on siting, environmental, safety and economic issues. Most of these challenges have been overcome successfully, but several hurdles remain. The case is still under consideration by the Federal Energy Regulatory Commission (Docket No. CP75-140).

The major obstacle to the project today is the lack of secure gas supplies. Originally, Indonesia was to provide about half the LNG received at the

regasification terminal. However, the Indonesian reserves originally contracted for have been relinquished, due to the delay. While a contract between these two parties is still in effect, in its current form it specifies neither dedicated reserves nor price.<sup>8</sup> Negotiations are now underway between PacIndonesia and Pertamina for new reserves, but recent LNG sales from Indonesia have been at a much higher price than PacIndonesia had anticipated. Thus it is not clear that the negotiations will produce terms acceptable to both parties. If no Indonesian supplies can be obtained, the terminal throughput costs may become prohibitively expensive.

The supply situation in Alaska is also uncertain. While PacAlaska has dedicated reserves of approximately 950 billion cubic feet in Cook Inlet (much of it in the Beluga River field, including several hundred billion cubic feet that are not listed as proven reserves by the State of Alaska), the contracts have expired and the reserves could - in theory - be bid away by competing buyers.<sup>9</sup> PacAlaska must also find additional gas in order to proceed with the project. Phase 1 of the project can be authorized when 1.6 trillion cubic feet of proven reserves are dedicated to it; Phase 2 (scheduled to begin a year after Phase 1) can be authorized when another 1.0 trillion cubic feet are found.<sup>10</sup> PacAlaska has underwritten a great deal of exploration in the Cook Inlet area in the last five years, and has added to known reserves in the area, but drilling activity has now slowed down.

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<sup>8</sup> Contract filed by Pacific Indonesia LNG Company, December 4, 1981, with FERC, Docket No. CP74-160 and ERA, Docket No. 77-001-LNG.

<sup>9</sup> Pacific Alaska LNG Associates' Initial Status Report on Dedicated Reserves and Other Pertinent Supply Matters, February 14, 1980, FERC, Docket No. CP75-140.

<sup>10</sup> Presiding Administrative Law Judge's Initial Decision, August 13, 1979, FERC, Docket No. CP75-140. The 2.6 trillion cubic feet required for both phases of the project to proceed only represent about 78 percent of the project's total requirements; it is anticipated that exploration will continue even after the project is underway.

## PAC ALASKA LNG PROJECT

<u>Dedicated Reserves</u>	(proven Bcf)	<u>Requirements (Bcf)</u>	<u>Total</u>	<u>Annual</u>
Beluga River	662.3	Phase 1-	1,600	73
Lewis River	58.0	Phase 2-	1,600	73
Ivan River	101.0			
		<b>Total</b>	<b>3,200</b>	<b>146</b>
West Foreland				
Birch Hills	12.0			
Falls Creek				
Stump Lake Prospect				
Tyonek Field	111.0			
Kenai Look Prospect (now Cannery Loop Field)				
<b>Total</b>	<b>944.3</b>			
<u>Contracted price for gas in Beluga Field - 1978 dollars</u>			\$1.48/Mcf	
<u>Expected delivery price in California - 1978 dollars</u>			\$5.48/MMBtu Phase 1	
			\$4.09/MMBtu Phase 2	

## Source:

Reserves: Pacific Alaska LNG Associates' Initial Status Report on Dedicated Reserves and Other Pertinent Supply Matters, February 14, 1980, FERC Docket No. CP75-140.

Requirements and prices: Presiding Administrative Law Judge's Initial Decision, August 13, 1979, FERC Docket No. CP75-140.



Finally, there is still opposition to the project in California. In September 1981 consumer and environmental groups there petitioned the California Public Utilities Commission to revoke its license for the Point Conception regasification plant. They argue, among other things, that forecasts of growth in gas requirements in California over the next 20 years have been cut back from 1 or 2 percent a year to zero, and that other, less expensive, supplies of gas could meet California's requirements.

Due to this assortment of difficulties, and to the fact that several years would undoubtedly be required for construction of facilities, we believe it unlikely that the PacAlaska project will be realized in the 1980s.

Dow-Shell Petrochemicals. In 1981 a group of companies headed by Dow Chemical Company and Shell Oil Company reported to the State of Alaska the conclusions of their study of the feasibility of building a petrochemical industry in Alaska. They concluded that, given rising oil prices and other favorable conditions, petrochemical development might be feasible. Their plan primarily entailed the manufacture of ethylene and its derivatives from ethane produced at Alaska's North Slope; however, it envisioned the use of Cook Inlet natural gas as fuel for these plants and also as feedstock for a new ammonia-urea plant. Total requirements of natural gas for all these purposes were estimated at about 55 billion cubic feet per year.<sup>11</sup> While the Dow-Shell report does not specify which field would supply this gas, it refers to the "plentiful supply" of gas in the Cook Inlet area.<sup>12</sup>

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11 The Dow-Shell Group, Report to the State of Alaska: Feasibility of a Petrochemical Industry, Vol. 1, p. 28.

12 Ibid., Vol. 1, p. 18.

Whatever the long-range prospects for petrochemical development in Alaska, it is clear that this plan would not put any demands on Cook Inlet gas in the 1980s. The project is not economically feasible unless oil prices reach \$40 per barrel or more in 1981 dollars, well above their current level,<sup>13</sup> so that the project will certainly not be initiated during the next few years. If and when it is undertaken, construction of petrochemical plants would not even begin until the third year after authorization, according to the Dow-Shell schedule,<sup>14</sup> and operations would not begin, presumably, for a few years after that.

F. Total Demand

The maximum demand for Cook Inlet gas in the 1980s is shown in Table 12, p. 34. Total demand could continue to grow, according to our projections, with the development of the Anchorage area and the extension of the electricity grid to Fairbanks and to the new city of Willow. However, this potential growth is quite limited. We do not foresee any plausible set of circumstances in which demand in the 1980s would exceed an annual level of 197 billion cubic feet, or 12 percent more than sales in 1981. Thus the cumulative demand for the years 1982-89 is not likely to exceed 1,490 billion cubic feet.<sup>15</sup>

A large part of this 1,490 billion cubic feet is already contracted for, as is shown in Table 13, p. 35. All the major purchasers have dedicated reserves that they will be drawing on in the 1980s.

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<sup>13</sup> Ibid., Vol. 2, p. 3.

<sup>14</sup> Ibid., Vol. 1, p. 47.

<sup>15</sup> While the growth in demand will be modest and should not strain local capacity, the extreme seasonal fluctuations in demand, especially in the coldest winters, have created a seasonal deliverability problem in Anchorage. However, the apparent shortages of gas in cold winters can be alleviated only by better planning and storage facilities, not by the curtailment of other demands.

**PROJECTED LOCAL AND INDUSTRIAL DEMAND FOR GAS IN  
THE ALASKAN SOUTHERN RAILBELT**

1982 - 1989

<u>Uses of Gas</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>Total</u>
	(1)	(2)	(3)	(4)	(5) (Bcf)	(6)	(7)	(8)	(9)
<b>LOCAL</b>									
Electric Utility Sales	32.3	34.2	36.2	38.3	39.6	41.0	37.5	38.9	298.0
Gas Utility Sales	18.7	19.9	21.3	22.8	23.8	24.9	26.1	27.3	184.8
Military Sales	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	40.0
Subtotal	56.0	59.1	62.5	66.1	68.4	70.9	68.6	71.2	522.8
<b>INDUSTRIAL</b>									
Collier Chemical	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	440.0
Tokyo LNG	65.6	65.6	65.6	65.6	65.6	65.6	65.6	27.4	486.6
Miscellaneous <sup>1</sup>	1.2	1.2	4.7	5.7	6.3	7.0	7.3	7.7	41.1
Subtotal	121.8	121.8	125.3	126.3	126.9	127.6	127.9	90.1	967.7
<b>Total</b>	<b>177.8</b>	<b>180.9</b>	<b>187.8</b>	<b>192.4</b>	<b>195.3</b>	<b>198.5</b>	<b>196.5</b>	<b>161.3</b>	<b>1,490.5</b>

<sup>1</sup> Miscellaneous includes gas use from Fairbanks Intertie (1984-1989), the new state capital (1984-1989) and oil refinery use (1982-1989).

**Sources:**

**Electric:** Electric utility demand for gas was derived from NERA demand model projections of the yearly demand for electricity. From these projections was subtracted the 235 million kWh per year contribution of the Eldutna and Cooper Lake hydroelectric plants and (beginning in 1988) the 295 million kWh per year contribution of the Bradley Lake hydro project. From the resulting demand for gas-fired generation, annual growth rates were calculated and then multiplied by 0.9 to account for technological changes in generation. The resulting growth rates were used to calculate electric utility demand for gas with 28.763 Bcf as the 1980 base.

**Gas:** NERA Energy Demand Model.

**Military and Collier:** Assumptions.

**Tokyo LNG:** Communication from Phillips and Marathon; demand based on requirements to deliver total cumulative contract quantity.

**Miscellaneous:** For Fairbanks Intertie and new state capital see Tables 9 and 10. Oil refinery use is assumed to be 1.2 Bcf/year.

**PROJECTED USE OF GAS IN THE COOK INLET REGION  
(OTHER THAN LEASE USE OR REINJECTION BY OIL PRODUCERS)**

**1982 - 1989**

Purchaser	Maximum Cumulative Demand (Bcf) (1)	Use from Committed Reserves		Demand to be met from Uncommitted Reserves (Bcf) (1)-(2) (4)
		(Bcf) (2)	(Field) (3)	
Collier Chemical	440	376 <sup>1</sup>	Kenai	64
Tokyo LNG Plant	487	53	Kenai	311
		123	North Cook Inlet	
Chugach Electric Association <sup>2</sup>	176	171 <sup>3</sup>	Beluga River	5
Anchorage Pipeline <sup>4</sup>	347	16 <sup>5</sup>	North Cook Inlet (Royalty)	50
		281 <sup>6</sup>	Kenai	
Miscellaneous <sup>7</sup>	<u>41</u>	<u>0</u>		<u>41</u>
<b>Total</b>	<b>1,491</b>	<b>1,020</b>		<b>471</b>

<sup>1</sup> Maximum take of 47 Bcf/year used each year.

<sup>2</sup> Assumes that Beluga generating plant continues to burn 59 percent of all gas used in area electric generation, as in 1980.

<sup>3</sup> Maximum take of 22 Bcf/year reached in 1985.

<sup>4</sup> Supplies gas utility, military bases, and 41 percent of electric utility demand.

<sup>5</sup> Assumes state takes full royalty share, equal to 12.5 percent, of production from the North Cook Inlet field to June 1, 1984; production is assumed to be 70 percent of the Tokyo LNG figure shown in Table 12.

<sup>6</sup> Total committed reserves are used.

<sup>7</sup> Miscellaneous includes gas use from the Fairbanks Intertie (18.5 Bcf, 1984-1989), the new state capital (12.9 Bcf, 1984-1989) and oil refinery use (1.2 Bcf/year = 9.6 Bcf, 1982-1989).

**Source:**

**Demand:** See Table 12.

**Use:** Battelle Pacific Northwest Laboratories, Cook Inlet Natural Gas: Future Availability and Price Forecasts, Comment Draft, Working Paper No. 1.1 Preliminary, prepared for Office of the Governor, State of Alaska, February 1981.

    Tokyo LNG use by communication from Phillips and Marathon.

However, they will all have to turn to additional sources during this period, as they will either exhaust their total committed reserves or reach their maximum annual take. We expect the demand for currently uncommitted reserves to total at most 471 billion cubic feet during the years 1982-1989.

G. Supply of Cook Inlet Gas

It should not be difficult to find this 471 billion cubic feet in the 1980s. Table 14, p. 37, shows that about 1876 billion cubic feet in the major fields are currently uncommitted, including PacAlaska's expired dedications in the Beluga River field. (We have ignored, on both the demand and supply sides, the small associated-gas fields that are used by oil producers in their drilling operations.) Thus no more than 25 percent of the uncommitted reserves are likely to be demanded in the 1980s. Even if no new reserves are added in the 1980s, supplies are likely to be more than adequate throughout the decade.

H. Summary

There has been a "buyers' market" in the Cook Inlet area ever since gas was discovered there over two decades ago. We do not expect this situation to change during the 1980s, since no significant new uses for Cook Inlet gas are likely to arise before the end of the decade. Plans to ship LNG to California appear to be stalled at best; neither is there any petrochemical or other major industrial demand for these reserves in the near future. Not even rapid regional growth and low prices would have very much effect on demand. Supplies available in the 1980s will be far greater than any plausible demand.

Thus, extension of the Japan LNG export contract will not fundamentally alter the gas market in Southern Alaska. With or without LNG exports, gas will continue to be available for heating and electric generation in Alaska. The termination of the export contract in 1984, therefore, would not provide gas that anyone could use in the 1980s.

**COMMITTED AND UNCOMMITTED GAS RESERVES  
IN THE COOK INLET REGION**

As of January 1, 1982

Total Proven Reserves in Major Fields		Committed Reserves		Uncommitted Reserves
(Field)	(Bcf)	(Use)	(Bcf)	(Bcf)
(1)	(2)	(3)	(4)	(2)-(4) (5)
Kenai	1,109	Collier Chemical	404	276
		Anchorage Pipeline	281	
		Tokyo Gas & Electric	53	
		Swanson River (Rental Gas)	95	
North Cook Inlet	950	Tokyo Gas & Electric	123	807
		Anchorage Pipeline (Royalty)	16	
Beluga River	743	Chugach Electric Association	276	467 <sup>1</sup>
Beaver Creek	240	2		240
McArthur River	84	2		84
Swanson River	<u>268</u>	Pressurization	<u>268</u> <sup>3</sup>	<u>0</u>
<b>Total</b>	<b>3,394</b>		<b>1,516</b>	<b>1,878</b>

<sup>1</sup> Reserves are technically committed to PacAlaska but can be sold to other purchasers.

<sup>2</sup> Reserves are uncommitted.

<sup>3</sup> Swanson River reserves being used for reinjection. Reserves will be available in the 1990s.

Source:

Total Proven Reserves: See Table 1.

Committed Reserves: Battelle Pacific Northwest Laboratories, Cook Inlet Natural Gas: Future Availability and Price Forecasts, Comment Draft, Working Paper No. 1.1 Preliminary, prepared for Office of the Governor, State of Alaska, February 1981.

State of Alaska, Alaska Oil and Gas Conservation Commission, February 1982 Bulletin, pp. 33-35.

State of Alaska, Alaska Oil and Gas Conservation Commission, Kenai Gas Sales, 1981 (xerox sheet).

Communication from Phillips and Marathon.

### III. THE PROPOSED CONTRACT EXTENSION WITHIN THE CONTEXT OF INTERNATIONAL TRADE

The Phillips-Marathon 1967 contract was Japan's first experiment with LNG. (In fact, Japan had used virtually no natural gas at all prior to that time.) It was also the first use of LNG for electric generation by anyone. The experiment was clearly successful and Japan began quickly to expand its LNG imports. It is widely recognized that use of LNG can help diversify Japan's energy sources, making the country less susceptible to a threat of an oil embargo which, in the words of a recent study, "is the emotional equivalent to the Soviet threat for the United States."<sup>16</sup> (See Table 15, p. 39, and Table 16, p. 40, for a summary of Japan's energy use and import dependence.) By the mid-1970s, Japan was importing LNG from Abu Dhabi, Brunei, and Indonesia as well as from Alaska. These other sources soon surpassed Alaska in terms of volume. By mid-1981, Phillips and Marathon were providing only about 6 percent of Japan's LNG imports (see Table 17, p. 41). This percentage will fall even further in the next few years, as Malaysian and Australian LNG, as well as additional supplies from Indonesia, begin to be imported. Alaskan gas, while still valuable to Japan, is no longer essential. If this contract were not extended, it appears likely that the buyers could easily substitute supplies from one or another of the sources currently shipping LNG to Japan.

However, such substitution would take time to arrange. LNG contracts, because they are large-scale and complex transactions, are usually preceded by months of negotiations.<sup>17</sup>

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<sup>16</sup> Report of the Japan-United States Economic Relations Group, prepared for the President of the United States and the Prime Minister of Japan, January 1981, p. 32.

<sup>17</sup> For accounts of some of these negotiations, see Jeffrey Segal, "LNG Market: Pricing Structure in Disarray", Petroleum Economist, December 1981.

**JAPANESE FUEL USE BY TYPE AND YEAR  
HISTORIC AND PROJECTED**

**1960 - 1990**

	<u>1960</u>	<u>1973</u>	<u>1979</u>	<u>1985</u>	<u>1990</u>
	----- (Million Tons of Oil Equivalent) -----				
	(1)	(2)	(3)	(4)	(5)
Oil	22.6	228.5	239.9	274.4	272.3
Solid Fuels	39.1	49.8	42.0	69.1	94.2
Gas	1.9	9.1	22.0	39.6	60.2
Nuclear	0	2.4	15.0	36.5	71.3
Hydro	14.3	17.6	20.6	27.2	36.0
Other	0	0	0	3.5	29.3
Total <sup>1</sup>	83.8	316.6	347.5	466.2	543.7

**Note:** Includes fuel use by industry, residential/commercial, transport, non-energy use and electricity generation.

<sup>1</sup> Totals include non-energy use and fuel uses not specified.

**Source:** International Energy Agency, Energy Policies and Programmes of IEA Countries 1980 Review, OECD, Paris, 1981, pp. 190-191.



**JAPANESE DEPENDENCE ON FUEL IMPORTS  
HISTORIC AND PROJECTED**

**1960 - 1990**

<u>Fuel Imports</u>	<u>1960</u>	<u>1973</u>	<u>1979</u>	<u>1985</u>	<u>1990</u>
	-----	-----	(Percent)-----	-----	-----
	(1)	(2)	(3)	(4)	(5)
Solid Fuels	13.1	73.2	81.1	84.7	88.4
Oil <sup>1</sup>	107.0	105.5	104.0	105.8	105.7
Gas	0	51.9	87.9	86.7	89.4
Imports as a Percent of Total Fuel Used	45.9	103.2	97.3	92.9	81.9

<sup>1</sup> Some imported oil is used for bunker and export purposes.

Source: International Energy Agency, Energy Policies and Programmes of IEA Countries 1980 Review, OECD, Paris, 1981, pp. 190-191.

LNG IMPORTS TO JAPAN<sup>1</sup>

1969 - 1981

	<u>Total</u> (10 <sup>3</sup> Metric tons) (1)	Imports From Alaska as a Percent of Total --(Percent)-- (2)
1969	143.7	100.0
1970	901.7	100.0
1971	998.0	100.0
1972	1,026.2	92.2
1973	1,986.8	48.5
1974	3,218.5	30.4
1975	5,003.3	20.5
1976	5,791.9	16.5
1977	7,259.6	13.7
1978	11,172.6	8.3
1979	13,805.9	7.1
1980	16,841.4	5.1
1981	16,975.1	6.4

<sup>1</sup> This table was constructed by reconciling several different sources, listed below. There is no single available source providing all the information needed to construct this table, and the various sources used are not consistent with each other, although the differences among them are not large. Thus other methods of reconciliation might produce slightly different results. Details of the methods of reconciliation used are available upon request.

Source: Table 6.

Jeffrey Segal, "LNG Market: Pricing Structure in Disarray," Petroleum Economist, December 1981, p. 518.

Agency of Natural Resources and Energy, Ministry of International Trade and Industry, Tokyo, Japan, Energy in Japan: Facts and Figures, February 1980.

United Nations, Department of Economic and Social Affairs, World Energy Supplies 1950-1974, Statistical Papers, Series J, No. 19, 1976, Table 16, pp. 564-565.

Thus a delay in the approval of the proposed contract extension could quite possibly force the buyers to begin negotiations for other supplies.

From the standpoint of American participation in world trade, the proposed contract extension is not inconsistent with the public interest. Table 18, p. 43, shows that the United States has had a persistent balance of trade deficit for some years; the proposed LNG export will continue to contribute about \$300 million per year for five years to the "exports" column rather than exacerbate this problem.

Similarly, the United States has in recent years had a large bilateral trade deficit with Japan, as shown in Table 19, p. 44. This is not necessarily worrisome in economic terms, but it undoubtedly generates frictions between our two countries, threatening in the end to lead to a diminution of trade relations, to the detriment of both parties. Here again, \$300 million a year in the export column is helpful in maintaining some sort of balance. (At the 1979 import price of \$4,376<sup>18</sup> a car, it cancels out the equivalent of 69,000 Japanese cars imported annually to the United States.)

Finally, we reject the argument that reduction of American petroleum imports requires controls over energy exports. It is not true in general: we can see in Table 21, p. 46, that the volume of petroleum imports has decreased in the years 1979-1981 even as total exports of fossil fuels have increased. Nor is it true in this particular case: since there are no facilities for getting Cook Inlet gas to the lower 48 states, it can hardly be used there as a substitute for imported energy. Nor, in general, has it been a consistent feature of American energy policy; as shown in Table 20, p. 45, even when energy imports became onerous, the United States never went so far as to ban energy exports altogether.

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<sup>18</sup> U.S. Department of Commerce, Bureau of Census, U.S. Imports for Consumption and General Imports, 1979.

## U.S. EXPORTS, IMPORTS AND BALANCE OF TRADE

1972 - 1981

	<u>Exports</u>	<u>Imports</u>	<u>Balance of Trade</u>
	------(Millions of Dollars)-----		
	(1)	(2)	(1)-(2) (3)
1972	49,381	55,797	-6,416
1973	71,410	70,499	911
1974	98,306	103,649	-5,343
1975	107,088	98,041	9,047
1976	114,745	124,051	-9,306
1977	120,816	151,689	-30,873
1978	142,054	175,813	-33,759
1979	184,473	211,819	-27,346
1980	223,966	249,308	-25,342
1981 <sup>1</sup>	238,574	267,242	-28,668

<sup>1</sup> Total year figures projected using data for the first three quarters of 1981 and projecting the fourth quarter using the third to fourth quarter trend in 1980. The 1981 third quarter figure is preliminary.

Source: Economic Report of the President, February 1982, Table B-102, p. 348.

## U.S. BALANCE OF TRADE WITH JAPAN

1972 - 1981

	<u>Exports</u>	<u>Imports</u>	<u>Balance</u>
	----- (Millions of Dollars) -----		<u>of Trade</u>
	(1)	(2)	(3)
1972	4,963	9,076	-4,113
1973	8,356	9,665	-1,309
1974	10,724	12,414	-1,690
1975	9,567	11,257	-1,690
1976	10,196	15,531	-5,335
1977	10,566	18,565	-7,999
1978	12,960	24,541	-11,581
1979	17,629	26,261	-8,632
1980	20,806	31,217	-10,411
1981 <sup>1</sup>	22,056	36,547	-14,491

<sup>1</sup> Projected figures using first three quarters at annual rate.

Source: Economic Report of the President, February 1982, Table B-103, p. 349 and January 1979, Table B-99, p. 297.

## U.S. EXPORTS AND IMPORTS OF FUEL

1972 - 1981

	<u>Exports</u>	<u>Imports</u>	<u>Balance of Trade</u>
	------(Millions of Dollars)-----		
	(1)	(2)	(1)-(2) (3)
1972	1,552	4,799	-3,247
1973	1,670	8,174	-6,504
1974	3,444	25,454	-22,010
1975	4,470	26,476	-22,006
1976	4,226	34,000	-29,774
1977	4,184	44,537	-40,353
1978	3,881	42,096	-38,215
1979	5,620	59,998	-54,378
1980	7,982	79,058	-71,076
1981 <sup>1</sup>	10,270	82,603	-72,333

<sup>1</sup> 1981 totals include the Virgin Islands and are estimates based on data for eleven months.

## Source:

1972-1978: U.S. Department of Commerce, Bureau of Economic Analysis, Business Statistics, 1979, pp. 100 and 104.

1979-1980: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, December 1981, pp. S-19 and S-20.

1981: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, January 1982, pp. S-19 and S-20.

**U.S. EXPORTS AND IMPORTS OF FUEL BY FUEL TYPE  
1972 - 1981**

Year	Crude Oil		Petroleum Products		Natural Gas		Coal	
	Exports (1)	Imports (2)	Exports (3)	Imports (4)	Exports (5)	Imports (6)	Exports (7)	Imports (8)
1972	1	2,216	222	2,525	78	1,019	56,740	47
1973	2	3,244	229	3,012	77	1,033	53,587	127
1974	3	3,477	218	2,635	77	959	60,661	2,080
1975	6	4,105	204	1,951	73	953	66,309	940
1976	8	5,287	215	2,026	65	964	60,021	1,203
1977	50	6,594	193	2,193	56	1,011	54,312	1,647
1978	158	6,195	204	2,008	53	966	40,714	2,953
1979	235	6,452	236	1,937	56	1,253	66,042	2,059
1980	288	5,219	258	1,646	49	985	91,742	1,194
1981	231	4,157	357	1,570	50	868	112,826 <sup>1</sup>	991 <sup>1</sup>

<sup>1</sup> Estimates based on data for eleven months.

Source: U.S. Department of Energy, Monthly Energy Review, various issues.

With some exceptions, practical considerations of geography and appropriate use have been given greater weight than the narrower goal of hoarding American resources for American use. In the last few years, policies have grown still more liberal: coal exports have been encouraged and accordingly have risen from 60 million tons in 1976 to 113 million tons in 1981. (See Table 21, p. 46.) Similarly, restrictions on refined petroleum exports were lifted in 1981 by the Department of Commerce, which held that such restrictions were "no longer warranted";<sup>19</sup> the table shows that refined petroleum exports increased by 40 percent in 1981. In addition, a fair amount of energy is freely exported in the form of petrochemicals; Table 22, p. 48, shows exports of ammonia and its derivatives, which are made from natural gas. Exported nitrogen compounds represent about twice as much gas annually as is used by Phillips' and Marathon's export of LNG.<sup>20</sup>

In summary, we believe that the proposed export of LNG is not inconsistent with the U.S. policy of reducing dependence on foreign oil and that it would have a favorable effect on United States-Japanese trade relations and the United States balance of trade in general.

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<sup>19</sup> Federal Register, Vol. 46, No. 193, p. 49108.

<sup>20</sup> Estimated using 37.1 thousand cubic feet of gas per short ton of ammonia, as given in U.S. Department of Interior, Bureau of Mines Bulletin 671, Mineral Facts and Problems, 1980 edition, p. 636. Other compounds are assumed to use equivalent amounts of natural gas per nitrogen content. The United States also imports ammonia compounds roughly equal in terms of nitrogen content to its exports.



## U.S. EXPORTS OF MAJOR NITROGEN COMPOUNDS

1978 - 1979

Export	Gross Weight	Nitrogen Content	Gross Weight	Nitrogen Content
	(Thousands of Short Tons)			
	(1978)	(1978)	(1979)	(1979)
	(1)	(2)	(3)	(4)
<b>Industrial Chemicals</b>				
Ammonia, Aqua	3	2	2	2
Ammonium Nitrate	8	3	8	3
Ammonium Phosphates	45	8	13	2
Ammonium Sulfate	18	4	9	2
<b>Fertilizer Materials</b>				
Ammonium Nitrate	38	13	100	33
Diammonium Phosphates	4,331	780	4,438	799
Other Ammonium Phosphates	506	56	493	54
Ammonium Sulfate	807	169	1,034	217
Anhydrous Ammonia	525	432	788	647
Sodium Nitrate	34	5	62	10
Urea	1,514	696	1,503	691
Nitrogen Solutions	27	9	374	120
Other Nitrogen Fertilizers	163	33	42	8
Mixed Chemical Fertilizers	219	22	352	35
<b>Total</b>	<b>8,239</b>	<b>2,232</b>	<b>9,218</b>	<b>2,624</b>

Source: 1978-1979 Minerals Yearbook Volume I Metals and Minerals, United States Department of the Interior, Bureau of Mines, Washington, D.C.: U.S. Government Printing Office, 1980, p. 647.

#### IV. ALTERNATIVE USES FOR COOK INLET GAS IN THE 1990s

Since the gas reserves in Cook Inlet, even if they remain unused throughout the 1980s, can be used at a later date, it is possible to ask whether the 311 billion cubic feet proposed by Phillips and Marathon for export in the years 1984-1989 might not better be saved for some other use in subsequent decades. Accordingly, we have considered how these reserves might be used in the 1990s.<sup>21</sup> It is our opinion that the proposed extension of the LNG export contract will have no significant effect on Alaskan or national gas markets in the 1990s. To show why this is the case, we consider two alternative plausible scenarios for the development of Cook Inlet gas reserves in the 1990s. The first scenario assumes that there will be no new markets for these reserves in the 1990s; the second assumes that significant new markets will be developed.

##### A. No New Markets

It is quite possible that there will be no major new uses for Cook Inlet gas in the 1990s, and that the reserves will be used only for heating and electricity generation in Alaska and for the production of ammonia and urea in the existing chemical plant. If gas prices in the lower 48 states increase less than they are expected to, or if large new supplies of gas are discovered closer to lower 48 markets, Cook Inlet reserves could be as unmarketable there in the 1990s as they have been since their discovery.

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<sup>21</sup> We do not attempt to make any projections beyond the year 2000. Although projections could, in a mechanical sense, be carried forward indefinitely, their reliability becomes lower and lower with distance from the present time. The problem is compounded when we are dealing with small quantities, as in this case. While it might be fruitful (for example) to speculate about whether the United States will be able to make the transition away from fossil fuels by the mid-twenty-first century, it is meaningless to ask whether there will be a need for a particular 311 billion cubic feet of gas at that time.

Table 23, p. 51, shows the maximum demand for gas in the business-as-usual case for each year in the 1990s. We have assumed that the Tokyo contract will be terminated in 1989, that Collier will operate at full plant capacity through the year 2000, that the Anchorage region will continue to grow fairly rapidly, that gas will continue to be used as the main source of electricity, and that both gas and electric prices will continue to be stable in real terms at the retail level.

These estimates of demand are almost certainly much too large. Any real rise in energy prices would almost certainly curtail demand to a lower figure than that shown here. It is also doubtful that Collier will continue to operate at full capacity until the end of the century, since the reserves currently available to its parent company, Union Oil, will only supply the plant until 1993.<sup>22</sup>

However, even assuming, as we do here, that gas will continue to be available at low cost to all buyers as long as it lasts, we do not anticipate that presently proven reserves will run out before the end of the century. Proven reserves in the major fields, as shown in Table 24, p. 52, exceed the maximum cumulative demand through the year 2000.<sup>23</sup>

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<sup>22</sup> We have calculated the reserves available to Union as of January 1, 1982 as 120 billion cubic feet in Beaver Creek, 84 billion cubic feet in McArthur River, and 458 billion cubic feet in Kenai (including what will be returned from Swanson River in the 1990s). See Battelle Pacific Northwest Laboratories, Cook Inlet Natural Gas: Future Availability and Price Forecasts, Comment Draft Working Paper, No. 1.1, Preliminary, February 1981.

<sup>23</sup> If declining pressures should lower well production rates to such an extent that the demands identified in Table 23 cannot be met, this scenario might be altered somewhat. Substitution of other, more expensive fuels would have to begin earlier; on the other hand, since all the gas can be produced eventually, use of Cook Inlet reserves would go on for a longer time, and would hold down price increases for gas and electricity customers after 2000. Because of the favorable effects after 2000, this possibility does not appear to us to constitute an objection on policy grounds. More to the point, declining pressure is a problem independent of the LNG export continuation. Deliverability problems could not be postponed for very long by termination of the export contract in 1984.

**PROJECTED MAXIMUM LOCAL AND INDUSTRIAL DEMAND FOR GAS IN THE  
ALASKAN SOUTHERN RAILBELT**

**WITHOUT PACALASKA OR OTHER NEW MARKETS**

**1990 - 2000**

Uses of Gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total 1990-2000 <sup>1</sup>	Total 1992-2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7) (Bcf)	(8)	(9)	(10)	(11)	(12)	(13)
<b>LOCAL</b>													
Electric Utility Sales	40.3	42.2	44.2	46.2	48.5	50.7	53.7	54.0	57.1	60.0	62.4	559.2	857.2
Gas Utility Sales	28.5	30.1	31.0	33.6	35.6	37.0	39.5	41.6	43.7	46.1	48.4	416.5	601.3
Military Sales	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	55.0	95.0
Subtotal	73.8	77.3	81.0	84.8	89.1	93.3	97.2	101.5	105.8	111.1	115.8	1,030.7	1,553.5
<b>INDUSTRIAL</b>													
Collier Chemical	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	605.0	1,045.0
Miscellaneous <sup>1</sup>	7.8	8.0	8.2	8.3	8.8	8.8	8.8	8.8	8.8	8.8	8.8	93.9	135.0
Subtotal	62.8	63.0	63.2	63.3	63.8	63.8	63.8	63.8	63.8	63.8	63.8	698.9	1,666.6 <sup>2</sup>
<b>Total</b>	<b>136.6</b>	<b>140.3</b>	<b>144.2</b>	<b>148.1</b>	<b>152.9</b>	<b>157.1</b>	<b>161.0</b>	<b>165.3</b>	<b>169.6</b>	<b>174.9</b>	<b>179.6</b>	<b>1,729.6</b>	<b>3,220.1<sup>2</sup></b>

<sup>1</sup> Miscellaneous includes gas use from Fairbanks Intertie (1990-2000), the new state capital (1990-2000) and oil refinery use (1990-2000).

<sup>2</sup> Includes 487 Bcf used for Tokyo LNG sales (1992-1999).

**Sources:**

**Electric:** Electric Utility demand for gas was derived from NERA demand model projections of the yearly demand for electricity. From these projections was subtracted the 235 million kWh per year contribution of the Eklutna and Cooper Lake hydroelectric plants and (beginning in 1988) the 295 million kWh per year contribution of the Bradley Lake hydro project. From the resulting demand for gas-fired generation, annual growth rates were calculated and then multiplied by 0.9 to account for technological changes in generation. The resulting growth rates were used to calculate electric utility demand for gas with 28.763 Bcf as the 1990 base.

**Gas:** NERA Energy Demand Model.

**Military and Collier:** Assumptions.

**Miscellaneous:** The Fairbanks Intertie and new state capital gas use grows through 1994 and then levels off to 3.0 Bcf/year and 4.6 Bcf/year respectively. Oil refinery use is assumed to be 1.3 Bcf/year.

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TABLE 23

**PROJECTED AVAILABILITY AND PROJECTED MAXIMUM DEMAND FOR GAS  
IN THE COOK INLET REGION**

**WITHOUT PACALASKA OR OTHER NEW MARKETS**

**1982 - 2000**

	<u>(Bcf)</u>	<u>(Field)</u>
Proven Gas Reserves	1,109	Kenai
Available from Major Fields	950	North Cook Inlet
1982-2000	743	Beluga River
	240	Beaver Creek
	84	McArthur River
	<u>268</u>	Swanson River
	3,394	Total Gas Available
Maximum Cumulative Demand	857	Electric Utility Sales
for Gas 1982-2000	601	Gas Utility Sales
	95	Military Sales
	1,045	Collier Chemical
	487	Tokyo LNG
	<u>135</u>	Miscellaneous
	<u>3,220</u>	Total Gas Demanded
	174	Proven reserves not used 1982-2000

Source: Reserves Available: See Table 1.  
Maximum Demand: See Table 23.

In other words, continuation of the LNG export contract to 1989 is consistent with cheap and available gas in the Anchorage area until the end of the century if no new markets for Cook Inlet gas should develop.

B. Development of New Markets for Cook Inlet Gas

The maintenance of the status quo, however, would have its drawbacks. While we can be reasonably sure that proved Cook Inlet gas reserves will not be depleted soon if historic patterns of use prevail, we can be even more sure that they will be depleted eventually. Depletion may be 20 or 30 years into the future; but in the end it is inescapable.

The reason for this is quite simple. Exploration and development of gas fields is a risky, expensive business. It is only economically attractive if it can be done on a fairly large scale. Exploration for gas purely for the Alaskan market could never be profitable, because the potential sales are too low. A few dry wells would quickly exhaust all the capital anyone would be willing to risk in such a venture; a large find would not be much more helpful, since it would take decades to sell. The existing proved gas reserves in Cook Inlet were found as a by-product of oil exploration, but there is virtually no oil exploration in Cook Inlet today.<sup>24</sup> Thus there will be no additions to Cook Inlet gas reserves unless there is reasonable probability to believe that the gas will be marketable elsewhere. For this reason, we note that a policy of deliberately restricting the use of Cook Inlet gas in order to keep it available at low cost to Alaskans would, in the long run, be counterproductive.<sup>25</sup> Alaskans might be able to postpone

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<sup>24</sup> See State of Alaska, Alaska Oil and Gas Conservation Commission, February 1982, Bulletin, p. 7.

<sup>25</sup> While this is not now state policy, it has had its proponents in Alaska. For example, the Alaska Department of Revenue warned against the PacAlaska project on the grounds that it might raise gas prices for consumers in Southcentral Alaska ("A Social, Economic and Environmental Analysis of a State Oil and Gas Lease Sale in Upper Cook Inlet", prepared by the Governor's Agency Advisory Committee on Leasing, State of Alaska, January 1981, p. 17).

their hour of reckoning by such a policy, but, in effect, they would be guaranteeing that they would sooner or later run out of their local supplies of gas.

However, there is a good possibility that significant new demands for Cook Inlet gas will develop after 1990. The most likely new market is the lower 48 states; but, depending on price trends and the rate of new discoveries, there may also be new demand from Pacific Rim countries (Japan, Korea, Taiwan) for gas in LNG or petrochemical form.

The quantity of proven uncommitted reserves in Cook Inlet, while large in comparison with local needs, is not large enough to supply any major new market. As we have seen above, one of the reasons for the delay in PacAlaska's plans has been the failure to find sufficient reserves to justify construction of liquefaction, shipping and regasification facilities. If PacAlaska or any other major new development is to go forward, therefore, there must be new supplies of gas in the area as well as new demand.

But do these new supplies exist? The answer depends on the price. Supply estimates, like demand estimates, are not fixed quantities. Exploration and production are expensive; new gas will only be found and produced if it can be sold at a price that covers these costs. At today's low wellhead prices in Cook Inlet, we can be quite confident that the supply of new gas will be close to zero: these prices do not provide any incentive at all for exploration. At the much higher price (approximately \$2.00 per thousand cubic feet in 1981 dollars) that PacAlaska was prepared to pay, new drilling began in the mid-1970s and some additions were made to the reserve base. At a still higher price, smaller accumulations of gas would become economical to find and produce, and supplies would increase even more. Technological advances in exploration and production could, of course, increase reserves still further.

It is not possible, on the basis of available information, to construct a very accurate or detailed supply curve showing the quantity of Cook Inlet gas reserves that would be discovered and produced at any price. However, the United States Geological Survey has published estimates of recoverable resources in the area; their figures, while not explicitly related to price, implicitly assume prevailing technology and prices as a basis for judging what is recoverable. In discussing the United States Geological Survey figures, therefore, we will assume that they represent new supplies that would be forthcoming at about \$2.00 per thousand cubic feet (1981 dollars), a price that we know elicited a flurry of drilling activity.

The United States Geological Survey has estimated on the basis of general geologic knowledge of the area, as well as the information provided by all wells drilled there, that there is a 50 percent chance of finding at least 5.3 trillion cubic feet of nonassociated gas in the Cook Inlet area, in addition to whatever may exist in fields already discovered. There is a good chance of finding a great deal more than that, and a virtual certainty of finding at least 1.8 trillion cubic feet. (See Table 25, p. 56.) Thus, on the basis of these figures, it appears that there is a better than 50 percent probability that supply-side constraints will not inhibit the development of Cook Inlet gas resources.

Nor will the development of these resources be hampered by governmental restraints. Although nearly all the gas remaining to be discovered in the area lies beneath state and federal lands, the state and federal governments have an active, coordinated schedule of lease sales that should make the entire area available for exploration in the next few years. Recent and planned lease sales are shown in Table 26, p. 57.



**UNDISCOVERED NATURAL GAS RESOURCE ESTIMATES  
COOK INLET AREA**

	Associated			Nonassociated			Total		
	Low (95%) (1)	High (5%) (2)	Mean (3)	Low (95%) (4)	High (5%) (5)	Mean (6)	Low (95%) (7)	High (5%) (8)	Mean (9)
Offshore	negligible	0.6	0.2	0.7	4.6	2.0	0.7	5.2	2.2
Onshore	negligible	0.6	0.2	1.1	7.2	3.3	1.1	7.9	3.5
Total	negligible	1.2	0.4	1.8	11.8	5.3	1.8	13.0	5.7

Source: G. L. Dolton, et al., Estimates of Undiscovered Recoverable Resources of Conventionally Producing Oil and Gas in the United States, A Summary, U.S.G.S. Open-File Report 81-192, 1981.

## OIL AND GAS LEASE SALES IN COOK INLET

Title	Tracts Offered (1)	Bids Accepted (2)
<b>RECENT:</b>		
State Lease Sale No. 33 (Upper Cook Inlet)	202	103
State Lease Sale No. 32 (Cook Inlet south of Kenai River)	78	59
Federal Lease Sale No. 60	142	13

**SCHEDULED FOR THE NEAR FUTURE:**

1982 State Lease Sale No. 35-Lower Cook Inlet

1983 State Lease Sale No. 40-Upper Cook Inlet

**Source:**

**Recent Sales:** State of Alaska, Department of Natural Resources,  
Division of Minerals and Energy Management,  
State of Alaska, "Competitive Oil and Lease Sale  
Results."

**Planned Sales:** State of Alaska, Department of Natural Resources,  
Division of Minerals and Energy Management,  
State Five-Year Leasing Program, January 1981.

1. Impact of New Demands. In short, there will be new demands for Cook Inlet gas if it can be sold at low enough prices, there will be new supplies of Cook Inlet gas if it can be sold at high enough prices, and there is a significant possibility that the two sets of prices will overlap in the 1990s, bringing about further development of Cook Inlet reserves. The form this development would take is uncertain, however. In the remainder of this section we will consider PacAlaska as the "prototype" of a post-1990 development scenario simply because we have figures on this project.

Because more information is available about the economics of shipping LNG to California than about any other potential market for these reserves, we can illustrate Cook Inlet development in detail by using PacAlaska. However, even if PacAlaska itself does not materialize, development could take some other form. In this case, the general conclusions in this section concerning prices and availability of fuels for the local market should still apply, even if the new demand comes from Oregon or Korea instead of California.

There is a reasonable possibility that Cook Inlet gas will be marketable in California in the 1990s. PacAlaska LNG's own delivered price estimate, once Phases 1 and 2 of PacAlaska, as well as PacIndonesia, are fully operating, is \$4.09 per million Btu in 1978 dollars, or about \$5.50 in 1981 dollars,<sup>26</sup> while recent forecasts of lower 48 gas markets suggest that supplemental (or competing) sources of gas will command prices as high as \$6.25 in 1990 and \$7.50 in the year 2000 (in 1981 dollars).<sup>27</sup> Moreover, the California utilities expect to buy gas from nontraditional sources in the 1990s. They forecast annual requirements of supplemental gas to reach 726 billion cubic feet by 1990 and 864

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<sup>26</sup> Presiding Administrative Law Judge's Initial Decision, August 13, 1979, FERC, Docket No. CP 75-140

<sup>27</sup> NERA projections.

billion cubic feet by 1995, and estimate that potential supplies of supplemental gas could reach 1435 billion cubic feet in 1990 and 1380 billion cubic feet in 1995.<sup>28</sup> Whether PacAlaska gas is among those supplemental supplies actually used depends, of course, on how many of the other supplemental sources--some of them very speculative--will in fact materialize, and on their relative costs. But if all these various forecasts prove correct--or are not too far off--Cook Inlet gas could be competitive in California.

It is widely believed that PacAlaska would have an immediate and large effect on gas prices in Cook Inlet.<sup>29</sup> The two major local contracts, governing Chugach's purchases from the Beluga field and the Anchorage pipeline's purchases from the Kenai field, could be affected by PacAlaska or other higher-priced sales in the area. Additionally, once PacAlaska was underway, local buyers entering into new contracts with producers would have to compete with PacAlaska for new supplies.

We have attempted to calculate the impact of PacAlaska on the price and availability of fuel in the Cook Inlet region. If wellhead prices rise to the \$2.00 per thousand cubic feet that we have assumed necessary to elicit exploration (this is equivalent to what the State of Alaska is selling its royalty gas for today) retail gas and electric prices will rise sharply and the local demand for gas will decline. Table 27, p. 60, illustrates the demand for Cook Inlet gas in the event that PacAlaska begins in 1990. While local demand will be smaller than under the low price scenario, total demand will be much larger.

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<sup>28</sup> 1981 California Gas Report, prepared by instate utilities pursuant to CPUC Decision No. 62260, Case 5924.

<sup>29</sup> See, for example, Governor's Agency Advisory Committee on Leasing, "A Social, Economic and Environmental Analysis", p. 17; Battelle Pacific Northwest Laboratories, Cook Inlet Natural Gas, p. 4.3; and Gregg K. Erickson, "Natural Gas and Electric Power: Alternatives for the Railbelt," prepared for the Legislative Affairs Agency, Alaska State Legislature, March 1981, p. 38.

**PROJECTED LOCAL AND INDUSTRIAL DEMAND FOR GAS IN THE  
ALASKAN SOUTHERN RAILBELT**

**WITH PACALASKA**

**1990 - 2000**

Uses of Gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7) (Bcf)	(8)	(9)	(10)	(11)	(12) 1990-2000	(13) 1992-2000
<b>LOCAL</b>													
Electric Utility Sales	33.7	35.1	36.7	38.2	40.0	41.7	43.3	45.0	46.7	48.7	50.6	459.7	757.7
Gas Utility Sales	22.9	23.2	23.7	24.3	24.8	25.4	26.0	26.6	27.2	27.9	28.6	280.6	465.4
Military Sales	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	55.0	95.0
Subtotal	61.6	63.3	65.4	67.5	69.8	72.1	74.3	76.6	78.9	81.6	84.2	795.3	1,318.1
<b>INDUSTRIAL</b>													
Collier Chemical	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	605.0	1,045.0
Miscellaneous <sup>1</sup>	7.8	8.0	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	83.9	135.0
PacAlaska	84.5	173.0	174.7	174.7	174.7	174.7	174.7	174.7	174.7	174.7	174.7	1,829.8	1,829.8
Subtotal	147.3	236.0	237.9	238.0	238.5	238.5	238.5	238.5	238.5	238.5	238.5	2,528.7	3,496.4 <sup>2</sup>
<b>Total</b>	<b>208.9</b>	<b>299.3</b>	<b>303.3</b>	<b>305.5</b>	<b>308.3</b>	<b>310.6</b>	<b>312.8</b>	<b>315.1</b>	<b>317.4</b>	<b>320.1</b>	<b>322.7</b>	<b>3,324.0</b>	<b>4,814.5<sup>2</sup></b>

<sup>1</sup> Miscellaneous includes gas use from Fairbanks Intertie (1990-2000), the new state capital (1990-2000) and oil refinery use (1990-2000).

<sup>2</sup> Includes 486.6 Bcf used for Tokyo LNG sales (1992-1999).

**Sources:**

**Electric:** Electric Utility demand for gas was derived from NERA demand model projections of the yearly demand for electricity. From these projections was subtracted the 235 million kWh per year contribution of the Eklutna and Cooper Lake hydroelectric plants and (beginning in 1988) the 295 million kWh per year contribution of the Bradley Lake hydro project. From the resulting demand for gas-fired generation, annual growth rates were calculated and then multiplied by 0.9 to account for technological changes in generation. The resulting growth rates were used to calculate electric utility demand for gas with 28.763 Bcf as the 1989 base.

**Gas:** NERA Energy Demand Model.

**Military and Collier:** Assumptions.

**Miscellaneous:** The Fairbanks Intertie and new state capital gas use grows through 1994 and then levels off to 3.0 Bcf/year and 4.6 Bcf/year respectively. Oil refinery use is assumed to be 1.2 Bcf/year.

Despite this larger demand, PacAlaska would not cause serious problems of gas availability in Cook Inlet. Table 28, p. 62, summarizes available resources and maximum demand in this scenario. Because the project does not now have enough dedicated reserves to go forward, PacAlaska will most likely have to depend on the discovery of more reserves in the state lands recently leased for drilling (see Table 26, p. 57). It is noteworthy that the new lease sales were offered with flexible royalty payments, i.e., the royalty share as well as the bonus payment was open to bidding. Since much of the area is quite speculative, the lease sales resulted in low bonus payments and high royalties--an average of 33 percent, compared to the standard royalty share of 12.5 percent. (See Table 29, p. 63 and Table 30, p. 64). This means that PacAlaska could, over its 20-year life cause more gas to be made available for local use than it withdraws from local use by its contract with the Beluga River producers. Table 28, p. 62, reflects the amount of royalty gas PacAlaska would make available for use in the state in the years 1990-2000 if it operates at its scheduled rates during those years and if one-third of the production from new fields, or royalty gas, is taken in kind for local use.

Of course, state royalty gas might not even be necessary to meet local needs. The local gas and electric utilities will also be able to bid directly for gas from new discoveries; if more is found than PacAlaska wants to buy, they can enter the market themselves instead of depending on the state royalty share for their supplies.

2. Alternative Energy Supplies. Our discussion so far has focused on the availability of Cook Inlet gas to serve nontransportation energy needs in southcentral Alaska.

**PROJECTED AVAILABILITY AND DEMAND FOR GAS  
IN THE COOK INLET REGION**

**WITH PACALASKA**

**1982 - 2000**

	<u>(Bcf)</u>	<u>(Field)</u>
Proven Gas Reserves	276	Beluga (dedicated to Chugach)
Available from Major Fields	1,830 <sup>1</sup>	Beluga (and other PacAlaska reserves available 1990-2000)
1982-2000	1,109	Kenai
	950	North Cook Inlet
	240	Beaver Creek
	84	McArthur River
	268	Swanson River
	<u>606<sup>1</sup></u>	Royalties
	5,363	Total Gas Available
Maximum Cumulative Demand for Gas 1982-2000	1,830 <sup>1</sup>	PacAlaska
	758	Electric Utility Sales
	465	Gas Utility Sales
	95	Military Sales
	1,045	Collier Chemical
	487	Tokyo LNG
	<u>135</u>	Miscellaneous
	<u>4,815</u>	Total Gas Demanded
	548	Proven reserves not used 1982-2000

<sup>1</sup> PacAlaska Demand/Reserves are calculated by taking the amount needed in California for ten-and-one-half years of the project and multiplying it by 1.2 to adjust for plant fuel and shipping. Royalties are 1,830 Bcf minus the ten-and-one-half year share of currently committed proven and probable reserves, (633 Bcf), multiplied by 0.5 to reflect the 33 percent royalty share on new gas, plus the small royalty on the 633 Bcf already committed.

Source: Reserves Available: See Tables 1 and 11.  
Maximum Demanded: See Table 27.

**COMPETTIVE OIL AND GAS LEASE SALE NO. 32  
DISTRIBUTION OF ROYALTY BIDS  
LOWER COOK INLET**

	<u>Number of Tracts</u>	<u>Average Royalty Bid (Percent)</u>	<u>Estimated Mean Gas Find -----</u>	<u>Estimated Royalty Gas Available -----</u>
	(1)	(2)	(3)	(2)x(3) (4)
<b>Royalty Bid Range:</b>				
21-25%	10			
26-30%	17			
31-40%	21			
41-50%	7			
51-60%	4			
		33.5	1.6	.54

**Source:**

Cols. 1 and 2: Department of Natural Resources, Division of Minerals and Energy Management, State of Alaska, "Competitive Oil and Lease Sale No. 32 Results."

Col. 3: The Division of Community Planning, Department of Community and Regional Affairs, State of Alaska, Offshore Oil Developments in Lower Cook Inlet, Implications for the Kenai Peninsula, June 1978.



**COMPETTIVE OIL AND GAS LEASE SALE NO. 33  
DISTRIBUTION OF ROYALTY BIDS  
UPPER COOK INLET**

	<u>Number of Tracts</u>	<u>Average Royalty Bid (Percent)</u>	<u>Estimated Mean Gas Find ----- (Tcf) -----</u>	<u>Estimated Royalty Gas Available (2)x(3) (4)</u>
	(1)	(2)	(3)	(4)
<b>Royalty Bid Range:</b>				
21-25%	30			
26-30%	25			
31-40%	29			
41-50%	8			
51-60%	7			
61-70%	4			
		33.0	.75	.25

**Source:**

**Cols. 1 and 2:** Department of Natural Resources, Division of Minerals and Energy Management, State of Alaska, "Competitive Oil and Lease Sale No. 33 Results."

**Col. 3:** The Governor's Agency Advisory Committee on Leasing, State of Alaska, A Social Economic and Environmental Analysis of a State Oil and Gas Lease Sale in Upper Cook Inlet.

These gas reserves have been the region's mainstay in meeting its energy demand for two decades and, as we have shown, there is no reason to believe that they cannot continue in this role for another two decades--or longer, if more gas is discovered. But this focus obscures an important fact: the region will no longer be dependent on Cook Inlet gas in the 1990s.

Alaskan energy resources are vast. They have the potential to supply hundreds of times more energy than the local population can consume. As these resources begin to be developed more fully, they will become available to local markets at reasonable prices and may well become preferable, in economic terms, to Cook Inlet gas in the 1990s. We will examine the three most immediately promising energy sources--coal, hydropower, and gas from the North Slope--in detail. The state has still more energy resources--geothermal, windpower, and peat, for example--that may prove economical in the next century, but they are not likely to be available on a large scale in the foreseeable future.

#### Alaskan Coal Resources

Data on the coal resources accessible to the Anchorage area are summarized in Table 31, p. 66 and Table 32, p. 67. The terms "measured," "indicated" and "inferred" are the standard categories used for the estimation of all mineral resources other than oil and gas, and reflect the extent of the information on which the figures are based.<sup>30</sup> Measured reserves should not be taken as the equivalent of proved reserves of hydrocarbons. Although they are subject to error, like all reserve estimates (in this instance 20 percent, by definition), they represent a minimum. The resources in the other categories do not involve discovery probabilities.

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<sup>30</sup> These are: observations at maximum spacings of 0.5 mile, 1.5 miles and 6.0 miles, respectively.

**COAL RESOURCE ESTIMATES—RAILBELT**

Field	Resources				Total in Seams 10' Thick	Rank
	Total	Measured	Indicated (Million tons)	Inferred		
	(1)	(2)	(3)	(4)	(5)	(6)
Matanuska	137.0	6.6	52.4	78.0	115.5	Bituminous
Nenana	6,938.2	861.6	2,700.0	3,376.6	5,848.2	Subbituminous
Jarvis Creek	76.5	0.0	5.9	70.6	0.0	Subbituminous
Broad Pass	63.9	0.0	0.6	63.3	0.0	Subbituminous-Lignite
Susitna (Includes Beluga)	2,394.7	0.0	2,394.7	0.0	2,235.5	Subbituminous-Lignite
Kenai	318.2	0.0	318.2	0.0	0.0	Subbituminous-Lignite
<b>Total</b>	<b>9,928.5</b>	<b>868.2</b>	<b>5,471.8</b>	<b>3,588.5</b>	<b>8,199.2</b>	

<sup>1</sup> Represents total resources in seams 42" thick.

Source: F. F. Barnes, Coal Resources of Alaska, U.S. Geological Survey Bulletin 1242-B, 1967, Table 4, p. B11; Table 5, pp. B12-B13.

## COAL RESOURCE ESTIMATES—RAILBELT

Field	Resources		
	Measured	Indicated & Inferred (million tons)	Hypothetical
	(1)	(2)	(3)
Matanuska	6.6	108-130	149
Nenana	861.6	6	8,700
Jarvis Creek	—	13-76	—
Broad Pass	—	64	—
Susitna (includes Beluga)	275.0	2,700-10,200	27,000
Kenai (Onshore)	0.2	318	34,000
Kenai (Offshore)	—	—	100,000

Source: D. L. McGee and K. S. Emmel, Alaska Coal Resources, State of Alaska, Department of Natural Resources, Division of Geological and Geophysical Surveys, April 1979, Figure 2.

Rather, the coal is known to exist; it is just that not enough information is available to give the estimates the greater certainty inherent in the measured figures. Even the hypothetical figures given on Table 32, p. 67, can be viewed with more confidence than the undiscovered resource estimates for gas.

But all this is really academic. Whatever the actual quantity of the Railbelt coal resources may be, it is clear beyond doubt that they dwarf the current and projected energy needs of southcentral Alaska. For example, the measured coal resources of Nenana and Susitna equal in energy content about 15-25 trillion cubic feet of gas, far exceeding the most optimistic outlook for all Cook Inlet gas. If no gas (or oil) were available, southcentral Alaska could supply all its energy needs from indigenous coal resources. The fact that this is true in purely physical terms, however, does not imply that it is economically feasible. Thus we must consider the likely price of coal in the 1990s as well as its presence in the ground.

The Nenana and Susitna fields are the only two fields in which production either exists or is proposed on a commercial basis. Alaska's only operating coal mine, the Usibelli mine at Healy, supplies coal for power generation in the Fairbanks area. Through its connection with the Alaska Railroad it could just as easily supply the Anchorage area. It is thus especially significant that there is a currently pending project to ship coal from the Usibelli mine to Seward, on the southern coast, for export to Korea. If the financing can be worked out, shipments are scheduled to start in the fall of this year, growing to at least 800,000 metric tons per year by 1984 and 2.5 million tons by 1986.<sup>31</sup>

Although there has not yet been any commercial production from the Susitna field, there are several proposals to develop its Beluga section, on the

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<sup>31</sup> Anchorage Times, December 22, 1981; Alaska Journal of Commerce, February 15, 1982.

northwestern side of Cook Inlet. The Diamond Alaska Coal Company has a three-year, \$25 million predevelopment study underway to investigate the possibility of beginning mining operations later in the 1980s, perhaps as early as 1986.<sup>32</sup> Placer-Amex has investigated the feasibility of converting the coal on its Beluga leases to methanol and shipping the product by tanker. This would overcome the disadvantages of the high ash and moisture content of Beluga coal. In October 1981 some 1,200 tons of Placer-Amex coal was shipped to Japan for testing in power plant boilers.<sup>33</sup> Amax and Mobil also hold leases in the northern portion of the Beluga field (sometimes called the Yentna field), but they have not yet formulated any specific projects.

A large economic hurdle to be overcome in any Beluga coal operation is the need for establishing a complete infrastructure. There are no facilities of any sort, including roads (the test shipment to Japan was helicoptered out); the only population is in the small village of Tyonek on the shore of Cook Inlet. Thus the investment in any project must include the construction of roads, housing and all utilities as well as the normal investment in production facilities, plus transportation and dock facilities for moving the coal to the shipping point and loading it aboard ship. The Placer-Amex methanol project envisions injecting the methanol into the oil pipeline at Granite Point, a few miles southwest of Tyonek, where oil from the offshore platforms in Cook Inlet is collected, and piping it 42 miles down the coast to the Drift River Terminal, where it is piped aboard tankers. (Declining oil production in future years will provide capacity

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<sup>32</sup> Alaska, January 1982, p. 35

<sup>33</sup> Anchorage Times, October 10, 1981

for methanol movement.) The total cost of the methanol project has been estimated at \$2.3 billion (1981 dollars).<sup>34</sup>

A study of the markets for Beluga coal undertaken for the State of Alaska in 1980 concluded that development of Beluga coal production for export was "highly probable between 1980 and 1985." In an analysis of the delivered cost of Beluga coal in Japan versus that of competing coals, as projected to 1985, the study found a clear advantage of Beluga coal over coal from the western states, a possible cost advantage over Canadian coal, and a probable cost disadvantage versus Australian and South African coals. Nonmarket factors such as reliability, however, might well offset any direct cost disadvantage.<sup>35</sup>

Thus, the development of the Beluga field is still in doubt. On the one hand is the low quality of the Beluga coal and the need for investment in infrastructure in addition to mine development. On the other hand is the new willingness of some companies to make such investment and the evident interest of potential Far Eastern importers. Whether or not Alaskan coal exports begin in the 1980s, there is a high probability of such exports in the 1990s. One or more of the importing countries will want to diversify its sources, and will consider importing Alaskan coal even if it costs somewhat more than coal from other suppliers.<sup>36</sup>

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<sup>34</sup> Cook Inlet Region, Inc. and Placer-Amex, Inc., Coal to Methanol Feasibility Study, Beluga Methanol Project, Final Report, Executive Review, September 1981, p. 2.

<sup>35</sup> W. H. Swift, et al., Beluga Coal Market Study (Battelle Pacific Northwest Laboratories), December 1980, Table 9.2, p. 9-4 and passim.

<sup>36</sup> In addition to the Korean and Japanese interest, representatives of the Taiwan Power Company have stated they will eventually be buying either Nenana or Beluga coal some time after 1985, at which time their import needs will be 8 million tons a year (Anchorage Times, August 27, 1981).

All of this is of direct significance to the question of satisfying local Alaskan needs for energy. The prospect of multifold expansion of Railbelt coal production<sup>37</sup> brings with it economies of scale and the possibility that the relatively small local needs could be supplied at something closer to marginal cost than to average cost. For the Nenana coal there will be similar scale effects in transport costs as well. Moreover, the existence of coal production in the Beluga field would make feasible the conversion of the Beluga River power station, located close to the coal leases, from its present natural gas fuel to mine-mouth coal. A flourishing local coal export industry means, in other words, that the Anchorage area would have a practical alternative to Cook Inlet gas in the 1990s. It would not simply be turning to potential resources but to an existing industry.

#### Alaska's Hydroelectric Resources and the Electricity System

Alaska also has substantial hydropower resources. To see how this source of supply might augment energy reserves beyond 1990, it is helpful to review the entire Railbelt electricity system, including both the Anchorage and Fairbanks areas. Existing generating capacity in the Railbelt is 1,064.8 megawatts, of which 64 percent is gas turbine, 21 percent steam, 9 percent diesel and 6 percent hydro. The distribution by generation mode reflects the distribution of population and activity in the Railbelt. The Anchorage area relies largely on gas-fired plants and the Fairbanks area relies largely on coal-fired plants; the isolated communities are served by diesels. The facilities are concentrated in the two urban areas, with interconnections among the individual utilities and military installations in each of the areas. The Anchorage

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<sup>37</sup> A recent forecast of Alaskan coal production is for 34.3 million tons in 1990 and 473 million tons by 1995. These figures are based on current producer plans. (Journal of Commerce, January 6, 1982.)



concentration connects the Kenai Peninsula, the north shore of Cook Inlet, and the lower Matanuska Valley. The Fairbanks concentration connects the Nenana River Valley to the southwest with North Pole and Fort Greeley to the southeast. There is no connection, however, between the two urban areas or with the communities along the upper Susitna River.<sup>38</sup>

In 1981 the Alaska state legislature took the first steps toward a radical alteration of this system. They proposed, first, to construct enough hydropower capacity on the Susitna River (the Watana and Devil's Canyon Dams, shown in Table 33, p. 73) to take care of all Railbelt power needs,<sup>39</sup> and, second, through the construction of a high voltage intertie between Anchorage and Fairbanks, to link all portions of the Railbelt in an electric grid.<sup>40</sup>

If the Susitna project is built and the delivered cost of electricity at the load centers--or at least the pricing of the electricity--were competitive with locally generated power at thermal stations, not only would no more thermal plants be built, but much, if not all, of the existing thermal capacity in the Railbelt would be retired. Gas requirements for generation would thus decline substantially.<sup>41</sup>

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<sup>38</sup> For a fuller description see U. S. Department of Energy, Alaska Power Administration, Alaska Electric Power Statistics 1960-80, August 1981.

<sup>39</sup> When completed, the project would generate 6.1 billion kWh annually on a firm basis, year-round. Another 0.8 billion kWh would be available as "secondary" power during peak streamflow. This compares with projected Railbelt power needs in the year 2000 of 5.021 to 7.056 billion kWh. (Scott Goldsmith and Lee Huskey, Electric Power Consumption for the Railbelt, Institute of Social, Economic and Government Research, June 1980.)

<sup>40</sup> The Alaska Power Authority-Corps of Engineers report on the Susitna project specifies 2-230 kV lines Between the two dams (30 miles), 2-345 kV lines from Devil Canyon to Anchorage (135 miles) and 2-230kV lines from Devil Canyon to Fairbanks (198 miles). The legislation, on the other hand, specifies only a "345 kV...system connecting Anchorage and Fairbanks" and implies a route north from the eastward bend of the Susitna River on to the Nenana River, thence eastward to Fairbanks.

<sup>41</sup> The same point is made in the State of Alaska Long Term Energy Plan, 1982 Report, Preliminary Draft, February 1982, p. I-9.

## AVAILABLE HYDROPOWER POTENTIAL OF ALASKAN RAILBELT

<u>Project</u>	<u>Capacity</u> (MW) (1)	<u>Annual</u> <u>Generation</u> (MWh) (2)
Watana	792	3,480,000
Devil's Canyon	776	3,410,000
Bradley Lake	94	410,000
Chakachamna Lake	366	1,600,000
Coffee	37	160,000
Beluga Upper	48	210,000
Chulitna Jurrricane	34	166,000
Keetna	74	324,000
Skwentna (Hayes)	98	490,000
Takeetna 2	90	406,446
Yentna	<u>219</u>	<u>960,000</u>
Total	2,628	11,616,446

Source: U.S. Corps of Engineers, National Power Study (in press).

The Susitna project would take 15 years to complete; hence, if it were to go forward without delay its full capacity would be available in the late 1990s and some generation could probably occur several years earlier. At this time, however, despite the legislative blessing, there is no certainty that the project will be carried forward. There is still opposition to committing the State to the enormous capital burden it will entail, given the possibility of State budget deficits even without it. The State is due to make its final decision this spring, and construction must also be approved by FERC.<sup>42</sup> Hydropower thus remains only a potential rather than actual alternative to thermally generated power in the Railbelt.

#### Prudhoe Bay Natural Gas

Known reserves of natural gas in the Prudhoe Bay region amount to 29 trillion cubic feet, again substantially in excess of the most optimistic outlook for natural gas in the Cook Inlet area. Under present plans, Prudhoe Bay gas will be marketed in the lower 48 states by means of a pipeline through Canada built for that purpose, the "Alaska Natural Gas Transportation System" (ANGTS). If ANGTS is completed, annual throughput is expected to be about 800 billion cubic feet. Alaska's royalty share would amount to 12.5 percent or about 100 billion cubic feet per year. The economics of the ANGTS project dictate strongly that the maximum amount of Btu be transported to the lower 48. The pipeline has an essentially fixed-cost characteristic. Therefore, any program that would substantially reduce the number of Btu passing through ANGTS below those now presently planned would significantly increase the cost of delivery per million Btu over ANGTS. Nevertheless, if market conditions warrant it seems likely

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<sup>42</sup> Information by telephone conversation with Alaska officials, January 1982.

that Alaska could withhold some part of its royalty share at Fairbanks, where the pipeline will turn east toward Canada. The gas could be used there to support electricity generation; Anchorage could receive some of this power through the intertie. While small by the overall standards of the ANGTS project, the amount of gas diverted would doubtless make a major contribution to available energy resources of Alaskans.

Construction of ANGTS is, however, by no means assured. Despite facilitating legislation passed in 1976 and amended, at the builders' behest, in 1981, there are still no firm plans to proceed. Time is probably against it: the longer the delay in overcoming financial and political obstacles, the less likely it is to be built. This is not to suggest that for present purposes, we should assume the failure of the ANGTS project. But if ANGTS does not materialize some alternative uses of Prudhoe Bay gas might be considered. For example, the gas could be brought to southern Alaska for liquefaction or conversion to methanol, or to supply local petrochemical plants. If this were to occur, it would mean that some of the gas would be available to supply local needs in the Railbelt. To be sure, the high costs of pipeline transportation and the resulting low netback price at the wellhead at Prudhoe Bay makes the likelihood of such a development remote. But conditions a decade hence could well be very different from those of today and the potential of ANGTS, in whatever guise, provides yet another alternative energy source for southern Alaska.

Costs of Alternative Energy Resources. It is not possible or even necessary to make very precise cost comparisons between Cook Inlet gas and the alternative energy resources, particularly coal and hydropower, for the period 1990 to 2000. Such comparisons depend crucially on future prices for Cook Inlet gas. These in turn will depend upon developments in world oil and gas markets as well as state energy policy concerning royalty gas and hydropower development.

It is clear, however, that these resources put an upper limit on Cook Inlet gas prices in local markets. This is so for two reasons. First, coal and hydro reserves can easily substitute for a major component of current gas consumption, namely, electricity generation. Second, cost information that is available appears to suggest that incremental costs of generation from these alternative resources would be well within the range of anticipated generation costs for the lower 48.

The most recent published estimates of the cost of Beluga coal all date from 1979 and 1980. Not surprisingly, there is a wide range in the estimates, reflecting different assumptions of the scale of operations and the different quality of coal on the various leases. An estimate as of December 1979 for the Chuitna River leases gives a range of \$0.80 to \$1.70 per million Btu.<sup>43</sup> A Department of Energy study of coal from the Beluga-Chuitna District gives a range of \$1.70 to \$1.93 per million Btu.<sup>44</sup> And a study done for the state gives a range of \$1.25 to \$1.50 per million Btu as the cost of coal from Capps Area.<sup>45</sup>

The cost of coal from the Usibelli mine at Healy in late 1978 was \$0.80 per million Btu, and the delivered cost at the Fairbanks municipal power

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<sup>43</sup> Bechtel Corporation, Executive Summary: Preliminary Feasibility Study Coal Export Program, Bass-Hunt-Wilson Coal Leases, Chuitna River Field, Alaska, San Francisco, California, 1980. (One million Btu is equivalent to the heat content of 1,000 cubic feet of natural gas; thus the Btu price is equivalent to the price of gas per thousand cubic feet.)

<sup>44</sup> U.S. Department of Energy, Transportation and Market Analysis of Alaska Coal (Draft), Region X Office, Seattle, Washington, 1980.

<sup>45</sup> W. H. Swift, et al., Beluga Coal Market Study, Battelle Pacific Northwest Laboratories, December 1980.

plant was \$1.15 per million Btu.<sup>46</sup> In 1979 a study by the Alaska Power Authority assumed a range of \$1.00 to \$1.50 per million Btu as the cost of coal at the mine at both Healy and the Beluga field under mid-1980 conditions.<sup>47</sup>

According to the Army Corps of Engineers, electricity generated from this coal in the Railbelt, assuming two 220-megawatt units per plant, would cost 5.9 cents per kilowatt-hour with \$1.00 per million Btu coal and 6.4 cents per kilowatt-hour with \$1.50 per million Btu coal (in both instances including 4 mills for transmission). Assuming two 500-megawatt units, the costs would be 5.21 cents per kilowatt-hour and 5.71 cents per kilowatt-hour, respectively, including 3 mills for transmission.<sup>48</sup> All of these costs are in 1979 dollars. This compares with a delivered cost of about 5 cents per kilowatt-hour (1979 dollars) from world-price Cook Inlet gas.<sup>49</sup>

The separate legislative authorization and appropriation for the Anchorage-Fairbanks intertie suggest that it will probably be built whether or not the Susitna project is built. Without Susitna, the power needs of the Railbelt

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<sup>46</sup> Corps of Engineers, Supplemental Feasibility Report, Vol. 3, p. 134.

<sup>47</sup> Idem.

<sup>48</sup> Ibid., p. 136.

<sup>49</sup> A recent study (Alaska Power Authority, Susitna Hydroelectric Project Summary Report, March 1982) assumes that the cost of coal-fired generation would inexorably rise: "The installation of thermal (coal- or gas-fired) plants to meet the demand would offer the consumer no protection against rising costs, since fuel prices will continue to be exposed to inflation and to extraordinary escalation occasioned by world market conditions." (Page 5; see also page 9.) We disagree with this assessment. Even if world oil prices increase in the future at a rate faster than inflation, which is itself debatable as a likelihood, there is no reason why this should raise the price of Alaskan coal. If coal is available for local power generation on a larger scale than at present, it will be because of projects developed for the export market, in which Alaskan coal must meet the competition from all other supply sources, namely, Canada, Australia, South Africa and the lower 48.

would continue to be served with thermal generation. If this were coal-based, the Corps calculates in its Susitna report that Anchorage generation would have an 8-mill cost advantage over Fairbanks generation. This would make possible the interchange of energy from Anchorage during the off-peak months, thus constituting an additional stimulus for coal-fired capacity.<sup>50</sup>

Based on 1978 cost data, and assuming "stable prices and medium load growth," the Corps estimates average system power rates for the Susitna project as 5.5 cents per kilowatt-hour in Anchorage and 6.7 cents per kilowatt-hour in Fairbanks.<sup>51</sup> More recent estimates place the cost of a highly utilized baseload facility at 8 cents per kilowatt hour or more. This appears to exceed the costs of thermal generation, but it is not so far out of the range as to be implausible.

State royalty gas from the ANGTS line would also be an expensive fuel. As a matter of economic policy, the trade-off between state developed hydropower and gas-fired generation must be made based on the opportunity cost of using the gas resources. Practically speaking, this means the state must consider how coal-fired or hydropower costs compare with the price it could get selling its royalty gas in a lower 48 or world market. It cannot look only at a local price based on contracts which no longer reflect market realities. For to do so would advantage--literally subsidize--limited numbers of Alaskan electricity and gas consumers in the Railbelt region at the expense of all Alaskans. The State of Alaska is well aware that the interest of Alaskans as royalty owners outweighs the interests of local gas consumers. Governor

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<sup>50</sup> Corps of Engineers, Supplemental Feasibility Report, Vol. 1, p. 426.

<sup>51</sup> Ibid., Vol. 3, p. 12.

Hammond, for example, was recently quoted as saying that "our constitution makes it very clear that the state must obtain fair market value for its natural resources."<sup>52</sup>

In summary, given the current interest of Far Eastern importers in the establishment of an export trade in Alaskan coal and the large investments being made in the development of Beluga coal, it is highly probable that in the 1990s there will be a flourishing export trade in coal from both sources. Thus coal will be available for local use. And if Cook Inlet gas at that time is selling at a price for local use that reflects substantial additional international demand and, consequently, international prices, the two fuels should be competitive in the Railbelt market in terms of their energy cost.

This means that thermal power generation could shift to coal, in the absence of hydropower. The availability of power from the Susitna project could well eliminate the need for any thermal generating capacity. On the other hand, if Susitna does not go through and the Anchorage-Fairbanks intertie is constructed, Beluga coal could end up as the dominant basis for power generation in the Railbelt.

Taking everything into account, there are no grounds for fearing that the extension of the contract for the export of Cook Inlet gas to Japan would deprive southcentral Alaska of a fuel supply in the 1990s. True, that supply will cost more than the gas now being consumed there, but today's gas price is an anachronism. No additional gas reserves are likely to be forthcoming at that price; thus it cannot be said that continued export of gas to Japan would be directly responsible for increased energy costs in the Railbelt.

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<sup>52</sup> Anchorage Times, November 25, 1981.



V. CONCLUSION

Phillips' and Marathon's proposed continued export of LNG from Southern Alaska to Japan in the years 1984-1989 is not inconsistent with the public interest. During the period of the proposed extension itself, there are no competing markets for the gas reserves they propose to dedicate to the LNG contract: proven reserves in the area are more than sufficient to supply local needs, and no facilities exist to transport gas from Cook Inlet to the lower 48 states. Therefore, the continuation of the export will have no effect on the price or availability of gas in Alaska or the lower 48 states.

Neither will the proposed continuation divert gas from more appropriate uses in the 1990s. There are sufficient proven reserves to meet local needs at least through the year 2000, and substantial new discoveries will be required in any case if Cook Inlet gas is to be marketed in the lower 48 states. In addition, other energy resources in Alaska--coal, hydropower, and North Slope gas--are vastly greater than local demand, and coal, at least, may well be competitive with Cook Inlet gas if the price of that gas reflects its value in lower 48 and Japanese markets.

Finally, the continued export will be helpful in view of the chronic United States trade deficit, and is consistent with other United States trade policies.

## TECHNICAL NOTE: DEMAND FORECASTING MODEL

The demand for natural gas by gas utilities and by electric utilities was either taken directly or derived from NERA's service area gas and electricity demand model, NERAGEM. NERAGEM is an econometric-based demand model disaggregated by major energy consuming sectors. In these projections only the residential and commercial sections of the model were used.

Residential sector forecasts are based on several interrelated submodels which focus on different aspects of residential energy demand. The submodels include saturation models for the major household electric- and gas-fired appliances (space and water heaters, cooking ranges and clothes dryers). In addition, there is a model for the usage of appliances that are exclusively electric.

Demand for electricity and gas by the commercial sector is forecast in NERAGEM on the basis of a behavioral relationship estimated using historical data. Commercial fuel consumption per dollar of real income earned in the commercial sector is modeled as a function of fuel prices, household income, the composition of commercial activity and a number of regional characteristics. Commercial sector electricity and gas demand in each year is computed as the product of consumption per dollar of income and the projected level of commercial sector income.

The major independent variables for NERAGEM are the number of households, real income per household, population, gas prices, electric prices and petroleum prices. Growth rates for five-year intervals from 1980 to 2000 for each of these variables appear in Table A-1.

NERAGEM was run with two sets of assumptions about gas and electric prices for the Alaskan Southern Railbelt. In the first scenario, which assumed that neither PacAlaska nor any other major new source of demand for Cook Inlet gas materialized, prices were assumed to be constant, in real terms, from 1980 to 2000. Actual 1980 prices (in 1978 dollars) were used. These prices are shown in Table A-2.

In the second scenario, PacAlaska was assumed to go through. Prices were again held constant until 1990 when, it was assumed, wellhead prices would jump to \$1.50 in 1978 dollars. Wellhead prices would then increase 2 percent each year as per NERA projections for the 1990s. The residential and commercial prices were computed by adding the non-wellhead costs (1980 retail prices minus 1980 wellhead price in 1978 dollars) to the wellhead price in each year. The resulting prices are in Table A-3.

Electric prices in the second scenario reflected the increased gas prices. They remained constant in real terms through 1989, and then, beginning in 1990, increased by a fraction of the increase in gas prices. This fraction was defined as the total cost of gas to the electric utilities divided by the total cost to the utilities of all electric generation. The resulting prices are summarized in Table A-3.

The demand projections based on NERAGEM are compared in Tables A-4, A-5, and A-6 with other published projections of energy demand in southern Alaska.

SOURCES OF DATA INPUT FOR NERAGEM  
ALASKAN SOUTHERN RAILBELT

Alaska Power Authority, Telephone interview, April 5, 1982.

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\_\_\_\_\_. Telephone interview, April 5, 1982.

**PROJECTED GROWTH RATES OF MAJOR INDEPENDENT VARIABLES FOR  
NERAGEM IN THE ALASKAN SOUTHERN RAILBELT**

**1980 - 2000**

<u>Variable</u>	<u>1980-1985</u>	<u>1985-1990</u>	<u>1990-1995</u>	<u>1995-2000</u>
	------(Percent/Year)-----			
	(1)	(2)	(3)	(4)
Households	4.7	2.7	3.6	3.3
Income per Household	1.0	1.0	1.0	1.0
Population	3.4	1.7	2.7	2.3
<b>Natural Gas Prices</b>				
Residential Without PacAlaska	0.0	0.0	0.0	0.0
Commercial Without PacAlaska	0.0	0.0	0.0	0.0
Residential With PacAlaska	0.0	10.2 <sup>2</sup>	1.4	1.4
Commercial With PacAlaska	0.0	11.2 <sup>2</sup>	1.5	1.5
<b>Electricity Prices</b>				
Residential Without PacAlaska	0.0	0.0	0.0	0.0
Commercial Without PacAlaska	0.0	0.0	0.0	0.0
Residential With PacAlaska	0.0	10.9	0.6	0.6
Commercial With PacAlaska	0.0	10.7	0.6	0.6
<b>Petroleum Prices</b>				
Residential	2.5	2.0	2.0	2.0
Commercial	2.2	2.0	2.0	2.0

<sup>1</sup> Income and prices in constant dollars.

<sup>2</sup> Increases due to a price jump in 1990.

**Source:**

Income per Household: 1980 OBERS B.E.A. Regional Projections, U.S. Department of Commerce, Bureau of Economic Analysis.  
 Households and Population: Scott Goldsmith and Lee Huskey, Electric Power Consumption for the Railbelt: A Projection of Requirements, Technical Appendices, 1980.  
 Petroleum Prices 1980-1981: Department of Energy, Monthly Energy Review, March 1982.  
 All Fuel Price Projections: NERA.

**PROJECTED GAS AND ELECTRIC PRICES<sup>1</sup>  
IN THE ALASKAN SOUTHERN RAILBELT**

**WITHOUT PACALASKA**

**FOR SELECTED YEARS 1980 - 2000**

<u>Year</u>	<u>Gas Prices</u>		<u>Electric Prices</u>	
	<u>Residential</u> ----- (Dollars/Mcf) ----- (1)	<u>Commercial</u> ----- (2)	<u>Residential</u> ----- (Cents/kWh) ----- (3)	<u>Commercial</u> ----- (4)
1980	1.37	1.17	2.94	2.46
1985	1.37	1.17	2.94	2.46
1990	1.37	1.17	2.94	2.46
1995	1.37	1.17	2.94	2.46
2000	1.37	1.17	2.94	2.46

<sup>1</sup> All prices are in 1978 dollars.

**Source:**

1980: U. S. Department of Energy, Alaska Power Administration, Alaska Electric Power Statistics 1960-1980, August 1981.

American Gas Association, Gas Facts 1980.

1985-2000: NERA projections.

**PROJECTED GAS AND ELECTRIC PRICES <sup>1</sup>  
IN THE ALASKAN SOUTHERN RAILBELT**

**WITH PACALASKA**

**FOR SELECTED YEARS 1980 - 2000**

<u>Year</u>	<u>Gas Prices</u>		<u>Electric Prices</u>	
	<u>Residential</u>	<u>Commercial</u>	<u>Residential</u>	<u>Commercial</u>
	<u>-----(Dollars/Mcf)-----</u>		<u>------(Cents/kWh)-----</u>	
	(1)	(2)	(3)	(4)
1980	1.37	1.17	2.94	2.46
1985	1.37	1.17	2.94	2.46
1990	2.23	2.03	4.91	4.09
1995	2.39	2.19	5.05	4.21
2000	2.56	2.36	5.20	4.34

<sup>1</sup> All prices are in 1978 dollars.

**Source:**

1980: U. S. Department of Energy, Alaska Power Administration, Alaska Electric Power Statistics 1960-1980, August 1981.

American Gas Association, Gas Facts, 1980.

1985-2000: NERA.

**NERA PROJECTIONS OF GROWTH IN GAS UTILITY SALES IN  
ALASKAN SOUTHERN RAILBELT 1980-2000  
COMPARED TO OTHER PUBLISHED PROJECTIONS**

<u>Study</u>	<u>Average Annual Growth Rates</u>				
	<u>1980-1985</u> (1)	<u>1985-1990</u> (2)	<u>1990-1995</u> (3)	<u>1995-2000</u> (4)	<u>1980-2000</u> (5)
<b>NERA</b>					
Without PacAlaska	7.1	4.6	5.7	5.2	5.6
With PacAlaska	7.1	0.1	2.1	2.4	2.9
<b>SRI</b>	6.1	5.3	5.1	5.0	5.4
<b>Goldsmith-O'Connor <sup>1</sup></b>	NA	NA	NA	NA	2.9
<b>Alaska Governor's <sup>2</sup> Advisory Committee</b>	2.3	3.3	3.7	4.6	3.4 <sup>3</sup>

- <sup>1</sup> Projections for years between 1980 and 2000 are not shown in the report.  
<sup>2</sup> Projections for AGAS include some electric and military sales.  
<sup>3</sup> To 1999.

**Source:** Goldsmith-O'Connor: Scott Goldsmith and Kristina O'Connor, Alaska-Historical and Projected Oil and Gas Consumption, January 1981, p. 30.  
 SRI: SRI International, Natural Gas Demand and Supply to the Year 2000 in the Cook Inlet Basin of South-Central Alaska, prepared for Pacific Alaska LNG Company, Los Angeles, California, November 1977, pp. 28-29.  
 State of Alaska Governor's Advisory Committee. A Social Economic and Environmental Analysis of a State Oil and Gas Lease Sale in Upper Cook Inlet, January 1981, p. 15.



**NERA PROJECTIONS OF THE GROWTH OF  
DEMAND FOR ELECTRICITY IN THE ALASKAN SOUTHERN RAILBELT**

**1980 - 2000**

**COMPARED TO OTHER PUBLISHED PROJECTIONS**

<u>Date</u>	<u>Study</u>	Average Annual Growth Rates				
		<u>1980- 1985</u> (1)	<u>1985- 1990</u> (2)	<u>1990- 1995</u> (3)	<u>1995- 2000</u> (4)	<u>1980- 2000</u> (5)
1982	NERA					
	Without PacAlaska	5.9	3.5	4.4	4.0	4.4
	With PacAlaska	5.9	0.6	4.0	3.7	3.5
1982	Battelle	2.5	5.8	1.3	2.0	3.5
1980	ISER	5.0	2.7	5.1	4.5	4.3
1979	Alaska Power Administration <sup>1,2</sup>	NA	4.5	NA	4.5	4.5
1978	Army Corps of Engineers <sup>1</sup>	NA	7.0	NA	6.3	6.6
1978	Alaska Power Administration	7.1	6.5	5.9	6.1	6.4
1977	SRI	9.9	8.1	7.4	7.1	8.1
1976	ISER <sup>1,2</sup>	NA	8.1	NA	8.1	8.1
1975	Army Corps of Engineers <sup>1</sup>	NA	7.2	NA	6.1	6.7
1974	Alaska Power Administration <sup>1</sup>	NA	7.2	NA	6.0	6.6

<sup>1</sup> Growth rates based only on 1980-1990 and 1990-2000 figures.

<sup>2</sup> Low scenario.

Source: Battelle: Alaska Power Authority, Susitna Hydroelectric Project; Summary Report, March 1982, plate 3.

1980 ISER: Scott Goldsmith and Lee Huskey, Electric Power Consumption for the Railbelt: A Projection of Requirements, June 1980, p. 53.

1974 Alaska Power Administration, 1976 ISER and 1975 Corps of Engineers: Bradford Tuck, A Review of Electric Power Demand Forecasts and Suggestions for Improving Future Forecasts, prepared for the House Power Alternatives Study Committee, May 1980, pp. 19, 24 and 49.

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SRI: SRI International, Natural Gas Demand and Supply to the Year 2000 in the Cook Inlet Basin of South-Central Alaska, November 1977, pp. 28-29.

**NERA PROJECTED CUMULATIVE GAS AND ELECTRIC  
UTILITY DEMAND PROJECTIONS COMPARED WITH  
OTHER FORECASTS**

**1982 - 2000**

	<u>Gas Utility Sales</u>	-----(Bcf)-----	<u>Electric Utility Demand for Gas</u>
	(1)		(2)
<b>NERA</b>			
Without PacAlaska	601		857
With PacAlaska	465		758
<b>Battelle Pacific Northwest Laboratories 1982</b>	413		397

**Source:**

    NERA: See Tables 24 and 28.  
    Battelle: Battelle Pacific Northwest Laboratories,  
Historical and Projected Oil and Gas Con-  
sumption, State of Alaska, Department of  
Natural Resources, January 1982, p. 3.4.

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AMENDATORY EXTENSION AGREEMENT

THIS AMENDATORY EXTENSION AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers", and executed in both the English and Japanese languages.

## WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement providing that Buyers purchase and receive from Sellers and pay for and Sellers sell and deliver to Buyers LNG produced from natural gas reserves located in the State of Alaska, United States of America, which Agreement has been amended from time to time (the said Agreement as amended shall hereinafter be referred to as the "Basic Agreement");

WHEREAS, pursuant to the provisions of Article Fourteen of the Basic Agreement, it is provided that the term of the Basic Agreement may be extended for an additional period of five (5) years from and after June 1, 1984;

NOW THEREFORE, in consideration of the mutual and dependent promises herein contained the parties hereto agree to further amend the Basic Agreement as follows:

1. Article Six of the Basic Agreement shall be amended by adding Section 6.3 as follows:

"Section 6.3 Variations in Delivery Schedule

- (a) If after June 1, 1984 unforeseen circumstances (excepting force majeure or those arising from negligence) arise which affect Buyers' ability to receive or Sellers' ability to deliver the contract quantity of LNG contemplated herein, then Buyers and Sellers shall consult with each other in good faith and endeavor to find a solution satisfactory to both parties, wherein the deficiency can be delivered and received as soon as reasonably possible.
  
- (b) In the event Buyers are unable to take the annual contract quantity during any contract year subsequent to June 1, 1984 due to an imbalance between Buyers' total LNG supply and demand, Buyers may reduce the receipt of the annual contract quantity for the said contract year to such extent as shall be fair and equitable in light of all of their LNG projects including the one hereunder; provided, however, that the aggregate quantity of such reductions shall not exceed the aggregate of (i) such additional quantities of

LNG as Sellers are able to deliver by Sellers' existing LNG tankers and facilities in subsequent contract years beyond the annual contract quantities applicable thereto and (ii) the maximum quantity which Sellers can deliver by Sellers' existing LNG tankers and facilities during the maximum extension period of seven (7) months set forth below.

Any LNG which Buyers are unable to take during any contract year, due to any of the aforesaid causes affecting Buyers, will be delivered and received as soon as reasonably possible in subsequent contract years within the limitation of Buyers' and Sellers' existing facilities directly related to this Agreement.

Further, if, due to any such cause, the aggregate quantity of LNG received by Buyers during the period June 1, 1984 through May 31, 1989, fails to reach the aggregate of the annual contract quantities applicable to the said period [a total of two hundred fifty-two trillion, eight hundred fifty billion (252,850,000,000,000) Btu's and as between Buyers, Tokyo Electric, one hundred eighty-nine trillion, six hundred thirty-seven billion, five hundred million (189,637,500,000,000) Btu's and Tokyo Gas, sixty-three trillion, two hundred twelve billion, five hundred million (63,212,500,000,000) Btu's], then the term of this Agreement shall, as of June 1, 1989, automatically be extended for a

necessary period of up to seven (7) months in order to receive such deficient quantity. The period of extension and the rates of delivery and receipt applicable thereto shall reflect normal consecutive deliveries beginning with the last cargo delivered prior to June 1, 1989, and shall be determined through consultations prior to November 30, 1988."

2. Section 9.1 (a) of the Basic Agreement shall be further amended by deleting from the first sentence thereof the words "prior to June 1, 1984" and substituting therefor the words "prior to June 1, 1989 or until such date as the term of this Agreement may be extended pursuant to Section 6.3".
3. Section 14.1 of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 14.1 This Agreement shall be effective from the date hereof, and unless earlier terminated as provided herein, shall thereafter continue in full force and effect for a term of twenty (20) years from June 1, 1969 unless extended pursuant to Section 6.3."

4. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.
5. All rights and obligations under this Amendatory Extension Agreement shall be subject to necessary approvals being obtained where required from all appropriate governmental authorities having jurisdiction.

IN WITNESS WHEREOF, the parties hereto have caused this Amendatory Extension Agreement to be executed in good faith, by their respective duly authorized officers, as of the 15<sup>th</sup> day of APRIL, 1982.

BUYERS:

THE TOKYO ELECTRIC  
POWER COMPANY, INC.

BY: Yasushi Ideraiwa  
President

TOKYO GAS COMPANY, LTD.

BY: Miroshi Watanabe  
President

SELLERS:

MARATHON OIL COMPANY

BY: [Signature]  
President

PHILLIPS PETROLEUM COMPANY

BY: [Signature]  
President

UNITED STATES OF AMERICA  
FEDERAL POWER COMMISSION

Before Commissioners: Lee C. White, Chairman; L. J. O'Connor, Jr.,  
Charles R. Ross, Carl E. Bagge, and  
John A. Carver, Jr.

Phillips Petroleum Company	)	Docket No. CI67-1226
and Marathon Oil Company	)	Docket No. CI67-1227

ORDER AUTHORIZING EXPORTATION OF LIQUEFIED  
NATURAL GAS AND DISMISSING APPLICATION  
FOR PERMIT

(Issued April 19, 1967)

On March 8, 1967, Phillips Petroleum Company and Marathon Oil Company (Applicants) filed in Docket No. CI67-1226 an application pursuant to Section 3 of the Natural Gas Act for authorization to export liquefied natural gas from the United States to Japan, all as more fully set forth in the application.

Applicants propose to export liquefied natural gas from Alaska for sale and delivery in Yokohama, Japan, to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited. Applicants agree to sell and buyers agree to purchase the following annual Btu's of liquefied natural gas during a fifteen-year period ending May 31, 1984:

March 1, 1969, to May 31, 1970: 35,295,000,000,000 Btu's,

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

The agreement contains an option for a five-year renewal.

The application states that the gas will be sold at a rate of 52.0 cents per million Btu's delivered.

Applicants will construct facilities in the Cook Inlet Basin area, Alaska, for the liquefaction of natural gas, the storage of liquefied natural gas, and the loading of such onto ships for export and delivery to Japan to the aforementioned buyers.

Concurrently with the subject application Applicants filed in Docket No. CI67-1227 an application pursuant to Executive Order No. 10485 for a permit authorizing the construction, operation and maintenance of facilities at the border of the United States in the State of Alaska for the exportation of natural gas. Said Order designates and empowers the Commission to issue such a permit upon finding that the issuance would be consistent with the public interest and after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense. During the course of processing this application a question was raised by the Department of State as to whether the facilities in question are of the type contemplated by the Executive Order, though both the Secretary of State and the Secretary of Defense agreed that authorization of the proposed export was consistent with the public interest of the United States. Consequently, the Commission presented the issue to the Office of the Legal Counsel of the Department of Justice which, upon consideration of the documents pertaining to the application, has concurred in the conclusion of the Department of State that the Executive Order does not apply, because there will not be facilities at the border involving any physical connection between this country and a foreign country. In view of these conclusions by the relevant agencies of the Executive Branch of the Government (with which, we are informed, the Department of Defense does not take issue), and in the absence of any basis for our independently reaching a contrary position, we shall dismiss, the permit application in Docket No. CI67-1227. We shall, however, in future cases of this nature continue to secure the views of the Departments of State and Defense before taking action under Section 3 of the Natural Gas Act.



After due notice no petitions to intervene, notices of intervention or protests to the granting of the application in Docket No. CI67-1226 have been received.

The Commission finds:

(1) The exportation of liquefied natural gas by Applicants, Phillips Petroleum Company and Marathon Oil Company, from the United States to Japan, as hereinabove described and as set forth in the application in Docket No. CI67-1226, will not be inconsistent with the public interest within the meaning of Section 3 of the Natural Gas Act, provided that said exportation be on the terms and conditions hereinafter set forth:

(a) Applicants shall file statements or reports with the Commission from time to time under oath and in such details as the Commission may require with respect to the whole or any part of the instant export operation.

(b) The authorization granted herein is not transferable or assignable and shall remain in full force and effect only so long as Applicants continue the acts or operations herein authorized in accordance with the terms and conditions herein set forth.

(c) The authorization granted herein shall automatically terminate on May 31, 1964. If the five-year renewal option of the agreement between Applicants and buyers is exercised, Applicants must comply with Section 153.8 of the Regulations under the Natural Gas Act.

(d) Applicants shall not, during the term of the authorization granted by this order, materially change or alter their export operations without first obtaining the permission and approval of the Commission.

(e) In the event that Applicants should abandon or permanently cease for any reason whatsoever all or any part of the instant export operation prior to the termination date described in (c) hereof, Applicants shall forthwith notify the Commission of said fact and the reason therefor.

(f) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited should not exceed the following:

March 1, 1969, to May 31, 1970: 35,295,000,000,000 Btu's,

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

(g) Applicants should comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan.

(2) Applicants do not propose to construct, operate or maintain any facilities at the border of the United States within the contemplation of and for which a permit is required to be issued pursuant to Executive Order No. 10485.

The Commission orders:

(A) Authorization is granted to Applicants to export liquefied natural gas from the United States to Japan, as hereinabove described and as set forth in the application in Docket No. CI67-1226, upon the conditions herein set forth and subject to the provisions of the Natural Gas Act and the Commission's Regulations issued thereunder.

(B) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited shall not exceed the following:

March 1, 1969, to May 31, 1970: 35,295,000,000,000 Btu's,

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

(C) Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan and for any other contractual changes including the exercise of the option for renewal.

(D) The application for a permit filed in Docket No. CI67-1227 is dismissed.

By the Commission.

( S E A L )

Joseph H. Gutride,  
Secretary.

Appendix D

[The Application filed by Phillips and Marathon in FPC Docket No. CI67-1226 on March 8, 1967, including all exhibits thereto, is incorporated by reference as if fully set forth in the instant Application.]

THIRTEENTH AMENDATORY AGREEMENT

THIS THIRTEENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

## WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 17th day of June, 1981) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1982, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984 shall be a base price of 592.8 U.S. cents per million Btu as indexed in accordance with the formula stated in this Sub-Section so as to reflect changes in the weighted average of Government Selling Prices of a basket of twenty (20) crude oils imported into Japan.

$$\begin{aligned} & \text{Price for calendar month} \\ & = 592.8 \times \frac{\text{Av GSP (Month Prior to Calendar Month)}}{34.48} \end{aligned}$$

WHERE:

Av GSP is the average of the Government Selling Prices (in U.S. dollars per barrel) weighted by the 1981 volumes for the top twenty (20) crude oils (ranked by descending volumes) imported into Japan during the calendar year of 1981.

If the Government Selling Price (GSP) for any of such top twenty (20) crude oils applicable on the last day of the month prior to the month in which LNG is sold and delivered is different from the GSP used in calculating the applicable LNG price, and the different GSP is announced before the end of the month following the month of delivery, then the applicable LNG price shall be re-calculated using the different GSP and appropriate adjusting payments shall be made at the next regular payment date. If at any time any of the Government Selling Prices used in the formula ceases to be published or is quoted on a revised basis, Sellers

and Buyers shall promptly meet to agree on an appropriate modification.

Sellers and Buyers shall be free to request a renegotiation of the price if there are significant changes in circumstances."

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 24th day of March, 1982.

BUYERS:

SELLERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

MARATHON OIL COMPANY

By: *Seishi Hiraiwa*  
President

By: *[Signature]*  
President

TOKYO GAS COMPANY LIMITED

PHILLIPS PETROLEUM COMPANY

By: *Hiroshi Watanabe*  
President

By: *CJ Sims*  
President

**LIQUEFIED NATURAL GAS SALES AGREEMENT**

RESTATED AGREEMENT  
INCORPORATING  
13TH AMENDATORY AGREEMENT  
AND AMENDATORY EXTENSION  
AGREEMENT  
AS OF  
APRIL 15, 1982

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

TOKYO GAS COMPANY LIMITED

MARATHON OIL COMPANY

PHILLIPS PETROLEUM COMPANY



I N D E X  
LIQUEFIED NATURAL GAS SALES AGREEMENT

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LIQUEFIED NATURAL GAS SALES AGREEMENT

THIS AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY LIMITED (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers", and executed in both the English and Japanese languages.

WITNESSETH:

In consideration of the mutual and dependent promises herein contained, the parties hereto agree as follows:

ARTICLE ONE

DEFINITIONS

Section 1.1 For the purpose of this Agreement, the words and terms contained in Exhibit A attached hereto and made a part hereof, unless their use in context is specifically to the contrary, shall have meanings contained in Exhibit A.

ARTICLE TWO

PURCHASE AND SALE

Section 2.1 Subject to all of the terms and conditions herein set forth, Buyers agree to purchase and receive from Sellers and to pay for, and Sellers agree to sell and deliver to Buyers LNG in the quantities and at the times and place and at the price hereinafter set forth.

ARTICLE THREE  
SOURCE OF SUPPLY

Section 3.1 The natural gas which Sellers will liquefy and sell and deliver to Buyers as LNG, will be produced from natural gas reserves located in the State of Alaska, United States of America. Sellers warrant that they own and control or have committed to them volumes of natural gas reserves sufficient to enable Sellers to sell and deliver to Buyers the annual contract quantities of LNG.

ARTICLE FOUR  
DELIVERY POINT, FACILITIES AND TITLE

Section 4.1 Delivery Point. Delivery of the LNG sold and purchased under this Agreement will be made by Sellers to Buyers in LNG tankers, and the point of delivery shall be at the flange connecting the unloading piping of the LNG tanker with the piping of Tokyo Gas.

Section 4.2 Buyers' Facilities. Buyers shall construct, maintain and operate or cause to be constructed, maintained and operated at their sole cost, expense and risk, docking, unloading and receiving facilities. The docking facilities shall be located at Tokyo Gas' Negishi Plant Site, in the city of Yokohama, Japan, and they shall be capable of handling and accommodating at mean low tide an LNG tanker approximately eight hundred (800) feet in length, with a loaded draft of not more than thirty-three and one-half (33-1/2) feet carrying approximately four hundred fifty thousand (450,000) barrels of LNG. LNG tankers shall have the right immediately upon arrival to use Buyers' docking facilities without any charges being imposed by Buyers for such use. The unloading facilities shall include lines and other terminal equipment of sufficient capacity to permit the unloading of an LNG tanker at a rate of not less than thirty thousand (30,000) barrels of LNG per hour when pumping

at a reasonable discharge pressure which is mutually acceptable to both parties. Such facilities shall also include a pipe line sufficient in size to return natural gas vapors from Buyers' storage tanks to the LNG tanker. The receiving facilities shall include storage and other auxiliary facilities of sufficient capacity to permit Sellers to deliver and Buyers to receive full tanker loads of LNG at the rates of delivery specified herein. Buyers shall also provide adequate facilities free of cost to Sellers to supply the LNG tankers with fresh water and ships stores.

Section 4.3 Sellers' Facilities. Sellers shall construct, maintain and operate or cause to be constructed, maintained and operated liquefaction facilities located in the State of Alaska, sufficient in size to enable Sellers to liquefy and deliver to Buyers or cause to be liquefied and delivered to Buyers the annual contract quantities of LNG purchased and sold hereunder. Sellers shall also construct, maintain and operate or cause to be constructed, maintained and operated two (2) LNG tankers to make the deliveries of LNG hereunder. It is contemplated that each LNG tanker shall be approximately eight hundred (800) feet in length, with a loaded draft of not more than thirty-three and one-half (33-1/2) feet and capable of carrying approximately four hundred fifty thousand (450,000) barrels of LNG at an average sea speed of seventeen (17) knots.

Section 4.4 Passage of Title. Title to the LNG purchased and sold hereunder shall pass from Sellers to Buyers at the point of delivery specified in Section 4.1.

## ARTICLE FIVE

### LIABILITY

Section 5.1 While the LNG tanker is being berthed, is berthed, or is leaving the berth at Buyers' Negishi dock, Buyers shall indemnify Sellers for any

injuries or damages they may suffer as a result of the negligence, or willful and malicious acts of Buyers, their agents, employees, contractors and suppliers of labor and materials and their employees while performing services for Buyers, and Sellers shall indemnify Buyers from any injuries or damages Buyers may suffer as a result of the negligence, or willful and malicious acts of Sellers, their agents, employees, contractors and suppliers of labor and materials and their employees while performing services for Sellers. Sellers shall cause the LNG to be delivered and Buyers shall receive the LNG at the delivery point with due regard for appropriate safety precautions.

#### ARTICLE SIX

##### QUANTITIES AND RATES OF DELIVERIES

###### Section 6.1 Annual Contract Quantity and Rates of Deliveries.

The annual contract quantity of LNG which Sellers agree to sell and deliver to Buyers, and which Buyers agree to receive and pay for under this Agreement, for each contract year except the first contract year is fifty trillion, five hundred seventy billion Btu's (50,570,000,000,000 Btu's), (which is the methane equivalent of approximately nine hundred sixty thousand (960,000) metric tons). As between Tokyo Electric and Tokyo Gas, Tokyo Electric's share of the annual contract quantity shall be thirty-seven trillion, nine hundred twenty-seven billion, five hundred million Btu's (37,927,500,000,000 Btu's), (which is the methane equivalent of approximately seven hundred twenty thousand (720,000) metric tons), and Tokyo Gas' share of the annual contract quantity shall be twelve trillion, six hundred forty-two billion, five hundred million Btu's (12,642,500,000,000 Btu's), (which is the methane equivalent of approximately two hundred forty thousand (240,000) metric tons).

Except for the Initial Delivery Schedule, as set forth in Section 6.2, and except for the annual inspection periods cargoes of LNG shall be delivered and received during each contract year at rates and intervals and in volumes reasonably equal and constant, and Buyers and Sellers shall cooperate in the expeditious unloading of each cargo so that cargoes may be so delivered and received. Sellers shall on or before the fifteenth (15th) day of each month mail to Buyers a forecast of the rates of delivery of LNG during each of the next twelve (12) months, and Sellers and Buyers shall discuss any changes which Buyers may desire in the forecast of rates of delivery. Sellers and Buyers shall schedule or cause to be scheduled all annual inspections and overhauls of their respective plants and facilities and the LNG tankers during the months of September, October and November as to Sellers and Tokyo Electric, and during July and August as to Tokyo Gas, or at such other times as such annual inspections and overhauls can be made with the approval of Buyers and Sellers without reducing the delivery of the annual contract quantity of LNG.

Section 6.2 Initial Delivery Schedule. Subject to Sellers, after the exercise of reasonable diligence, receiving timely delivery from the shipyard of the first LNG tanker and completing construction of the other necessary facilities, and Tokyo Electric, after the exercise of reasonable diligence, timely completing construction of its power generating plants at Negishi and Tokyo Gas, after the exercise of reasonable diligence, timely completing construction of its LNG terminal facilities at Negishi, the target date for the first cargo of LNG to be delivered by Sellers and received by Buyers shall be March 1, 1969. Buyers and Sellers shall cooperate in establishing a mutually satisfactory schedule of delivery rates of LNG for the period from March 1, 1969 through May 31, 1970, which rates shall be sufficient for Sellers and Buyers to test and bring into operation their respective facilities which they will construct.

The parties contemplate that the deliveries and receipts during the first contract year from June 1, 1969 through May 31, 1970 shall be thirty-five trillion, two hundred ninety-five billion Btu's (35,295,000,000,000 Btu's), (which is the methane equivalent of six hundred seventy thousand (670,000) metric tons). From June 1, 1970, and for the remainder of the term of this Agreement, deliveries and receipts of LNG shall be at the annual rate stated in Section 6.1 above.

SECTION 6.3 VARIATIONS IN DELIVERY SCHEDULE.

(a) If after June 1, 1984 unforeseen circumstances (excluding force majeure or those arising from negligence) arise which affect Buyers' ability to receive or Sellers' ability to deliver the contract quantity of LNG contemplated herein, then Buyers and Sellers shall consult with each other in good faith and endeavor to find a solution satisfactory to both parties, wherein the deficiency can be delivered and received as soon as reasonably possible.

(b) In the event Buyers are unable to take the annual contract quantity during any contract year subsequent to June 1, 1984 due to an imbalance between Buyers' total LNG supply and demand, Buyers may reduce the receipt of the annual contract quantity for the said contract year to such extent as shall be fair and equitable in light of all of their LNG projects including the one hereunder; provided, however, that the aggregate quantity of such reductions shall not exceed the aggregate of (i) such additional quantities of



LNG as Sellers are able to deliver by Sellers' existing LNG tankers and facilities in subsequent contract years beyond the annual contract quantities applicable thereto and (ii) the maximum quantity which Sellers can deliver by Sellers' existing LNG tankers and facilities during the maximum extension period of seven (7) months set forth below.

Any LNG which Buyers are unable to take during any contract year, due to any of the aforesaid causes affecting Buyers, will be delivered and received as soon as reasonably possible in subsequent contract years within the limitation of Buyers' and Sellers' existing facilities directly related to this Agreement.

Further, if, due to any such cause, the aggregate quantity of LNG received by Buyers during the period June 1, 1984 through May 31, 1989, fails to reach the aggregate of the annual contract quantities applicable to the said period [a total of two hundred fifty-two trillion, eight hundred fifty billion (252,850,000,000,000) Btu's and as between Buyers, Tokyo Electric, one hundred eighty-nine trillion, six hundred thirty-seven billion, five hundred million (189,637,500,000,000) Btu's and Tokyo Gas, sixty-three trillion, two hundred twelve billion, five hundred million (63,212,500,000,000) Btu's], then the term of this Agreement shall, as of June 1, 1989, automatically be extended for a

necessary period of up to seven (7) months in order to receive such deficient quantity. The period of extension and the rates of delivery and receipt applicable thereto shall reflect normal consecutive deliveries beginning with the last cargo delivered prior to June 1, 1989, and shall be determined through consultations prior to November 30, 1988.

ARTICLE SEVEN

QUALITY

Section 7.1 Gross Heating Value. The LNG delivered hereunder shall have a standard gross heating value of 1,040 Btu's per cubic foot, and Sellers warrant that the LNG shall have a minimum gross heating value of 990 Btu's per cubic foot and a maximum gross heating value of 1,150 Btu's per cubic foot. The gross heating value of the LNG delivered hereunder shall be determined by computations using the procedure and physical constants and correction factors contained in Exhibit B, Measurement Procedures, attached hereto and made a part hereof.

Section 7.2 Hydrocarbon Composition. Sellers warrant that the LNG delivered hereunder shall have hydrocarbon components within the following ranges:

Methane — not less than 85 mole percent;

Butanes and heavier — not more than 2 mole percent;

Pentanes and heavier — not more than 0.1 mole percent.

The hydrocarbon components shall be analyzed and determined by the test method specified in Article III of Exhibit B.

Section 7.3 Impurities. Sellers warrant that the LNG delivered hereunder shall meet the following specifications:

(a) Gaseous Impurities. The hydrogen sulphide, total sulphur, cyanides, metal carbonyl and ammonia contained in the LNG delivered from Sellers to Buyers shall not be detectable when using analysis methods specified in Exhibit C, Analysis Methods, attached hereto and made a part hereof.

(b) Solid Impurities and Others. The LNG delivered hereunder shall not contain solid impurities such as solid carbon dioxide, or hydrates of hydrocarbons, or inorganic compounds, or lubricants in such quantities as will unreasonably interfere with Buyers' uses of the LNG for town gas manufacture and power generation.

## ARTICLE EIGHT

### MEASUREMENT AND TESTING

Section 8.1 Sellers' Equipment. Sellers shall install, maintain and operate in each LNG tanker, at their sole cost and expense, suitable equipment and devices for the purpose of measuring the quantities of LNG delivered hereunder. Tests for the accuracy of the equipment and devices shall be made by Sellers and shall be witnessed and verified before the LNG tanker is put into service by an independent surveyor selected jointly by Sellers and Buyers. Thereafter, tests for accuracy of the equipment and devices shall be made by Sellers (not including the volumetric calibration of the tanks in the ships) at least once each year and shall be witnessed and verified upon request of Buyers or Sellers by an independent surveyor selected and employed jointly by Sellers and Buyers, and at any other time requested by either party. Buyers shall have the right to be present at each such test.

Section 8.2 Buyers' Equipment. Buyers shall install, maintain and operate at their sole cost and expense, suitable equipment and devices for the purpose

of collecting and analyzing the samples. Tests for accuracy of the equipment and devices shall be witnessed and verified upon the request of Buyers or Sellers by an independent surveyor selected and employed jointly by Buyers and Sellers. Sellers shall have the right to be present at each such test.

Section 8.3 Collection and Analysis of Samples. Buyers shall collect from each cargo of LNG representative samples of LNG, and they shall promptly analyze for quality under Article VII the appropriate sample following the method provided in Exhibits B and C, and the analyses when correctly made in accordance with the provisions of this Agreement and Exhibits B and C shall be final. Sellers shall have the right to be present when the samples are collected and the analyses are made. Buyers shall also promptly report to Sellers the results of the analyses.

Section 8.4 Measurement of Quantities of LNG Delivered. Sellers shall determine the quantities of LNG delivered from each LNG tanker following the methods and procedure contained in Exhibit E. The gauging of the LNG tanks shall be witnessed and verified upon request of Buyers or Sellers by an independent surveyor selected and employed jointly by Buyers and Sellers. Buyers shall have the right to be present during measurement.

Section 8.5 Determination of Quantities of Btu's Delivered. The quantities of Btu's delivered to Buyers from each LNG tanker shall be determined from the results of the analyses and measurements made under Sections 8.3 and 8.4 and in accordance with the procedures set out in Exhibit B.

Section 8.6 Costs and Expenses of Tests and Verifications. All the costs and expenses for testing Sellers' equipment and devices shall be borne by Sellers, and all the costs and expenses for testing Buyers' equipment and devices shall be borne by Buyers; provided, however, that costs and expenses for incidental

tests upon request of Sellers or Buyers shall be borne equally by Sellers and Buyers. The fees and charges of the independent surveyor for measurement, sampling and analyses shall be borne equally by Sellers and Buyers.

ARTICLE NINE

PRICE

Section 9.1 (a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1989, or until such date as the term of this Agreement may be extended pursuant to Section 6.3. shall be a base price of 592.8 U.S. cents per million Btu as indexed in accordance with the formula stated in this Sub-Section so as to reflect changes in the weighted average of Government Selling Prices of a basket of twenty (20) crude oils imported into Japan.

Price for calendar month

$$= 592.8 \left[ \frac{\text{Av GSP (Month Prior to Calendar Month)}}{34.48} \right]$$

WHERE:

Av GSP is the average of the Government Selling Prices (in U.S. dollars per barrel) weighted by the 1981 volumes for the top twenty (20) crude oils (ranked by descending volumes) imported into Japan during the calendar year of 1981.

If the Government Selling Price (GSP) for any of such top twenty (20) crude oils applicable on the last day of the month prior to the month in which LNG is sold and delivered is different from the GSP used in calculating the applicable LNG price, and the different GSP is announced before the end of the month following the month of delivery, then the applicable LNG price shall be re-calculated using the different GSP and appropriate adjusting payments shall be made at the next regular payment date. If at any time any of the Government Selling Prices used in the formula ceases to be published or is quoted on a revised basis, Sellers

and Buyers shall promptly meet to agree on an appropriate modification.

Sellers and Buyers shall be free to request a renegotiation of the price if there are significant changes in circumstances.

(b) If in the future another Liquefied Natural Gas project is placed into operation to supply Japan with natural gas from foreign gas sources, such as Alaska, Canada, Australia, Brunei and the Middle East under similar conditions such as volume, distance, liquefaction and ocean transportation techniques, contract term and so forth, Sellers will hold a discussion with Buyers concerning the price as herein set forth, and shall endeavor to find a solution satisfactory to all parties concerned.

#### ARTICLE TEN

##### TAXES AND DUTIES

Section 10.1 With respect to LNG sold and delivered hereunder, Sellers shall pay all taxes and duties imposed by governmental bodies outside Japan, and Buyers shall pay all taxes and duties imposed by Japanese governmental bodies; provided, however, that Sellers shall bear all port and harbor duties, fees and assessments imposed by Japanese governmental bodies on Sellers' LNG tankers.

ARTICLE ELEVEN

UNLOADING

Section 11.1 Sellers shall notify Buyers or cause Buyers to be notified at least seventy-two (72) hours and again at least twenty-four (24) hours in advance of the estimated time each LNG tanker will arrive at Buyers' docking facilities. Sellers and Buyers shall cooperate in their efforts to unload an LNG tanker within a period of seventeen (17) hours after docking.

ARTICLE TWELVE

BILLING, PAYMENT AND ERRORS

Section 12.1 Billing and Payment. Sellers shall prepare and submit to Buyers promptly after completion of each delivery, delivery tickets for each shipment of LNG delivered hereunder, which tickets shall show the figures recorded by the equipment and devices installed on the LNG tanker for the measurement of LNG deliveries. The tickets shall be signed by authorized personnel of Sellers and Buyers. Sellers shall also promptly prepare and submit to Buyers, through Buyers' designated agent in the United States (such agent to be maintained at all times by Buyers), for each LNG tanker shipment, documents of title and an invoice showing the quantity of Btu's delivered into Buyers' facilities and the sum in United States dollars owed by Buyers to Sellers. Buyers shall pay Sellers within ten (10) days after Buyers' agent has received Sellers' invoice the sums invoiced and owed Sellers hereunder for each cargo of LNG delivered to Buyers. Payment shall be made in United States dollars by Buyers depositing to the credit of the respective Sellers in the proportions to be stated in Sellers' invoice in the First National City Bank, New York City, New York, United States of America, or in some other bank designated in writing by Sellers the sums due and owing Sellers.



Section 12.2 Determination of Amount Payable for LNG Delivered.

The amount payable for each cargo of LNG delivered to Buyers shall be the product of the unit price provided in Section 9.1 (a) multiplied with the quantity of Bru's determined in accordance with the procedures and tables set forth in Exhibit B.

Section 12.3 Errors. In the event any error is discovered in the amount billed in any invoice rendered hereunder, such error shall be rectified within one (1) month after the determination thereof, provided a claim therefor shall have been made within two (2) years after the date of such invoice.

ARTICLE THIRTEEN

FORCE MAJEURE

Section 13.1 If either Sellers or Buyers are rendered unable, wholly or in part, by force majeure to carry out their obligations under this Agreement, other than the obligation to make money payments, and if such Sellers or Buyers, as the case may be, give notice and reasonably full particulars of such force majeure in writing or by telegraph to the other party within a reasonable time after the occurrence of the facts relied on, then the obligations of the party giving the notice, so far as and to the extent that the obligations are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period, and the cause of such inability shall insofar as possible be remedied within a reasonable time. The party giving the notice shall, if requested by the party receiving the notice, deliver to the party receiving the notice a sworn statement of the facts relied on as constituting force majeure, and a certificate from a government official of the occurrence of the facts when known to the official. If, as a result of the temporary suspension of the obligations of either Sellers or Buyers as above provided,

the annual contract quantity of LNG is not delivered or received during any contract year, then the party claiming force majeure shall be obligated to deliver or to receive, as the case may be, during the remaining term of this Agreement, all or such portions of the undelivered quantities of LNG as may be delivered within the capabilities of the facilities of Sellers and Buyers, the undelivered quantities to be delivered and received as soon as reasonably possible after termination of such suspension, and to be in addition to the annual contract quantity for the particular year in which such deliveries are made and receipts occur.

The term "force majeure", as used in this Agreement, means cause or causes which are not reasonably within the control of the party or parties claiming force majeure, and which cannot be overcome by the exercise of reasonable diligence, and includes but shall not be limited to forces of nature, perils of the sea, shipwrecks, strikes, lockouts, or other industrial disturbances, acts of God, acts of government or any governmental agency, compliance with any directive, order or regulation of any governmental authority or representative thereof acting under claim or color of authority, wars, blockades, insurrections, riots, epidemics, quarantine restrictions, landslides, lightning, earthquakes, fires, storms, floods, washouts, civil or military disturbances or interferences, explosions, et cetera. Labor disputes shall be settled at the sole discretion of the party having such dispute.

#### ARTICLE FOURTEEN

##### EFFECTIVE DATE AND TERM

Section 14.1 This Agreement shall be effective from the date hereof, and unless earlier terminated as provided herein, shall thereafter continue in full force and effect for a term of twenty (20) years from June 1, 1969 unless extended pursuant to Section 6.3.

ARTICLE FIFTEEN

NOTICES

Section 15. 1 All notices, requests, demands, invoices, statements, or other communications required or permitted hereunder, or any notice one party may desire to give to the other, shall be in writing and deemed to have been properly delivered if personally handed to a responsible employee of the party or its designee for whom intended, or received by registered mail or telegraph at the address of such party or designee for whom intended. Sellers and Buyers initially designate their official designees and addresses as follows:

Sellers - As respects Marathon :	Marathon Oil Company 550 South Flower Street Los Angeles, California 90017
As respects Phillips :	Phillips Petroleum Company Natural Gas and Gasoline Department Frank Phillips Building Bartlesville, Oklahoma 74003
Buyers - As respects Tokyo Electric :	The Tokyo Electric Power Company, Inc. 2-9 Uchisaiwaicho, Chiyoda-ku Tokyo, Japan
As respects Tokyo Gas :	Tokyo Gas Company Limited 1-3 Yaesu, Chuo-ku Tokyo, Japan
As respects Buyers' Agent :	Mitsubishi International Corporation 606 South Hill Street Los Angeles, California 90014

Any party hereto may change its address at any time by giving prior written notice to the other parties. All notices which are mailed or sent by telegraph shall be deemed to have been given on the date of the addressee's receipt thereof, except routine communications, including invoices, statements and payments, shall be considered as duly delivered when mailed or handed to a responsible person employed by the party or its designee for whom intended.

ARTICLE SIXTEEN

ARBITRATION

Section 16.1 Any dispute between the parties touching the construction, meaning or effect of this Agreement, or the rights or liabilities of the parties hereunder, or any matter arising out of the same or connected therewith, except failure to agree to a revision or modification of price under Section 9.1 (b) or failure to agree on the terms of a five-year extension under Section 14.7, which cannot be resolved by the parties after discussion in a good faith attempt to reach an amicable solution shall be resolved in Tokyo, Japan, by arbitration in accordance with the rules then obtaining of the International Chamber of Commerce before a board of three (3) arbitrators named in accordance with such rules. The parties shall carry out the award of the arbitrators without invoking any immunity, and judgment upon the award rendered may be entered in any court having jurisdiction, or application may be made to such court for a judicial acceptance of the award and an order of enforcement, as the case may be. The parties hereby waive any objection to the award of the arbitrators insofar as is permissible under the laws of any of the United States of America or of Japan. The laws of Japan shall be applied by the arbitrators in settling disputes between the parties unless it clearly appears to the arbitrators that other laws should be applied.

ARTICLE SEVENTEEN

APPROVAL OF GOVERNMENTAL REGULATORY BODIES

Section 17.1 Sellers and Buyers Shall Attempt to Obtain.

Sellers shall use their best efforts to forthwith obtain any and all approvals and authorizations required by any legally constituted regulatory bodies of the United States of America and the State of Alaska, or deemed necessary by Sellers, to allow Sellers to commence and continue deliveries of LNG to Buyers under the terms of this Agreement, furnishing Buyers certified copies of all such govern-

mental approvals and authorizations, together with certified copies of rules, regulations and restrictions promulgated by each and every regulatory body in connection with such approvals. Sellers shall also exercise their best efforts to obtain any other or additional governmental approvals and authorizations of the United States of America or the State of Alaska which may be required from time to time during the term of this Agreement.

Buyers shall use their best efforts to forthwith obtain all approvals and authorizations, if any are required, by any legally constituted regulatory bodies of Japan, or deemed necessary by Buyers to allow them to commence and continue receiving LNG under the terms of this Agreement, furnishing Sellers with certified copies of rules, regulations and restrictions promulgated by each and every regulatory body, if any, in connection with such approvals and authorizations. Buyers shall also exercise their best efforts to obtain any other or additional governmental approvals and authorizations of Japanese governmental bodies which may be required from time to time during the term of this Agreement.

Each party shall, at the request of another, assist the other by all reasonable means in obtaining such governmental approvals and authorizations. Forthwith upon any such governmental approvals and authorizations being obtained, the party obtaining the same shall notify the others, and shall advise such others as soon thereafter as is reasonably possible whether such governmental approvals and authorizations are in form acceptable to it and in terms which will enable it to perform its obligations hereunder. When all such governmental approvals and authorizations deemed necessary by Sellers and Buyers have been obtained, Sellers and Buyers shall each notify the other parties to such effect.

If Buyers fail to perceive within sixty (60) days from the date this Agreement is executed reasonable prospects of obtaining the necessary governmental approvals and authorizations, either Buyers or Sellers may terminate this Agreement

by written notice to the other within sixty (60) days from the date this Agreement is executed of their intent to terminate.

If Sellers fail to obtain within sixty (60) days from the date this Agreement is executed the necessary governmental approvals and authorizations, either Sellers or Buyers may terminate this Agreement at any time thereafter by written notice to the other of their intent to terminate, given prior to the obtaining of such approvals and authorizations.

Section 17.2 No Liability if Terminated. Should either Sellers or Buyers exercise the right under Section 17.1 to terminate this Agreement the parties exercising the right shall not be liable to the other parties for any losses, damages or expenses incurred by such other parties as a result of the termination of this Agreement.

#### ARTICLE EIGHTEEN

##### LAWS AND REGULATIONS

Section 18.1 This Agreement, insofar as it is affected thereby, shall be subject to all valid and applicable laws, orders, rules, and regulations of governmental authorities having jurisdiction. Either party hereto shall have the right to contest the validity of any such law, order, rule or regulations and the acquiescence therein or compliance therewith for any period of time shall not be construed as a waiver of such right.

#### ARTICLE NINETEEN

##### CONSTRUCTION OF CONTRACT

Section 19.1 This instrument contains the entire contract and agreement between the parties and supersedes all prior agreements between them, and there are no oral promises or representations affecting it. It may be amended or

modified only in writing. Exhibit B, Measurement Procedures, and Exhibit C, Analysis Methods, may be amended or supplemented by written memoranda informally executed by employees of Buyers and Sellers who are responsible for conducting such measurement procedures and analysis methods.

#### ARTICLE TWENTY

##### ASSIGNMENT

Section 20.1 Any Seller or any Buyer may assign all or a part of its interest in this Agreement to any one who by accepting the assignment becomes a party to this Agreement, but no such assignment shall ever release or relieve the Seller or Buyer making the assignment from any part of its obligations and liabilities hereunder unless all of the other Sellers and Buyers agree to release and relieve the party assigning from its obligations and liabilities hereunder. The party assigning the interest shall, before making the assignment, notify the other parties of the intent to make the assignment, and shall furnish them with copies of the assignment after execution.

Any assignment shall contain a provision that the assignee by accepting the assignment agrees that all the terms and provisions of this Agreement shall extend to, be binding upon and inure to the benefit of the parties and their successors and assigns.

#### ARTICLE TWENTY-ONE

##### NON-WAIVER

Section 21.1 The failure of Sellers or Buyers at any time to require performance by the others of any provisions hereof shall in no way affect the right of a party to require any performance which may be due thereafter pursuant to such provision; nor shall the waiver by Buyers or Sellers of any breach of any provision hereof be taken or held to be a waiver of any subsequent breach of such provision.

ARTICLE TWENTY-TWO  
DEFAULT AND TERMINATION OF AGREEMENT

Section 22.1 Should either Sellers or Buyers default in the performance of any obligation under this Agreement, and such default shall continue for sixty (60) days after the party not in default has requested the party in default to remedy the default, the party not in default may, in addition to all other rights and remedies, suspend the deliveries or receipts of LNG until the default is remedied, or may cancel and terminate this Agreement.

ARTICLE TWENTY-THREE  
GENERAL

Section 23.1 Exchange of Information. Sellers shall keep Buyers informed about the progress Sellers are making in the construction of their liquefaction facilities in Alaska, and the progress they or their contractors are making in the construction of LNG tankers. Buyers shall likewise keep Sellers informed about the progress Buyers are making in the construction of Buyers' facilities in Japan. The parties shall, as far as reasonably possible, coordinate their construction programs to the end that the facilities of both parties will be completed at about the same time. The parties also shall keep each other informed about the progress they are making in obtaining all governmental authorizations provided for under the provisions of Section 17.1 hereof.

Section 23.2 Languages. This Agreement shall be made and originals executed in the English and Japanese languages, and the originals executed in both languages shall have the same effect; provided, however, that should either party give a meaning to any provision of this Agreement as written in one language different to the meaning the other party gives to the same provision as written in the other language, both parties shall attempt in good faith to mutually reconcile and



adjust the differences in meaning, but until they have mutually reconciled and adjusted the differences in meaning, the Agreement executed in English shall control.

IN WITNESS WHEREOF, the parties hereto have caused this contract to be executed in good faith, by their respective duly authorized officers, this 6th day of March, 1967.

BUYERS:

THE TOKYO ELECTRIC POWER COMPANY, INC.

By \_\_\_\_\_  
President and Director

TOKYO GAS COMPANY LIMITED

By \_\_\_\_\_  
President and Director

SELLERS:

MARATHON OIL COMPANY

By \_\_\_\_\_  
President

PHILLIPS PETROLEUM COMPANY

By \_\_\_\_\_  
President

EXHIBIT "A"

EXHIBIT "A"

DEFINITIONS

This Exhibit is attached to and made a part of that certain Liquefied Natural Gas Sales Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited, as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, dated March 6, 1967.

ARTICLE I

DEFINITIONS

Section 1.1 For the purpose of the Agreement to which this Exhibit A is attached, the following words and terms, unless their use in context is specifically to the contrary, shall have meanings as follows:

a. "Day" shall mean a period of time of twenty-four (24) consecutive hours beginning at 8:00 a.m. Japan Standard Time, and any day of a month shall begin at 8:00 a.m. Japan Standard Time.

b. "Month", unless preceded by the word "calendar", shall mean a period of time beginning on any day of a calendar month (Gregorian Calendar) and ending on the same day of the next succeeding calendar month.

c. "Year", unless preceded by the word "calendar", shall mean a period of time beginning on any day of a calendar year (Gregorian Calendar) and ending on the same day of the next succeeding calendar year.

d. "Contract year" shall mean a full period of twelve (12) consecutive months, the first contract year to begin on June 1, 1969, and to end the first day of the month one year thereafter.

e. "Btu" shall mean one (1) British Thermal Unit, and is defined as the amount of heat required to raise the temperature of one (1) pound of water from fifty-nine degrees (59°) to sixty degrees (60°) Fahrenheit.

f. "A cubic foot of gas" is the quantity of gas necessary to fill one cubic foot of space at a temperature of sixty degrees (60°) Fahrenheit and a pressure of fourteen and six hundred ninety-six one thousandths (14.696) pounds per square inch absolute, and "Mcf" shall mean one thousand (1,000) cubic feet.

g. "Gross heating value" is the heat liberated from burning one cubic foot of water-free gas, measured at sixty degrees (60°) Fahrenheit and at a pressure of fourteen and six hundred ninety-six one thousandths (14.696) pounds per square inch absolute, determined by cooling the products of combustion including the moisture formed to sixty degrees (60°) Fahrenheit.

h. "Liquefied natural gas", or "LNG", shall mean natural gas which has been transformed from a vapor to a liquid state in a processing plant and can be stored, transferred and transported in a liquid phase at approximately atmospheric pressure.

i. "Natural gas" shall mean gas and vapors produced from subterranean formations, whether produced from gas wells or oil wells.

j. "Annual contract quantity" shall mean that quantity of LNG which Buyers are obligated to purchase and receive and which Sellers are obligated to have available for delivery and to deliver to Buyers each contract year.

k. "Ton" shall mean a metric ton consisting of two thousand two hundred four and six-tenths (2204.6) pounds.

l. "LNG tanker" shall mean a ship in which LNG purchased and sold hereunder is transported.

m. "Liquefaction facilities" shall mean the liquefaction plant, storage tanks, pipelines, docks and loading facilities which Sellers will construct and operate in Alaska for the purpose of liquefying and loading into LNG tankers the LNG purchased and sold hereunder.

n. "Barrel" shall mean forty-two (42) United gallons (five and six thousand one hundred forty-six ten thousandths (5.6146) cubic feet).

**EXHIBIT "B"**

I N D E X  
EXHIBIT "B"  
MEASUREMENT PROCEDURES

<u>Article</u>	<u>Title</u>	<u>Page</u>
I	Calibration of LNG Tanks .....	B-1
II	Liquid Level, Temperature and Pressure Sensing Equipment .....	B-2
III	Sampling and Analysis Procedures.....	B-3
IV	Measurement Procedures .....	B-5
V	Physical Data .....	B-7
	Table I - Liquefied Natural Gas Conversion Factors (Consisting of Schedules A through I) .....	B-9

EXHIBIT "B"

MEASUREMENT PROCEDURES

This Exhibit is attached to and made a part of that certain Liquefied Natural Gas Sales Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited, as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, dated March 6, 1967.

Buyers and Sellers shall have the right for good reason to request changes in the physical constants, conversion factors, methods and equipment for measurement and analysis herein provided. When such request is made, Buyers and Sellers shall promptly hold mutual discussions in an attempt to agree upon revised constants, factors, methods and equipment.

ARTICLE I

CALIBRATION OF LNG TANKS

Section 1.1 During or immediately following LNG tanker construction, but in any event prior to loading of the first cargo, each LNG tank of each LNG tanker shall be calibrated by Charles Martin Company or any other recognized independent surveyor or measurement and testing specialists in the industry mutually agreed upon by Sellers and Buyers (hereafter referred to as "measurement specialists"). Such calibration will be in accordance with the standard procedures for petroleum tankage as prescribed in ASTM Method D-1220, including any revisions or amendments thereto. From the measurements so made, said measurement specialists shall prepare accurate tank tables correlating the volume in barrels (of 5.61-16 cubic feet) with the tank depth in feet and inches.

Section 1.2 Sellers and Buyers shall each have the right to have representatives present at the time each tank on each LNG tanker is volumetrically calibrated as provided above.

Section 1.3 In the event of damage to LNG tanks of an LNG tanker of a nature to cause a prudent operator to reasonably question the validity of the tank tables provided for in Section 1.1 (or any subsequent calibration provided for hereint), either Buyers or Sellers may require recalibration of such LNG tanks in the same manner as provided in Section 1.1 during any period when the LNG tanker shall be out of service for scheduled inspection and/or repairs. Except as provided in this Section 1.3 no other calibration of said tanks shall be required.

## ARTICLE II

### LIQUID LEVEL TEMPERATURE AND PRESSURE SENSING EQUIPMENT

Section 2.1 Each LNG tank in each LNG tanker shall be provided with a main liquid level gauging device especially suited to LNG service and capable of determining liquid level in this service to within plus or minus three tenths (0.3) of one inch. Each such tank shall also be provided with an auxiliary liquid level gauging device. Prior to Sellers selecting such auxiliary devices, Sellers will hold discussions with Buyers regarding the type of such auxiliary devices to be provided. Such liquid level gauging devices shall be installed on the longitudinal axis of the ship in each tank.

Section 2.2 Each LNG tanker shall be provided with a minimum of twenty (20) temperature measuring devices which shall have an accuracy of plus or minus five tenths (0.5) degrees Fahrenheit and which shall have passed a calibration test by pure methane. These devices will be used to determine the average liquid temperature and average vapor temperature of each cargo of LNG.



Section 2.3 Each LNG tank in each LNG tanker shall be provided with pressure gauging equipment approved by the parties, capable of determining the pressure of the vapor phase of the cargo. A barometer will be provided by Tokyo Gas at its Negishi plant for the purpose of measuring barometric pressure.

Section 2.4 The liquid level of each LNG tank shall be determined by taking ten (10) readings, or such lesser number as the parties mutually agree as practical, at one (1) minute intervals. An average of these readings will be the final liquid level of each LNG tank. The procedure described above shall be used for determining liquid levels before and after unloading.

The liquid temperature of each LNG tank before and after unloading shall be determined respectively by averaging the temperature readings of any of the temperature measuring devices known by liquid level measurement to be immersed in the liquid. The vapor temperature of each LNG tank before and after unloading shall be determined respectively by averaging the temperature readings of any of the temperature measuring devices known by liquid level measurement not to be immersed in the liquid. Each LNG tanker shall be provided with a data logging instrument capable of automatically recording in digital form the various readings as described above.

### ARTICLE III

#### SAMPLING AND ANALYSIS PROCEDURES

Section 3.1 Representative samples of the LNG delivered shall be obtained in triplicate by Buyers during the time of unloading and delivery to Buyers. The samples obtained will be distributed as follows: one sample from each set of three shall be immediately analyzed by Buyers; one sample from each set of three shall be retained by Buyers for forty-five (45) days or in the event of a dispute

between the parties as to the accuracy of the analysis until the dispute is resolved; and the third sample from each set of three shall be returned to Sellers aboard the delivering LNG tanker.

All samples will be taken from the sample connection provided by Buyers through a heating coil into the inlet connection (top) of suitable sample containers of ten gallons or more capacity each, or as mutually agreed upon by Buyers and Sellers. The LNG sample containers shall at the start of the unloading, be completely filled with suitable inert solution. When unloading is started, the inert solution will be withdrawn from the sample containers in such manner as will reasonably provide representative samples of the LNG delivered. The amount of the withdrawals shall be computed so that the composite sample size taken will be as mutually agreed between Buyers and Sellers.

Section 3.2 Analyses of the samples obtained in accordance with Section 3.1 hereof will be performed by Buyers in accordance with the requirements hereafter provided.

The samples of LNG obtained in accordance with Section 3.1 hereof shall be analyzed by gas chromatography in conformance with the method described in the latest revision of N.G.P.A. Standard 2261. Duplicate runs shall be made on each sample to determine that repeatabilities of peak heights are within the limits of one millimeter or one percent (whichever is larger) as specified in N.G.P.A. Standard 2261. When the repeatabilities of peak heights are within the above limits, the calculated results of such duplicate runs shall be averaged.

A reference standard run shall be made for each sample run while the chromatograph is in continuous operation.

Section 3.3 The collecting and analyzing of the samples shall be witnessed and verified upon request of Buyers or Sellers by an independent surveyor

selected and employed jointly by Buyers and Sellers. Sellers shall have the right to be present while samples are being collected and to witness all analyses and shall have the right to require check runs and other tests to ascertain that samples are representative and that the equipment performance is proper and that the compositions of the reference standards are accurate.

ARTICLE IV  
MEASUREMENT PROCEDURES

Section 4.1 Immediately prior to unloading each shipment of LNG, the main liquid level gauging devices specified in Article II will be used to determine the depth of liquid contained in each LNG tank of the LNG tankers when berthed at Buyers' docking facilities. By use of this level and the appropriate tank tables (provided for in Article I) the total gross barrels of liquid cargo will be recorded. If both the main and auxiliary liquid level gauging devices on the LNG tanker fail to operate properly, then the quantity of LNG delivered shall be determined by Buyers' shore tank gauges.

Section 4.2 Through the sampling and analysis procedure provided in Article III, the composition of the LNG delivered will be determined in mole fractions.

Section 4.3 Immediately following the unloading of LNG from each LNG tanker, determine and record the total gross barrels of LNG remaining in the tanks in the same manner as provided in Section 4.1. Subtract the gross number of barrels of LNG remaining in the tanks (corrected to the average temperature of the liquid determined prior to unloading) from the gross number of barrels of LNG determined prior to unloading. The difference is the apparent number of barrels of LNG delivered from the LNG tanker.

Section 4.4 Through use of the temperature measuring devices and pressure gauging equipment specified in Article II the average temperature of the

vapor and the pressure of the vapor in each tank shall be calculated upon completion of unloading. The barometric pressure is determined by the barometer specified in Article II.

Section 4.5 The following formula shall be used to determine the total number of Btu's delivered from Sellers to Buyers:

$$Q = \left( B \times \frac{\sum MH}{\sum ML} \right) - \left( 5.6146 \times B \times \frac{520}{T} \times \frac{P_A + P_G}{760} \times \frac{\sum MH}{379.495} \right)$$

Where:

Q = Actual quantity of Btu's delivered (per tanker unloaded).

B = Number of barrels of LNG apparently delivered.

M = Component mole fraction.

L = Liquid factor for average LNG temperature from Table I.

Liquid factor means liquid volume in barrels (5.6146 cubic feet) occupied by one pound mole at the average temperature of liquid determined before unloading.

H = Btu's per pound mole from Table I.

T = Average temperature of tank vapors in degrees Rankine.

P<sub>A</sub> = Barometric pressure at the time unloading is completed. The unit of measurement will be millimeters of mercury.

P<sub>G</sub> = Gauge pressure of tank vapors at the time unloading is completed. The unit of measurement will be millimeters of mercury.

Section 4.6 Numerical values used in Section 4.5 shall be treated as follows:

Q - Omit from quantities of Btu's delivered any part of one million (1,000,000) Btu's between one (1) and nine hundred ninety-nine thousand nine hundred ninety-nine (999,999).

B - Omit from barrels of LNG any fraction of one barrel.

M - Significant figures shall be 0.0001 or larger.

- T - Use the nearest whole number average temperature in the unit of one (1) degree Rankine. The fractional degrees of the average temperature will be dropped when they are less than five-tenths a degree (0.5) and will be increased to the next whole number when they are five-tenths (0.5) or more.
- L - To pick this number from Table I, use the nearest whole number average temperature in the unit of one (1) degree Fahrenheit. The fractional degrees of the average temperature will be dropped when they are less than five-tenths a degree (0.5) and will be increased to the next whole number when they are five-tenths (0.5) or more.
- P<sub>c</sub> - Use the value to the nearest unit recorded, expressed in millimeters of mercury.
- P<sub>a</sub> - Use the value to the nearest unit recorded, expressed in millimeters of mercury.

## ARTICLE V

### PHYSICAL DATA

#### Section 5.1 Basic Physical Factors.

##### A. Gross Heat of Combustion.

<u>Component</u>	<u>Btu/pound vapor at 60°F</u>
Methane	23,885
Ethane	22,323
Propane	21,664
Isobutane	21,238
N-butane	21,299
N-pentane	21,088
N-hexane	20,944

Gross Heat of Combustion, Btu/pound mole of component equals Btu/pound times molecular weight.

Source: N.G.P.A. Publication 2145-66.

B. Molecular Weight.

<u>Component</u>	
Methane	16.042
Ethane	30.068
Propane	44.094
Butanes	58.120
Pentanes	72.146
Hexanes	86.172

Source: N.G.P.A. Publication 2145-66

SCHEDULE A  
NITROGEN

EXHIBIT B  
TABLE I

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 0.0000 Btu per pound mole

LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 245.0	0.165738
- 246.0	0.164830
- 247.0	0.163919
- 248.0	0.163005
- 249.0	0.162091
- 250.0	0.161174
- 251.0	0.160257
- 252.0	0.159339
- 253.0	0.158421
- 254.0	0.157502
- 255.0	0.156585
- 256.0	0.155668
- 257.0	0.154752
- 258.0	0.153837
- 259.0	0.152923
- 260.0	0.152012
- 261.0	0.151102
- 262.0	0.150195
- 263.0	0.149290
- 264.0	0.148388
- 265.0	0.147489
- 266.0	0.146593
- 267.0	0.145700
- 268.0	0.144810
- 269.0	0.143924
- 270.0	0.143042
- 271.0	0.142163
- 272.0	0.141288
- 273.0	0.140418
- 274.0	0.139551
- 275.0	0.138689

SCHEDULE B  
CARBON DIOXIDE

EXHIBIT B  
TABLE I

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 0.0000 Btu per pound mole

LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 245.0	0.086301
- 246.0	0.086221
- 247.0	0.086141
- 248.0	0.086061
- 249.0	0.085982
- 250.0	0.085903
- 251.0	0.085824
- 252.0	0.085745
- 253.0	0.085667
- 254.0	0.085588
- 255.0	0.085510
- 256.0	0.085433
- 257.0	0.085355
- 258.0	0.085278
- 259.0	0.085201
- 260.0	0.085124
- 261.0	0.085048
- 262.0	0.084972
- 263.0	0.084895
- 264.0	0.084820
- 265.0	0.084744
- 266.0	0.084669
- 267.0	0.084594
- 268.0	0.084519
- 269.0	0.084444
- 270.0	0.084370
- 271.0	0.084296
- 272.0	0.084222
- 273.0	0.084148
- 274.0	0.084075
- 275.0	0.084001



SCHEDULE C  
METHANE

EXHIBIT B  
TABLE I

(Consisting of Schedules A through D)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 383,163 Btu per pound mole

LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 245.0	0.110397
- 246.0	0.110189
- 247.0	0.109983
- 248.0	0.109778
- 249.0	0.109576
- 250.0	0.109376
- 251.0	0.109178
- 252.0	0.108981
- 253.0	0.108787
- 254.0	0.108594
- 255.0	0.108403
- 256.0	0.108214
- 257.0	0.108026
- 258.0	0.107840
- 259.0	0.107656
- 260.0	0.107474
- 261.0	0.107293
- 262.0	0.107114
- 263.0	0.106936
- 264.0	0.106760
- 265.0	0.106586
- 266.0	0.106413
- 267.0	0.106242
- 268.0	0.106072
- 269.0	0.105903
- 270.0	0.105736
- 271.0	0.105571
- 272.0	0.105407
- 273.0	0.105244
- 274.0	0.105083
- 275.0	0.104923

SCHEDULE D  
ETHANE

EXHIBIT B  
TABLE I

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 671.208 Btu per pound mole  
LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 245.0	0.140564
- 246.0	0.140447
- 247.0	0.140331
- 248.0	0.140215
- 249.0	0.140099
- 250.0	0.139984
- 251.0	0.139869
- 252.0	0.139754
- 253.0	0.139640
- 254.0	0.139526
- 255.0	0.139412
- 256.0	0.139299
- 257.0	0.139186
- 258.0	0.139073
- 259.0	0.138961
- 260.0	0.138849
- 261.0	0.138737
- 262.0	0.138626
- 263.0	0.138515
- 264.0	0.138404
- 265.0	0.138293
- 266.0	0.138183
- 267.0	0.138073
- 268.0	0.137964
- 269.0	0.137855
- 270.0	0.137746
- 271.0	0.137637
- 272.0	0.137529
- 273.0	0.137421
- 274.0	0.137313
- 275.0	0.137206

SCHEDULE E  
PROPANE

EXHIBIT B  
TABLE I

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 955,252 Btu per pound mole

LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
-245.0	0.180728
-246.0	0.180596
-247.0	0.180465
-248.0	0.180334
-249.0	0.180203
-250.0	0.180072
-251.0	0.179942
-252.0	0.179812
-253.0	0.179682
-254.0	0.179553
-255.0	0.179423
-256.0	0.179295
-257.0	0.179166
-258.0	0.179038
-259.0	0.178909
-260.0	0.178782
-261.0	0.178654
-262.0	0.178527
-263.0	0.178400
-264.0	0.178273
-265.0	0.178147
-266.0	0.178020
-267.0	0.177895
-268.0	0.177769
-269.0	0.177644
-270.0	0.177518
-271.0	0.177394
-272.0	0.177269
-273.0	0.177145
-274.0	0.177021
-275.0	0.176897

SCHEDULE F  
ISOBUTANE

EXHIBIT B  
TABLE I

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 1,234,353 Btu per pound mole

LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 245.0	0.225631
- 246.0	0.225480
- 247.0	0.225330
- 248.0	0.225180
- 249.0	0.225030
- 250.0	0.224881
- 251.0	0.224732
- 252.0	0.224583
- 253.0	0.224434
- 254.0	0.224286
- 255.0	0.224138
- 256.0	0.223990
- 257.0	0.223843
- 258.0	0.223695
- 259.0	0.223548
- 260.0	0.223402
- 261.0	0.223255
- 262.0	0.223109
- 263.0	0.222963
- 264.0	0.222818
- 265.0	0.222672
- 266.0	0.222527
- 267.0	0.222383
- 268.0	0.222238
- 269.0	0.222094
- 270.0	0.221950
- 271.0	0.221806
- 272.0	0.221662
- 273.0	0.221519
- 274.0	0.221376
- 275.0	0.221233

EXHIBIT B  
TABLE I

SCHEDULE C  
N-BUTANE

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 1,237,898 Btu per pound mole

LIQUID FACTORS: Barrels of liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 245.0	0.223311
- 246.0	0.223178
- 247.0	0.223045
- 248.0	0.222912
- 249.0	0.222780
- 250.0	0.222648
- 251.0	0.222516
- 252.0	0.222384
- 253.0	0.222253
- 254.0	0.222121
- 255.0	0.221990
- 256.0	0.221860
- 257.0	0.221729
- 258.0	0.221599
- 259.0	0.221469
- 260.0	0.221340
- 261.0	0.221210
- 262.0	0.221081
- 263.0	0.220952
- 264.0	0.220823
- 265.0	0.220695
- 266.0	0.220567
- 267.0	0.220439
- 268.0	0.220311
- 269.0	0.220183
- 270.0	0.220056
- 271.0	0.219929
- 272.0	0.219802
- 273.0	0.219676
- 274.0	0.219550
- 275.0	0.219424

SCHEDULE H  
PENTANES

EXHIBIT B  
TABLE I

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 1,521,415 Btu per pound mole  
LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 245.0	0.264798
- 246.0	0.264646
- 247.0	0.264494
- 248.0	0.264342
- 249.0	0.264191
- 250.0	0.264039
- 251.0	0.263888
- 252.0	0.263737
- 253.0	0.263587
- 254.0	0.263436
- 255.0	0.263286
- 256.0	0.263136
- 257.0	0.262986
- 258.0	0.262837
- 259.0	0.262687
- 260.0	0.262538
- 261.0	0.262390
- 262.0	0.262241
- 263.0	0.262093
- 264.0	0.261945
- 265.0	0.261797
- 266.0	0.261649
- 267.0	0.261502
- 268.0	0.261354
- 269.0	0.261207
- 270.0	0.261061
- 271.0	0.260914
- 272.0	0.260768
- 273.0	0.260622
- 274.0	0.260476
- 275.0	0.260330

SCHEDULE I  
HEXANES

EXHIBIT B  
TABLE I

(Consisting of Schedules A through I)

LIQUEFIED NATURAL GAS CONVERSION FACTORS

HEATING VALUE: 1,301,786 Btu per pound mole

LIQUID FACTORS: Barrels of Liquid at Specified Temperature per  
pound mole of Component

Temperature Degrees F	Factor Bbls/Pound Mole
- 215.0	0.305225
- 246.0	0.306064
- 247.0	0.305903
- 248.0	0.305743
- 249.0	0.305583
- 250.0	0.305422
- 251.0	0.305263
- 252.0	0.305103
- 253.0	0.304944
- 254.0	0.304784
- 255.0	0.304626
- 256.0	0.304467
- 257.0	0.304308
- 258.0	0.304150
- 259.0	0.303992
- 260.0	0.303834
- 261.0	0.303677
- 262.0	0.303519
- 263.0	0.303362
- 264.0	0.303205
- 265.0	0.303048
- 266.0	0.302892
- 267.0	0.302735
- 268.0	0.302579
- 269.0	0.302423
- 270.0	0.302268
- 271.0	0.302112
- 272.0	0.301957
- 273.0	0.301802
- 274.0	0.301647
- 275.0	0.301492

I N D E X

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EXHIBIT "C"

ANALYSIS METHODS

FOR DETERMINING IMPURITIES CONTAINED IN LNG

This Exhibit is attached to and made a part of that certain Liquefied Natural Gas Sales Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited, as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, dated March 6, 1967.

Buyers and Sellers shall have the right for good reason to request changes in the test methods and procedures as specified herein. When such request is made, Buyers and Sellers shall promptly hold mutual discussion in an attempt to agree upon a revised method and procedure.

ARTICLE I

SCOPE OF THIS EXHIBIT C

Analysis of the impurities described in Section 7.3 of the Sales Agreement shall follow the methods and procedures specified herein.

ARTICLE II

SAMPLING AND ANALYSES

The representative samples of the LNG delivered shall be obtained and analyses performed in accordance with the provisions in Sections 3.1 and 3.3 of Exhibit B of the Sales Agreement and sound engineering practices.

Buyers shall install, maintain and operate suitable equipment and devices for sampling and analyses described hereabove.

Analyses shall follow the methods and procedures specified in Article III through Article VII below.

ARTICLE III  
HYDROGEN SULFIDE

Analysis of hydrogen sulfide shall follow the qualitative method described in the Second Edition of Circular 48 of the National Bureau of Standards (U.S.) entitled "Standard Method of Gas Testing". If the results of the above stated test are inconclusive, test method one, methylene blue method as described in British Standard 3156-1959 shall be used for quantitative analysis. In such event hydrogen sulfide shall be considered undetectable by the qualitative test if the quantity determined is one-fourth (1/4) grain or less per one hundred (100) standard cubic feet.

ARTICLE IV  
TOTAL SULFUR

Analysis of total sulfur shall follow the method as described in ASTM D-1072-56. The total sulfur shall be considered undetectable by the above test method when the results are one and three-tenths (1.3) grains or less per one hundred (100) standard cubic feet.

ARTICLE V  
CYANIDES

Analysis of cyanides shall follow the test method approved by the parties. Cyanides shall be considered undetectable by the above test method when the results are one-tenth (1/10) or less grain per one hundred (100) standard cubic feet.

ARTICLE VI

AMMONIA

Analysis of ammonia shall follow the test method approved by the parties. Ammonia shall be considered undetectable by the above test method when the results are one (1) grain or less per one hundred (100) standard cubic feet.

ARTICLE VII

METAL CARBONYL

Metal carbonyl shall be the total of iron carbonyl and nickel carbonyl. Analysis of metal carbonyl shall follow the test method approved by the parties. Metal carbonyl shall be considered undetectable by the above test method when the results are one-tenth (1/10) grain or less per one hundred (100) standard cubic feet.

EXHIBIT "C"



**DATES:** Petitions to intervene are to be filed on or before the 15th day after the date of publication of this notice in the FEDERAL REGISTER.

**FOR FURTHER INFORMATION CONTACT:** Stanley Vass, Division of Natural Gas, Economic Regulatory Administration, Federal Building, Room \_\_\_\_\_, 12th Street and Pennsylvania Avenue, N.W., Washington, D.C. 20461, (202) \_\_\_\_\_.

\_\_\_\_\_ (Office of General Counsel, Natural Gas and Mineral Leasing), 1000 Independence Avenue, S.W., Forrestal Building, Room \_\_\_\_\_, Washington, D. C. 20585, (202) \_\_\_\_\_.

**SUPPLEMENTARY INFORMATION:**

By an order dated April 19, 1967 in FPC Docket No. CI67-1226, the FPC authorized the exportation to Japan by Phillips and Marathon of LNG manufactured from natural gas produced in Alaska. The order approved the exportation pursuant to a contract dated March 6, 1967 between Phillips and Marathon as sellers, and the Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited as buyers.

That agreement provided for the annual delivery (after the first year) of 50.57 trillion Btu's of LNG to Japan. The natural gas exported is produced in the Cook Inlet Basin area of Alaska, delivered by pipeline to liquefaction facilities near Kenai, Alaska and then shipped by two LNG tankers to Japan.

The initial term of the March 6, 1967 contract was to expire on May 31, 1984 unless an option to renew the contract were exercised by the parties between June 1, 1981 and June 1, 1982. The parties have entered into an Amendatory Extension Agreement dated April 15, 1982 in order to exercise this option.

The extension amendment provides that the term of the contract will be extended for five years through May 31, 1989. The quantities of LNG exported during the five year extension will remain the same under the April 15, 1982 agreement, except that the annual contract volumes which are not delivered in a given year due to unforeseen circumstances or to a reduction in the amount received by buyers will be delivered as soon as possible thereafter in subsequent contract years or during a maximum seven month period beginning June 1, 1989. In addition, Phillips and Marathon request express approval for the shipment, pursuant to the original March 6, 1967 contract, of authorized contract volumes which have not been delivered in past contract years, or which are not delivered in future contract years.

The price to be charged for the LNG delivered to Japan is determined by Article 9 of the March 6, 1967 contract as amended. The currently effective price is determined by a base price of 592.8 U.S. cents per million Btu's indexed in accordance with a formula based upon changes in the weighted average of Government Selling Prices of the top twenty crude oils imported by Japan.

That formula produced a delivered price of approximately \$5.76 per million Btu's for April 1982.

The same liquefaction plant, storage facilities and LNG tankers presently used to export this LNG will continue to be used during the five year extension period. No alterations or additions to those facilities are anticipated during the period of the extension.

In support of their application, Phillips and Marathon state that continuation of the export project for five years would not be inconsistent with the public interest. They state that the application seeks only the routine continuation for five years of an established export project with the same facilities and the same successful method of operation -- an extension which was not only provided for in the original contract, but also contemplated by both the parties and the FPC in 1967.

Applicants state that there is no national or regional need for the natural gas which will be exported during the five year extension period, both because of strong national and regional supplies of natural gas, and because it is economically infeasible for applicants to market this LNG in the continental United States within the time period of the proposed extension. They also observe that the price to be charged for the delivered LNG is reasonably related to the free market price of alternative sources of equivalent energy.



Applicants state that continuation of the project will benefit U.S. relations with Japan by enabling the Japanese to maintain diversity of the sources of their imported energy supplies. The U.S. will also benefit because of the positive effect of the substantial revenues generated by this project on the balance of payments position of the U.S. with Japan.

Applicants further state that continuation of the project will also benefit the citizens of Alaska by providing tax and royalty revenues to the state. In addition, continued operation of the export facilities will provide continued employment and economic stimulus to the Kenai, Alaska area.

Finally, applicants state that the request to ship additional quantities of LNG to make up for the under-delivery of authorized contract amounts is consistent with the public interest because such make-up provisions, which are common in national and international natural gas sales contracts, simply ensure that the total contract amount of LNG authorized to be exported will in fact be delivered.

**OTHER INFORMATION:**

Any person wishing to become a party to the proceeding or to participate as a party in any conference or hearing which might be convened must file a petition to intervene. Any person may file a protest with respect to this application. The filing of a protest will not serve to make the protestant a party to the

proceeding. Protests will be considered in determining the appropriate action to be taken on the application.

All protests and petitions to intervene must meet the requirements specified in 18 C.F.R. §§ 1.8 and 1.10. They should be filed with the Division of Natural Gas, Economic Regulatory Administration, Room \_\_\_\_\_, Federal Building, 12th Street and Pennsylvania Avenue, N.W., Washington, D.C. 20461. All protests and petitions to intervene must be filed on or before the 15th day after the date of publication of this notice in the FEDERAL REGISTER.

A hearing will not be held unless a motion for hearing is made by a party or person seeking intervention and granted by ERA, or if ERA on its own motion believes that a hearing is necessary or required. A person filing a motion for hearing should demonstrate how a hearing will advance the proceedings. Notice of any scheduled hearing will be provided by ERA to all parties and persons whose petitions to intervene are pending.

A copy of the application noticed herein is available for public inspection and copying in the Division of Natural Gas Docket Room, Room \_\_\_\_\_, Federal Building, 12th Street and Pennsylvania Avenue, N.W., Washington, D.C. 20461 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, D.C. on May \_\_, 1982.

Rayburn Hanzlik,

Administrator, Economic Regulatory Administration

UNITED STATES OF AMERICA  
FEDERAL POWER COMMISSION

OFFICE OF THE SECRETARY  
MAY 10 4 55 PM '87  
FEDERAL POWER COMMISSION

In the Matter of )  
 )  
Phillips Petroleum Company )  
Marathon Oil Company )

Docket No. \_\_\_\_\_

APPLICATION FOR AUTHORIZATION TO  
EXPORT LIQUEFIED NATURAL GAS

Phillips Petroleum Company (hereinafter referred to as "Phillips") and Marathon Oil Company (hereinafter referred to as "Marathon") hereby separately make application pursuant to Section 3 of the Natural Gas Act, and in accordance with Part 153 of the Commission's Regulations under the Natural Gas Act, for authorizations to export liquefied natural gas (LNG) from the United States. In conformity with the requirements of Section 153.1-153.8 inclusive, of the Commission's Regulations under the Natural Gas Act, Applicants show:

A. The Exact Legal Names of Applicants Are.

Phillips Petroleum Company  
Marathon Oil Company

B. The Name, Title, and Post Office Address of the Persons to Whom Correspondence in Regard to this Application Shall be Addressed:

Mr. Dan L. Mayer  
Manager, Natural Gas and Gasoline Department  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74003

Mr. Kenneth Heady, Counsel  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74003

MAY 10 4 55 PM '87

Mr. S. C. Sandusky  
Manager, Natural Gas Division  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

Mr. Morton Taylor, Attorney  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

C. The State or Territory Under the Laws of which the Applicants Were Organized:

Phillips Petroleum Company is organized under the laws of the State of Delaware and has its principal offices in Bartlesville, Oklahoma. Phillips is presently authorized to do business in all fifty of the United States and in the District of Columbia.

Marathon Oil Company is a corporation organized and existing under the laws of the State of Ohio. Its principal place of business is in Findlay, Ohio. Marathon is organized to do business in each of the fifty states of the United States except Delaware, Hawaii, Idaho, Maine, Minnesota, New Hampshire, Oregon and Vermont.

D. Name and Location of the Fields in which the Gas Proposed to be Liquefied and Exported is Produced and the Most Recent Estimate of the Remaining Natural Gas Reserves in such Fields:

The natural gas proposed to be liquefied and exported by Applicants will be produced from reserves owned or controlled by Phillips in the North Cook Inlet Field and from reserves owned or controlled by Marathon in the Kenai Field. Both of such fields are in the Cook Inlet Basin Area of the State of Alaska.

The North Cook Inlet producing properties will supply 70% and the producing properties in the Kenai Field will supply 30% of the natural gas to be liquefied for exportation.

The most recent estimate of the natural gas reserves in the North Cook Inlet and Kenai Fields available and committed to this project is 930 billion cubic feet.

E. Name of Purchaser of LNG Proposed to be Exported, Its Proposed Use in the Foreign Country, The Rate to be Charged the Purchaser for Such Gas, and the Rate Charged for Similar Service, if Rendered in the United States:

(1) The names of the proposed purchasers are:

The Tokyo Electric Power Company, Inc.  
Tokyo Gas Company Limited

(2) The purchasers' proposed use of such LNG:

Applicants understand that after regasification, a portion of the gas will be used as fuel in the generation of electricity by The Tokyo Electric Power Company, Inc., and that the gas purchased by Tokyo Gas Company Limited will be resold in Japan to its residential, commercial and industrial customers.

(3) The rate proposed to be charged the purchasers for such LNG at the point of delivery at or near Yokohama, Japan is 52¢ per Million Btu.

(4) Neither of the Applicants render similar service in the United States.

F. Data on Importation of Natural Gas. Not applicable.

G. Description of Facilities to be Utilized in the Proposed Exportation of LNG:

The facilities to be utilized in the proposed exportation of LNG will be installed downstream from the liquefaction plant proposed to be located near Kenai, Alaska. The LNG will be stored in three 225,000-barrel storage tanks at an average temperature of -259°F. These storage facilities will have sufficient capacity to load the specially designed ocean-going LNG tankers and to store plant production during normal variations in ship scheduling. The design of such tanks also gives consideration to shutdowns for ship repairs and periods of unpredictable disruptions due to bad weather or other reasons.

LNG will be piped through insulated lines extending from the storage tanks to a conventional all-weather loading dock located nearby.

H. Statement of Reasons Why the Proposed Exportation (1) Will Not be Inconsistent With the Public Interest and (2) Will Not in Any Way Impair the Ability of Applicants to Render Natural Gas Service at Reasonable Rates to Their Customers in the United States:

(1) The entire demand for natural gas in the State of Alaska for the foreseeable future can be supplied from a small fraction of the State's proved natural gas reserves. Without the development of foreign markets as here proposed, much of Alaska's natural gas reserves would of necessity remain undeveloped and unproductive for many years. Thus the proposed liquefaction of natural gas for export to Japanese markets will not only assist in the development of the State's natural resources, but it will introduce new industry which will in turn add new payrolls and new sources of revenue to the Alaskan economy. In addition, the State will benefit directly from payments received for its royalty interests in production from these state leases, as well as through the receipt of income, ad valorem and severance taxes in connection with this project.

Further, in recent years the United States government has voiced a growing and urgent concern in regard to the increasing deficit in the balance of payments from international trade. Therefore, the proposed exportation and sale of LNG will not only serve to improve and stimulate the economy of Alaska, but it will also serve the national interests by reducing the deficit in the balance of payments.

(2) Inasmuch as the Applicants have been unable to develop a comparable domestic market for these Alaskan reserves, the proposed exportation will not in any way impair their ability to render natural gas service to their existing customers in the United States.

Wherefore, Applicants respectfully request that the Commission approve this application and grant to each of the Applicants authority to export LNG from Alaska to Japan as hereinabove described.

Dated March 8, 1967.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

*Dan L. Mayer*  
By Dan L. Mayer  
Manager, Natural Gas and Gasoline  
Department

MARATHON OIL COMPANY

Clayton L. Orn  
Morton Taylor  
Jack Fariss  
Attorneys for Marathon Oil Company

By Morton Taylor  
Morton Taylor

EXHIBITS

- Exhibits A  
and A-2 - Articles of Incorporation and By-Laws of company.
- Exhibits B  
and B-2 - Copies of Applicants' Annual Reports to Stockholders  
for year 1965.
- Exhibit C  
and C-2 - Statements, including signed opinions of counsel,  
showing that exportation of LNG is within corporate  
powers of Applicants and that Applicants have complied  
with State laws and with the rules and regulations of  
state regulatory authorities in the State or States in  
which Applicants operate.
- Exhibit D - Copy of the Liquefied Natural Gas Sales Agreement dated  
March 6, 1967, between The Tokyo Electric Power Company,  
Inc. and Tokyo Gas Company Limited, as Buyers, and  
Marathon Oil Company and Phillips Petroleum Company, as  
Sellers.
- Exhibit E - Not applicable
- Exhibit F - Map showing location of facilities.




DISTRICT OF COLUMBIA    )  
                                  )  
CITY OF WASHINGTON        )    ss:

DAN L. MAYER, being first duly sworn, deposes and says:  
That he is Manager of the Natural Gas and Gasoline Department of  
Phillips Petroleum Company; that he has read the foregoing Applica-  
tion, and that the matters and facts set forth therein are true and  
correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
Dan L. Mayer

Subscribed and sworn to before me a Notary Public in and for  
the District of Columbia, this 8th day of March, 1967.

  
\_\_\_\_\_  
Ruth E. Morningstar  
Notary Public, D. C.

My Commission Expires:  
December 31, 1970.

WASHINGTON  
DISTRICT OF COLUMBIA } SS

MORTON TAYLOR, being first duly sworn according to law, deposes and states that he is Attorney for Marathon Oil Company; that as such Attorney he has signed the annexed Application of Marathon Oil Company for and on behalf of Marathon Oil Company; that he is authorized so to do; that he has read the document and is familiar with the contents thereof; and that the matters and things set forth are true and correct to the best of his knowledge, information and belief.

Morton Taylor  
Morton Taylor

Subscribed and sworn to before me, a Notary Public,  
this 8th day of March, 1967.

Ruth E. Warriner  
Notary Public  
My Commission Expires 12/31/70

**LIQUEFIED NATURAL GAS SALES AGREEMENT**

**THE TOKYO ELECTRIC POWER  
COMPANY, INC.**

**TOKYO GAS COMPANY LIMITED**

**MARATHON OIL COMPANY**

**PHILLIPS PETROLEUM COMPANY**

I N D E X

LIQUEFIED NATURAL GAS SALES AGREEMENT

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LIQUEFIED NATURAL GAS SALES AGREEMENT

THIS AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY LIMITED (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers", and executed in both the English and Japanese languages.

WITNESSETH:

In consideration of the mutual and dependent promises herein contained, the parties hereto agree as follows:

ARTICLE ONE

DEFINITIONS

Section 1.1 For the purpose of this Agreement, the words and terms contained in Exhibit A attached hereto and made a part hereof, unless their use in context is specifically to the contrary, shall have meanings contained in Exhibit A.

ARTICLE TWO

PURCHASE AND SALE

Section 2.1 Subject to all of the terms and conditions herein set forth, Buyers agree to purchase and receive from Sellers and to pay for, and Sellers agree to sell and deliver to Buyers LNG in the quantities and at the times and place and at the price hereinafter set forth.

ARTICLE THREE  
SOURCE OF SUPPLY

Section 3.1 The natural gas which Sellers will liquefy and sell and deliver to Buyers as LNG, will be produced from natural gas reserves located in the State of Alaska, United States of America. Sellers warrant that they own and control or have committed to them volumes of natural gas reserves sufficient to enable Sellers to sell and deliver to Buyers the annual contract quantities of LNG.

ARTICLE FOUR  
DELIVERY POINT, FACILITIES AND TITLE

Section 4.1 Delivery Point. Delivery of the LNG sold and purchased under this Agreement will be made by Sellers to Buyers in LNG tankers, and the point of delivery shall be at the flange connecting the unloading piping of the LNG tanker with the piping of Tokyo Gas.

Section 4.2 Buyers' Facilities. Buyers shall construct, maintain and operate or cause to be constructed, maintained and operated at their sole cost, expense and risk, docking, unloading and receiving facilities. The docking facilities shall be located at Tokyo Gas' Negishi Plant Site, in the city of Yokohama, Japan, and they shall be capable of handling and accommodating at mean low tide an LNG tanker approximately eight hundred (800) feet in length, with a loaded draft of not more than thirty-three and one-half (33-1/2) feet carrying approximately four hundred fifty thousand (450,000) barrels of LNG. LNG tankers shall have the right immediately upon arrival to use Buyers' docking facilities without any charges being imposed by Buyers for such use. The unloading facilities shall include lines and other terminal equipment of sufficient capacity to permit the unloading of an LNG tanker at a rate of not less than thirty thousand (30,000) barrels of LNG per hour when pumping

at a reasonable discharge pressure which is mutually acceptable to both parties. Such facilities shall also include a pipe line sufficient in size to return natural gas vapors from Buyers' storage tanks to the LNG tanker. The receiving facilities shall include storage and other auxiliary facilities of sufficient capacity to permit Sellers to deliver and Buyers to receive full tanker loads of LNG at the rates of delivery specified herein. Buyers shall also provide adequate facilities free of cost to Sellers to supply the LNG tankers with fresh water and ships stores.

Section 4.3 Sellers' Facilities. Sellers shall construct, maintain and operate or cause to be constructed, maintained and operated liquefaction facilities located in the State of Alaska, sufficient in size to enable Sellers to liquefy and deliver to Buyers or cause to be liquefied and delivered to Buyers the annual contract quantities of LNG purchased and sold hereunder. Sellers shall also construct, maintain and operate or cause to be constructed, maintained and operated two (2) LNG tankers to make the deliveries of LNG hereunder. It is contemplated that each LNG tanker shall be approximately eight hundred (800) feet in length, with a loaded draft of not more than thirty-three and one-half (33-1/2) feet and capable of carrying approximately four hundred fifty thousand (450,000) barrels of LNG at an average sea speed of seventeen (17) knots.

Section 4.4 Passage of Title. Title to the LNG purchased and sold hereunder shall pass from Sellers to Buyers at the point of delivery specified in Section 4.1.

## ARTICLE FIVE

### LIABILITY

Section 5.1 While the LNG tanker is being berthed, is berthed, or is leaving the berth at Buyers' Negishi dock, Buyers shall indemnify Sellers for any



injuries or damages they may suffer as a result of the negligence, or willful and malicious acts of Buyers, their agents, employees, contractors and suppliers of labor and materials and their employees while performing services for Buyers, and Sellers shall indemnify Buyers from any injuries or damages Buyers may suffer as a result of the negligence, or willful and malicious acts of Sellers, their agents, employees, contractors and suppliers of labor and materials and their employees while performing services for Sellers. Sellers shall cause the LNG to be delivered and Buyers shall receive the LNG at the delivery point with due regard for appropriate safety precautions.

## ARTICLE SIX

### QUANTITIES AND RATES OF DELIVERIES

#### Section 6.1 Annual Contract Quantity and Rates of Deliveries.

The annual contract quantity of LNG which Sellers agree to sell and deliver to Buyers, and which Buyers agree to receive and pay for under this Agreement, for each contract year except the first contract year is fifty trillion, five hundred seventy billion Btu's (50,570,000,000,000 Btu's), (which is the methane equivalent of approximately nine hundred sixty thousand (960,000) metric tons). As between Tokyo Electric and Tokyo Gas, Tokyo Electric's share of the annual contract quantity shall be thirty-seven trillion, nine hundred twenty-seven billion, five hundred million Btu's (37,927,500,000,000 Btu's), (which is the methane equivalent of approximately seven hundred twenty thousand (720,000) metric tons), and Tokyo Gas' share of the annual contract quantity shall be twelve trillion, six hundred forty-two billion, five hundred million Btu's (12,642,500,000,000 Btu's), (which is the methane equivalent of approximately two hundred forty thousand (240,000) metric tons).

Except for the Initial Delivery Schedule, as set forth in Section 6.2, and except for the annual inspection periods cargoes of LNG shall be delivered and received during each contract year at rates and intervals and in volumes reasonably equal and constant, and Buyers and Sellers shall cooperate in the expeditious unloading of each cargo so that cargoes may be so delivered and received. Sellers shall on or before the fifteenth (15th) day of each month mail to Buyers a forecast of the rates of delivery of LNG during each of the next twelve (12) months, and Sellers and Buyers shall discuss any changes which Buyers may desire in the forecast of rates of delivery. Sellers and Buyers shall schedule or cause to be scheduled all annual inspections and overhauls of their respective plants and facilities and the LNG tankers during the months of September, October and November as to Sellers and Tokyo Electric, and during July and August as to Tokyo Gas, or at such other times as such annual inspections and overhauls can be made with the approval of Buyers and Sellers without reducing the delivery of the annual contract quantity of LNG.

Section 6.2 Initial Delivery Schedule. Subject to Sellers, after the exercise of reasonable diligence, receiving timely delivery from the shipyard of the first LNG tanker and completing construction of the other necessary facilities, and Tokyo Electric, after the exercise of reasonable diligence, timely completing construction of its power generating plants at Negishi and Tokyo Gas, after the exercise of reasonable diligence, timely completing construction of its LNG terminal facilities at Negishi, the target date for the first cargo of LNG to be delivered by Sellers and received by Buyers shall be March 1, 1969. Buyers and Sellers shall cooperate in establishing a mutually satisfactory schedule of delivery rates of LNG for the period from March 1, 1969 through May 31, 1970, which rates shall be sufficient for Sellers and Buyers to test and bring into operation their respective facilities which they will construct.

The parties contemplate that the deliveries and receipts during the first contract year from June 1, 1969 through May 31, 1970 shall be thirty-five trillion, two hundred ninety-five billion Btu's (35,295,000,000,000 Btu's), (which is the methane equivalent of six hundred seventy thousand (670,000) metric tons). From June 1, 1970, and for the remainder of the term of this Agreement, deliveries and receipts of LNG shall be at the annual rate stated in Section 6.1 above.

## ARTICLE SEVEN

### QUALITY

Section 7.1 Gross Heating Value. The LNG delivered hereunder shall have a standard gross heating value of 1,040 Btu's per cubic foot, and Sellers warrant that the LNG shall have a minimum gross heating value of 990 Btu's per cubic foot and a maximum gross heating value of 1,150 Btu's per cubic foot. The gross heating value of the LNG delivered hereunder shall be determined by computations using the procedure and physical constants and correction factors contained in Exhibit B, Measurement Procedures, attached hereto and made a part hereof.

Section 7.2 Hydrocarbon Composition. Sellers warrant that the LNG delivered hereunder shall have hydrocarbon components within the following ranges:

Methane — not less than 85 mole percent;

Butanes and heavier — not more than 2 mole percent;

Pentanes and heavier — not more than 0.1 mole percent.

The hydrocarbon components shall be analyzed and determined by the test method specified in Article III of Exhibit B.

Section 7.3 Impurities. Sellers warrant that the LNG delivered hereunder shall meet the following specifications:

(a) Gaseous Impurities. The hydrogen sulphide, total sulphur, cyanides, metal carbonyl and ammonia contained in the LNG delivered from Sellers to Buyers shall not be detectable when using analysis methods specified in Exhibit C, Analysis Methods, attached hereto and made a part hereof.

(b) Solid Impurities and Others. The LNG delivered hereunder shall not contain solid impurities such as solid carbon dioxide, or hydrates of hydrocarbons, or inorganic compounds, or lubricants in such quantities as will unreasonably interfere with Buyers' uses of the LNG for town gas manufacture and power generation.

## ARTICLE EIGHT MEASUREMENT AND TESTING

Section 8.1 Sellers' Equipment. Sellers shall install, maintain and operate in each LNG tanker, at their sole cost and expense, suitable equipment and devices for the purpose of measuring the quantities of LNG delivered hereunder. Tests for the accuracy of the equipment and devices shall be made by Sellers and shall be witnessed and verified before the LNG tanker is put into service by an independent surveyor selected jointly by Sellers and Buyers. Thereafter, tests for accuracy of the equipment and devices shall be made by Sellers (not including the volumetric calibration of the tanks in the ships) at least once each year and shall be witnessed and verified upon request of Buyers or Sellers by an independent surveyor selected and employed jointly by Sellers and Buyers, and at any other time requested by either party. Buyers shall have the right to be present at each such test.

Section 8.2 Buyers' Equipment. Buyers shall install, maintain and operate at their sole cost and expense, suitable equipment and devices for the purpose

of collecting and analyzing the samples. Tests for accuracy of the equipment and devices shall be witnessed and verified upon the request of Buyers or Sellers by an independent surveyor selected and employed jointly by Buyers and Sellers. Sellers shall have the right to be present at each such test.

Section 8.3 Collection and Analysis of Samples. Buyers shall collect from each cargo of LNG representative samples of LNG, and they shall promptly analyze for quality under Article VII the appropriate sample following the method provided in Exhibits B and C, and the analyses when correctly made in accordance with the provisions of this Agreement and Exhibits B and C shall be final. Sellers shall have the right to be present when the samples are collected and the analyses are made. Buyers shall also promptly report to Sellers the results of the analyses.

Section 8.4 Measurement of Quantities of LNG Delivered. Sellers shall determine the quantities of LNG delivered from each LNG tanker following the methods and procedure contained in Exhibit B. The gauging of the LNG tanks shall be witnessed and verified upon request of Buyers or Sellers by an independent surveyor selected and employed jointly by Buyers and Sellers. Buyers shall have the right to be present during measurement.

Section 8.5 Determination of Quantities of Btu's Delivered. The quantities of Btu's delivered to Buyers from each LNG tanker shall be determined from the results of the analyses and measurements made under Sections 8.3 and 8.4 and in accordance with the procedures set out in Exhibit B.

Section 8.6 Costs and Expenses of Tests and Verifications. All the costs and expenses for testing Sellers' equipment and devices shall be borne by Sellers, and all the costs and expenses for testing Buyers' equipment and devices shall be borne by Buyers; provided, however, that costs and expenses for incidental

tests upon request of Sellers or Buyers shall be borne equally by Sellers and Buyers. The fees and charges of the independent surveyor for measurement, sampling and analyses shall be borne equally by Sellers and Buyers.

## ARTICLE NINE

### PRICE

Section 9.1 (a) Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, a price of United States fifty-two cents (52¢) per million Btu's delivered.

(b) If in the future another Liquefied Natural Gas project is placed into operation to supply Japan with natural gas from foreign gas sources, such as Alaska, Canada, Australia, Brunei and the Middle East under similar conditions such as volume, distance, liquefaction and ocean transportation techniques, contract term and so forth, Sellers will hold a discussion with Buyers concerning the price as herein set forth, and shall endeavor to find a solution satisfactory to all parties concerned.

## ARTICLE TEN

### TAXES AND DUTIES

Section 10.1 With respect to LNG sold and delivered hereunder, Sellers shall pay all taxes and duties imposed by governmental bodies outside Japan, and Buyers shall pay all taxes and duties imposed by Japanese governmental bodies; provided, however, that Sellers shall bear all port and harbor duties, fees and assessments imposed by Japanese governmental bodies on Sellers' LNG tankers.

## ARTICLE ELEVEN

### UNLOADING

Section 11.1 Sellers shall notify Buyers or cause Buyers to be notified at least seventy-two (72) hours and again at least twenty-four (24) hours in advance of the estimated time each LNG tanker will arrive at Buyers' docking facilities. Sellers and Buyers shall cooperate in their efforts to unload an LNG tanker within a period of seventeen (17) hours after docking.

## ARTICLE TWELVE

### BILLING, PAYMENT AND ERRORS

Section 12.1 Billing and Payment. Sellers shall prepare and submit to Buyers promptly after completion of each delivery, delivery tickets for each shipment of LNG delivered hereunder, which tickets shall show the figures recorded by the equipment and devices installed on the LNG tanker for the measurement of LNG deliveries. The tickets shall be signed by authorized personnel of Sellers and Buyers. Sellers shall also promptly prepare and submit to Buyers, through Buyers' designated agent in the United States (such agent to be maintained at all times by Buyers), for each LNG tanker shipment, documents of title and an invoice showing the quantity of Btu's delivered into Buyers' facilities and the sum in United States dollars owed by Buyers to Sellers. Buyers shall pay Sellers within ten (10) days after Buyers' agent has received Sellers' invoice the sums invoiced and owed Sellers hereunder for each cargo of LNG delivered to Buyers. Payment shall be made in United States dollars by Buyers depositing to the credit of the respective Sellers in the proportions to be stated in Sellers' invoice in the First National City Bank, New York City, New York, United States of America, or in some other bank designated in writing by Sellers the sums due and owing Sellers.

Section 12.2 Determination of Amount Payable for LNG Delivered.

The amount payable for each cargo of LNG delivered to Buyers shall be the product of the unit price provided in Section 9.1 (a) multiplied with the quantity of Btu's determined in accordance with the procedures and tables set forth in Exhibit B.

Section 12.3 Errors. In the event any error is discovered in the amount billed in any invoice rendered hereunder, such error shall be rectified within one (1) month after the determination thereof, provided a claim therefor shall have been made within two (2) years after the date of such invoice.

ARTICLE THIRTEEN

FORCE MAJEURE

Section 13.1 If either Sellers or Buyers are rendered unable, wholly or in part, by force majeure to carry out their obligations under this Agreement, other than the obligation to make money payments, and if such Sellers or Buyers, as the case may be, give notice and reasonably full particulars of such force majeure in writing or by telegraph to the other party within a reasonable time after the occurrence of the facts relied on, then the obligations of the party giving the notice, so far as and to the extent that the obligations are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period, and the cause of such inability shall insofar as possible be remedied within a reasonable time. The party giving the notice shall, if requested by the party receiving the notice, deliver to the party receiving the notice a sworn statement of the facts relied on as constituting force majeure, and a certificate from a government official of the occurrence of the facts when known to the official. If, as a result of the temporary suspension of the obligations of either Sellers or Buyers as above provided,



the annual contract quantity of LNG is not delivered or received during any contract year, then the party claiming force majeure shall be obligated to deliver or to receive, as the case may be, during the remaining term of this Agreement, all or such portions of the undelivered quantities of LNG as may be delivered within the capabilities of the facilities of Sellers and Buyers, the undelivered quantities to be delivered and received as soon as reasonably possible after termination of such suspension, and to be in addition to the annual contract quantity for the particular year in which such deliveries are made and receipts occur.

The term "force majeure", as used in this Agreement, means cause or causes which are not reasonably within the control of the party or parties claiming force majeure, and which cannot be overcome by the exercise of reasonable diligence, and includes but shall not be limited to forces of nature, perils of the sea, shipwrecks, strikes, lockouts, or other industrial disturbances, acts of God, acts of government or any governmental agency, compliance with any directive, order or regulation of any governmental authority or representative thereof acting under claim or color of authority, wars, blockades, insurrections, riots, epidemics, quarantine restrictions, landslides, lightning, earthquakes, fires, storms, floods, washouts, civil or military disturbances or interferences, explosions, et cetera. Labor disputes shall be settled at the sole discretion of the party having such dispute.

#### ARTICLE FOURTEEN

##### EFFECTIVE DATE AND TERM

Section 14.1 This Agreement shall be effective from the date hereof, and unless earlier terminated as provided herein, shall thereafter continue in full force and effect for a term of fifteen (15) years from June 1, 1969. The term of this Agreement may be extended for an additional period of five (5) years if between June 1, 1981, and June 1, 1982, Buyers and Sellers are able to mutually agree in writing upon the price to be paid for such LNG and the other terms and provisions of such extension.

## ARTICLE FIFTEEN

### NOTICES

Section 15. 1 All notices, requests, demands, invoices, statements, or other communications required or permitted hereunder, or any notice one party may desire to give to the other, shall be in writing and deemed to have been properly delivered if personally handed to a responsible employee of the party or its designee for whom intended, or received by registered mail or telegraph at the address of such party or designee for whom intended. Sellers and Buyers initially designate their official designees and addresses as follows:

Sellers - As respects Marathon:	Marathon Oil Company 550 South Flower Street Los Angeles, California 90017
As respects Phillips:	Phillips Petroleum Company Natural Gas and Gasoline Department Frank Phillips Building Bartlesville, Oklahoma 74003
Buyers - As respects Tokyo Electric:	The Tokyo Electric Power Company, Inc. 2-9 Uchisaiwaicho, Chiyoda-ku Tokyo, Japan
As respects Tokyo Gas:	Tokyo Gas Company Limited 1-3 Yaesu, Chuo-ku Tokyo, Japan
As respects Buyers' Agent:	Mitsubishi International Corporation 606 South Hill Street Los Angeles, California 90014

Any party hereto may change its address at any time by giving prior written notice to the other parties. All notices which are mailed or sent by telegraph shall be deemed to have been given on the date of the addressee's receipt thereof, except routine communications, including invoices, statements and payments, shall be considered as duly delivered when mailed or handed to a responsible person employed by the party or its designee for whom intended.

## ARTICLE SIXTEEN

### ARBITRATION

Section 16.1 Any dispute between the parties touching the construction, meaning or effect of this Agreement, or the rights or liabilities of the parties hereunder, or any matter arising out of the same or connected therewith, except failure to agree to a revision or modification of price under Section 9.1 (b) or failure to agree on the terms of a five-year extension under Section 14.1, which cannot be resolved by the parties after discussion in a good faith attempt to reach an amicable solution shall be resolved in Tokyo, Japan, by arbitration in accordance with the rules then obtaining of the International Chamber of Commerce before a board of three (3) arbitrators named in accordance with such rules. The parties shall carry out the award of the arbitrators without invoking any immunity, and judgment upon the award rendered may be entered in any court having jurisdiction, or application may be made to such court for a judicial acceptance of the award and an order of enforcement, as the case may be. The parties hereby waive any objection to the award of the arbitrators insofar as is permissible under the laws of any of the United States of America or of Japan. The laws of Japan shall be applied by the arbitrators in settling disputes between the parties unless it clearly appears to the arbitrators that other laws should be applied.

## ARTICLE SEVENTEEN

### APPROVAL OF GOVERNMENTAL REGULATORY BODIES

Section 17.1 Sellers and Buyers Shall Attempt to Obtain.

Sellers shall use their best efforts to forthwith obtain any and all approvals and authorizations required by any legally constituted regulatory bodies of the United States of America and the State of Alaska, or deemed necessary by Sellers, to allow Sellers to commence and continue deliveries of LNG to Buyers under the terms of this Agreement, furnishing Buyers certified copies of all such govern-

mental approvals and authorizations, together with certified copies of rules, regulations and restrictions promulgated by each and every regulatory body in connection with such approvals. Sellers shall also exercise their best efforts to obtain any other or additional governmental approvals and authorizations of the United States of America or the State of Alaska which may be required from time to time during the term of this Agreement.

Buyers shall use their best efforts to forthwith obtain all approvals and authorizations, if any are required, by any legally constituted regulatory bodies of Japan, or deemed necessary by Buyers to allow them to commence and continue receiving LNG under the terms of this Agreement, furnishing Sellers with certified copies of rules, regulations and restrictions promulgated by each and every regulatory body, if any, in connection with such approvals and authorizations. Buyers shall also exercise their best efforts to obtain any other or additional governmental approvals and authorizations of Japanese governmental bodies which may be required from time to time during the term of this Agreement.

Each party shall, at the request of another, assist the other by all reasonable means in obtaining such governmental approvals and authorizations. Forthwith upon any such governmental approvals and authorizations being obtained, the party obtaining the same shall notify the others, and shall advise such others as soon thereafter as is reasonably possible whether such governmental approvals and authorizations are in form acceptable to it and in terms which will enable it to perform its obligations hereunder. When all such governmental approvals and authorizations deemed necessary by Sellers and Buyers have been obtained, Sellers and Buyers shall each notify the other parties to such effect.

If Buyers fail to perceive within sixty (60) days from the date this Agreement is executed reasonable prospects of obtaining the necessary governmental approvals and authorizations, either Buyers or Sellers may terminate this Agreement

by written notice to the other within sixty (60) days from the date this Agreement is executed of their intent to terminate.

If Sellers fail to obtain within sixty (60) days from the date this Agreement is executed the necessary governmental approvals and authorizations, either Sellers or Buyers may terminate this Agreement at any time thereafter by written notice to the other of their intent to terminate, given prior to the obtaining of such approvals and authorizations.

Section 17.2 No Liability if Terminated. Should either Sellers or Buyers exercise the right under Section 17.1 to terminate this Agreement the parties exercising the right shall not be liable to the other parties for any losses, damages or expenses incurred by such other parties as a result of the termination of this Agreement.

## ARTICLE EIGHTEEN

### LAWS AND REGULATIONS

Section 18.1 This Agreement, insofar as it is affected thereby, shall be subject to all valid and applicable laws, orders, rules, and regulations of governmental authorities having jurisdiction. Either party hereto shall have the right to contest the validity of any such law, order, rule or regulations and the acquiescence therein or compliance therewith for any period of time shall not be construed as a waiver of such right.

## ARTICLE NINETEEN

### CONSTRUCTION OF CONTRACT

Section 19.1 This instrument contains the entire contract and agreement between the parties and supersedes all prior agreements between them, and there are no oral promises or representations affecting it. It may be amended or

modified only in writing. Exhibit B, Measurement Procedures, and Exhibit C, Analysis Methods, may be amended or supplemented by written memoranda informally executed by employees of Buyers and Sellers who are responsible for conducting such measurement procedures and analysis methods.

## ARTICLE TWENTY

### ASSIGNMENT

Section 20.1 Any Seller or any Buyer may assign all or a part of its interest in this Agreement to any one who by accepting the assignment becomes a party to this Agreement, but no such assignment shall ever release or relieve the Seller or Buyer making the assignment from any part of its obligations and liabilities hereunder unless all of the other Sellers and Buyers agree to release and relieve the party assigning from its obligations and liabilities hereunder. The party assigning the interest shall, before making the assignment, notify the other parties of the intent to make the assignment, and shall furnish them with copies of the assignment after execution.

Any assignment shall contain a provision that the assignee by accepting the assignment agrees that all the terms and provisions of this Agreement shall extend to, be binding upon and inure to the benefit of the parties and their successors and assigns.

## ARTICLE TWENTY-ONE

### NON-WAIVER

Section 21.1 The failure of Sellers or Buyers at any time to require performance by the others of any provisions hereof shall in no way affect the right of a party to require any performance which may be due thereafter pursuant to such provision; nor shall the waiver by Buyers or Sellers of any breach of any provision hereof be taken or held to be a waiver of any subsequent breach of such provision.

## ARTICLE TWENTY-TWO

### DEFAULT AND TERMINATION OF AGREEMENT

Section 22.1 Should either Sellers or Buyers default in the performance of any obligation under this Agreement, and such default shall continue for sixty (60) days after the party not in default has requested the party in default to remedy the default, the party not in default may, in addition to all other rights and remedies, suspend the deliveries or receipts of LNG until the default is remedied, or may cancel and terminate this Agreement.

## ARTICLE TWENTY-THREE

### GENERAL

Section 23.1 Exchange of Information. Sellers shall keep Buyers informed about the progress Sellers are making in the construction of their liquefaction facilities in Alaska, and the progress they or their contractors are making in the construction of LNG tankers. Buyers shall likewise keep Sellers informed about the progress Buyers are making in the construction of Buyers' facilities in Japan. The parties shall, as far as reasonably possible, coordinate their construction programs to the end that the facilities of both parties will be completed at about the same time. The parties also shall keep each other informed about the progress they are making in obtaining all governmental authorizations provided for under the provisions of Section 17.1 hereof.

Section 23.2 Languages. This Agreement shall be made and originals executed in the English and Japanese languages, and the originals executed in both languages shall have the same effect; provided, however, that should either party give a meaning to any provision of this Agreement as written in one language different to the meaning the other party gives to the same provision as written in the other language, both parties shall attempt in good faith to mutually reconcile and

adjust the differences in meaning, but until they have mutually reconciled and adjusted the differences in meaning, the Agreement executed in English shall control.

IN WITNESS WHEREOF, the parties hereto have caused this contract to be executed in good faith, by their respective duly authorized officers, this 6th day of March, 1967.

BUYERS:

THE TOKYO ELECTRIC POWER COMPANY, INC.

By (SIGNED) KAZUTAKA KIKAWADA  
President and Director

TOKYO GAS COMPANY LIMITED

By (SIGNED) HIROTOSHI HONDA  
President and Director

SELLERS:

MARATHON OIL COMPANY

By (SIGNED) J. C. DONNELL II  
President

PHILLIPS PETROLEUM COMPANY

By (SIGNED) STANLEY LEARNED  
President



82-04-LNG

JONES, DAY, REAVIS & POGUE

1735 EYE STREET, N.W.  
WASHINGTON, D.C. 20006  
202/861-3939

IN DALLAS  
2700 BRYAN TOWER 75201 AND  
3000 DIAMOND SHAMROCK TOWER 75201  
214/748-3939  
IN LOS ANGELES  
2029 CENTURY PARK EAST 90067  
213/553-3939

IN CLEVELAND  
1700 UNION COMMERCE BUILDING 44115  
216/596-3939

IN COLUMBUS  
50 WEST BROAD STREET 43215  
614-459-3939

CABLE ATTORNEYS WASHINGTON  
TELEX: DOMESTIC 892410  
TELEX: INTERNATIONAL 64363  
TELECOPIER: 202/466-8642

May 10, 1982

Paula Daigneault, Chief  
Natural Gas Branch  
Economic Regulatory Administration  
Room 6144  
12th and Pennsylvania Avenue, N.W.  
Washington, D.C. 20461

10 13:33

Re: Application to Amend Authorization  
to Export Liquefied Natural Gas

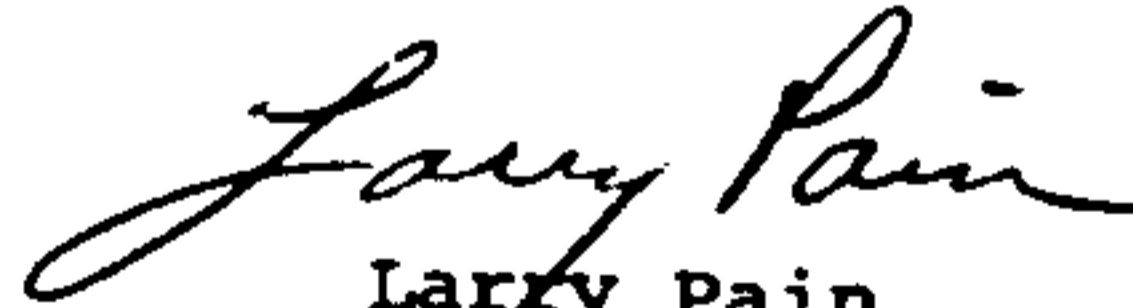
Dear Ms. Daigneault:

Enclosed for filing are the original and seven copies of the Application to Amend Authorization to Export Liquefied Natural Gas of applicants Phillips Petroleum Company and Marathon Oil Company.

Although the information contained in a prior application and the exhibits thereto submitted to the Federal Power Commission in 1967 has been incorporated by reference in Appendix D of the instant application, we are submitting herewith for your convenience eight copies of the text of the 1967 FPC Application and Exhibit D thereto, which is the 1967 LNG Sales Agreement between applicants and their Japanese customers.

We would also like to call your attention to the request of Phillips and Marathon for expedited consideration of this application.

Sincerely yours,



Larry Pain  
Attorney for  
Phillips Petroleum Company



James F. Bell  
Jones, Day, Reavis & Pogue  
Attorneys for  
Marathon Oil Company

Enclosure

JONES, DAY, REAVIS & POGUE

1735 EYE STREET, N.W.  
WASHINGTON D.C. 20006

202/861 3939

CABLE ATTORNEYS WASHINGTON

TELEX: DOMESTIC 892410

TELEX: INTERNATIONAL 64363

TELECOPIER: 202/466-8642

IN DALLAS  
2700 BRYAN TOWER 75201 AND  
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216/696-3939

IN COLUMBUS  
50 WEST BROAD STREET 43215  
614 469-3939

454100-008-061  
7082:rr

May 10, 1982

Ms. Nancy Hargrove  
Natural Gas Branch  
Economic Regulatory Administration  
Room 6144  
12th & Pennsylvania Avenue, N.W.  
Washington, D.C. 20461

Dear Ms. Hargrove:

Thank you for your assistance and advice concerning the Application of Phillips Petroleum Company and Marathon Oil Company to extend their current authorization to export liquefied natural gas. In accordance with our conversation, we are submitting under separate cover the Application, which is bound in the manner which you suggested was appropriate.

If there are any questions, please do not hesitate to call at your convenience.

Very truly yours,

  
Kevin D. McDonald

861-6843

U.S. DEPARTMENT OF ENERGY  
**memorandum**

DATE May 13, 1982

REPLY TO  
ATTN OF RG-631

SUBJECT Filing Fee to Accompany Application of Phillips Petroleum Company/Marathon  
Oil Company, ERA Docket No. 82-04-LNG

TO Shirley Barker  
Cash Management Division  
Washington Accounts and Reports Branch  
Mail Station C-356

Pursuant to the memo of December 1, 1977, of Robert L. Zanatell, Director,  
Office of Finance and Accounting, I am attaching check no. G-011953 dated  
May 5, 1982, of Jones, Day, Reavis & Pogue, for the amount of \$50.00  
representing filing fee required upon the above application.

*Paula A. Daigneault*  
Paula A. Daigneault  
Director, Natural Gas Branch  
Office of Fuels Programs, ERA

Attachment

<b>1st AMERICAN</b> FIRST AMERICAN BANK, N.A., WASHINGTON	<b>JONES, DAY, REAVIS &amp; POGUE</b> 1735 EYE STREET, N.W. WASHINGTON, D.C. 20006	May 5, 1982	<b>G 011953</b>
PAY TO THE ORDER OF	<u>The sum of 50 dol's 00 cts</u> \$ 50.00		154 840
Treasurer of the United States			<i>Paula A. Daigneault</i>
#011953# 10540000431 3 198 820#			



Department of Energy  
Washington, D.C. 20461

3 JUN 1982

MEMORANDUM FOR ROBERT STERN

FROM:

PAULA DAIGNEAULT

SUBJECT:

PHILLIPS PETROLEUM COMPANY AND MARATHON OIL  
COMPANY, PROJECT DESCRIPTION FOR EA/EIS  
DETERMINATION (ERA DOCKET NO. 82-04-LNG)

ERA has received an application from Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon) to amend their authorization to export liquefied natural gas (LNG) from Alaska to Japan.

Currently, Phillips and Marathon have authority, under a Federal Power Commission order, FPC Docket Nos. CI67-1226 and CI67-1227, 37 FPC 777 (1967) issued on April 19, 1967, to export up to 50.57 trillion Btu of LNG annually to Japan for sale to Tokyo Electric Power Company and Tokyo Gas Company. Consistent with their Amendatory Extension Agreement of April 15, 1982, Phillips and Marathon seek to amend and extend their current export authorization to permit the continued exportation of LNG from Alaska to Japan for five years beyond the scheduled expiration date of May 31, 1984. Also requested is authorization to ship limited additional volumes to make up for under-deliveries of authorized volumes which either have occurred during prior contract years, or may occur during future contract years. The contractual annual volumes of LNG to be exported during the five-year extended term of the agreement will remain the same as under the April 19, 1967 agreement, 50.57 trillion Btu per year. The new expiration date will be May 31, 1989. However, under the terms of the Amendatory Extension Agreement, the annual contract volumes which are not delivered in a given year due to unforeseen circumstances or to a reduction in the amount taken by the buyer, will be delivered as soon as possible thereafter in subsequent contract years, or during a maximum seven-month period beginning June 1, 1989.

No alterations or additions to existing transportation, liquefaction, and storage facilities are anticipated during the period of the extension.

ERA requests that a determination be made as to whether a decision on this application for the exportation of liquefied natural gas constitutes a major Federal action as defined by the National Environmental Policy Act of 1969, and whether the provisions of E.O. 12114 calling for a review of the foreign impact of these actions applies. A copy of the application is attached. Please coordinate your reply with the Office of General Counsel. If additional information is required, please contact R. T. Gehring, Natural Gas Branch, Oil and Gas Imports Division, ERA, at 633-9296.

Attachment

[ERA Docket No. 82-04-LNG]

**Phillips Petroleum Co. and Marathon Oil Co.; Application To Amend Authorization To Export Liquefied Natural Gas to Japan**

**AGENCY:** Department of Energy Economic Regulatory Administration.

**ACTION:** Notice of Application to Amend Authorization to Export Liquefied Natural Gas (LNG) to Japan.

**SUMMARY:** The Economic Regulatory Administration (ERA) of the Department of Energy (DOE) gives notice of receipt on May 10, 1982, of the joint application of Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon) to amend their existing authorization to export liquefied natural gas (LNG) to Japan. Currently, Phillips and Marathon are authorized to export 50.57 trillion Btu of LNG per year to Japan. They seek and extension and amendment of this authority for five years beyond the scheduled expiration date of May 31, 1984. Also requested is authorization to export limited additional volumes to make up for underdeliveries of authorized volumes which either have or may occur.

The application is filed with ERA pursuant to Section 3 of the Natural Gas Act and DOE Delegation Order No. 0204-54. Protests or petitions to intervene are invited.

**DATES:** Protests or petitions to intervene are to be filed no later than 4:30 p.m. July 12, 1982.

**FOR FURTHER INFORMATION CONTACT:** R. T. Gehring (Natural Gas Branch, Oil and Gas Imports Division), Economic Regulatory Administration, 12th & Pennsylvania Avenue NW., Room 6144, RG-631, Washington, D.C. 20461, (202) 633-9296

Merrill F. Hathaway (Office of General Counsel, Natural Gas and Mineral Leasing), 1000 Independence Avenue SW., Forrestal Building, Room 6E-042, Washington, D.C. 20585, (202) 252-4467.

**SUPPLEMENTARY INFORMATION:** In a Federal Power Commission (FPC) order issued on April 19, 1967, in FPC Docket Nos. C167-1226 and C167-1227, 37 FPC

777 (1967), Phillips and Marathon were authorized to export LNG from Alaska to Japan for sale to Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited under a sales agreement dated March 6, 1967, as amended. The firms were authorized to sell a total of up to 35.295 trillion Btu of LNG from March 1, 1969, to May 31, 1970, and 50.57 trillion Btu of LNG annually from June 1, 1970, to May 31, 1984.

The initial term of the March 6, 1967, sales agreement expires on May 31, 1984, with an option to renew the arrangement by mutual agreement between June 1, 1981, and June 1, 1982.

Pursuant to this option, the parties have entered into an Amendatory Extension Agreement dated April 15, 1982, which would continue the export for five additional years, through May 31, 1989. The quantities of LNG to be exported during the extended term will remain the same, 50.57 trillion Btu annually. The parties seek approval of their export of LNG during this extended term. The parties also seek approval of certain make-up deliveries, so that any annual volumes of LNG not delivered under either the 1967 sales agreement or the Amendatory Extension Agreement in a given year due to unforeseen circumstances or to a reduction in the amount taken by buyers may be delivered as soon as possible thereafter in subsequent contract years or during a maximum seven-month period beginning June 1, 1980.

The currently effective price of the LNG exports is determined by a base price of 582.8 U.S. cents per MMBtu indexed in accordance with a formula based upon changes in the weighted average of the official Japanese Government Selling Prices of the top twenty crude oils imported by Japan. That formula produced a delivered price of approximately \$5.76 per MMBtu for April 1982.

Phillips and Marathon state that the extension of this export project is not inconsistent with the public interest for the following reasons: (1) Given national and international developments, including the return in many cases to free market pricing for natural gas, there is no basis for a conclusion that there would be a national need for the LNG proposed to be shipped to Japan in the 1984-89 period; (2) there is no regional need for the gas because all of Alaska's natural gas needs are presently being supplied and any foreseeable future needs can easily be supplied from proven reserves in the Cook Inlet area; (3) it will continue to improve the

economy of Alaska by providing jobs and royalty revenues; (4) it will continue to affect favorably the balance of payments position of the United States by providing annual revenues approaching \$300 million per year for additional five years; and (5) it will continue to benefit U.S. relations with Japan by providing a reliable source of LNG for Japan for an additional five years.

No alterations or additions to existing transportation and storage facilities are anticipated during the period of the extension.

**OTHER INFORMATION:** Any person wishing to become a party to the proceeding, and thus to participate in any conference or hearing which might be convened, must file a petition to intervene. Any person may file a protest with respect to this application. The filing of a protest will not serve to make the protestant a party to the proceeding. Protests will be considered in determining the appropriate action to be taken on the application.

All protests and petitions to intervene must meet the requirements specified in 18 CFR 1.8 and 1.10. They should be filed with the Natural Gas Branch, Economic Regulatory Administration, Room 6144, RG-631, 12th & Pennsylvania Avenue, NW., Washington, D.C. 20461. All protests and petitions to intervene must be filed no later than 4:30 p.m., July 12, 1982.

A hearing will not be held unless a motion for a hearing is made by a party or person seeking intervention and granted by ERA, or if ERA on its own motion believes that a hearing is necessary or required. A person filing a motion for hearing must demonstrate how a hearing will advance the proceedings. If a hearing is scheduled, ERA will provide notice to all parties and persons whose petitions to intervene are pending.

A copy of Phillips' and Marathon's application is available for inspection and copying in the Natural Gas Branch Docket Room, located in Room 6144, 12th & Pennsylvania Avenue, NW., Washington, D.C., between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, D.C. on June 3, 1982.

James W. Workman,  
Director, Office of Fuels Programs, Economic  
Regulatory Administration.

[FR Doc. 82-10853 Filed 6-9-82; 845 am]

BILLING CODE 6450-01-01

U.S. DEPARTMENT OF ENERGY  
**memorandum**

DATE JUN 21 1982

REPLY TO EP-36  
ATTN OF

SUBJECT National Environmental Policy Act (NEPA) Determination for  
Phillips Petroleum Company and Marathon Oil Company Application  
to Export Liquefied Natural Gas (LNG)

TO Paula Daigneault, Chief  
Natural Gas Branch

In response to your request of June 3, 1982, we have reviewed the subject application with respect to NEPA requirements and have determined, after consultation with the Office of the General Counsel, that granting of the application will clearly have no significant effects on the quality of the human environment. Accordingly, neither an environmental assessment nor an environmental impact statement will be required. (The attachment explains the basis for this determination.)

This memorandum should be retained in the files for this application as a record of the NEPA review.

*R. J. Stern*

Robert J. Stern, Acting Director  
Office of Environmental Compliance

Attachment

Office of the General Counsel

Concur *Stephen H. Crandall* Date 6/18/82

Nonconcur \_\_\_\_\_ Date \_\_\_\_\_

ATTACHMENT

Subject: National Environmental Policy Act (NEPA) Determination  
for Phillips Petroleum Company and Marathon Oil Company  
Application to Export Liquefied Natural Gas (LNG)

The Phillips Petroleum Company and Marathon Oil Company have applied to the Department to amend and extend their authorization to export liquefied natural gas (LNG) from Alaska to Japan. Currently these companies have authority to export up to 50.57 trillion Btu of LNG annually to Japan for sale to Tokyo Electric Power Company and Tokyo Gas Company. Consistent with their Amendatory Extension Agreement of April 15, 1982, Phillips and Marathon seek to amend and extend their current export authorization to permit the continued exportation of LNG from Alaska to Japan for five years beyond the scheduled expiration date of May 31, 1984. Also requested is authorization to ship limited additional volumes to make up for under-deliveres of authorized volumes which either have occurred during prior contract years, or may occur during future contract years. The contractual annual volumes of LNG to be exported during the five-year extended term of the agreement will remain the same as under the April 19, 1967, agreement, 50.57 trillion Btu per year. The new expiration date will be May 31, 1989. However, under the terms of the Amendatory Extension Agreement, the annual contract volumes which are not delivered in the amount taken by the buyer, will be delivered as soon as possible thereafter in subsequent contract years, or during a maximum seven-month period beginning June 1, 1989.

No alterations or additions to existing transportation, liquefaction, and storage facilities are anticipated during the period of the extension.

Since continuation of exports under the authorization will not result in a change in environmental impacts due to Department action, grant of reauthorization will clearly have no significant effect on the quality of the human environment within the meaning of Section 102(2)(C) of NEPA.

Executive Order 12114 does not impose any special review requirements with respect to this proposed reauthorization.



UNITED STATES OF AMERICA  
BEFORE THE  
DEPARTMENT OF ENERGY  
ECONOMIC REGULATORY ADMINISTRATION

ORIGINAL

In the Matter of ) ECONOMIC REGULATORY  
Phillips Petroleum Company ) ADMINISTRATION  
Marathon Oil Company ) Docket No. 82-04-LNG

PETITION OF  
PACIFIC ALASKA LNG ASSOCIATES  
PACIFIC GAS AND ELECTRIC COMPANY  
AND SOUTHERN CALIFORNIA GAS COMPANY  
FOR PERMISSION TO INTERVENE  
IN SUPPORT OF APPLICATION

2023 110:51

PACIFIC ALASKA LNG ASSOCIATES (PacAlaska), PACIFIC GAS AND ELECTRIC COMPANY (PG&E), and SOUTHERN CALIFORNIA GAS COMPANY (SoCalGas), pursuant to the requirements of the Rules of Practice and Procedure (18 CFR §1.8) request that they be authorized and permitted to intervene and become parties to the above-entitled proceedings. All correspondence or communications in connection with this petition should be addressed to the following:

E. R. Island  
Michael D. Gayda  
Attorneys at Law  
810 South Flower Street  
Los Angeles, California 90017  
(213) 689-4255

Keith C. McKinney  
Pacific Alaska LNG Associates  
810 South Flower Street  
Los Angeles, California 90017  
(213) 689-7005

Harry W. Long  
Pacific Gas & Electric Company  
Law Department  
P. O. Box 7442  
San Francisco, California 94120  
(415) 541-6642

I

SoCalGas is a corporation organized and existing under the laws of the State of California. SoCalGas' principal office is located at 810 South Flower Street, Los Angeles, California 90017. SoCalGas, the nation's largest gas distribution company in terms of number of customers, provides natural gas service to a population in excess of 12 million in the central and southern parts of the State of California.

PGandE is and ever since October 10, 1905, has been, an operating public utility corporation, organized under the laws of the State of California. The company is engaged primarily in the business of furnishing electric and gas service to customers in the state of California. PGandE serves approximately 3.3 million commercial, industrial and residential electric customers within its northern and central California service area. PGandE also serves approximately 2.7 million natural gas customers within its service area. In addition, PG&E makes some sales of electricity for resale in interstate commerce that are subject to regulation by the Federal Energy Regulatory Commission. PGandE's principal office is located at 77 Beale Street, San Francisco, California 94106.

PacAlaska, a partnership of Pacific Alaska LNG Company, an affiliate of Southern California Gas Company and Alaska California LNG Company, an affiliate of PGandE, is organized and exists under the laws of the State of California. Its principal office is located at 810 South Flower Street, Los Angeles, California 90017.

PacAlaska has among its purposes the purchasing, processing, liquefying, transporting, regasifying and selling of natural gas in both liquid and vapor form. Specifically, PacAlaska has been organized for the purpose of purchasing Alaskan gas and liquefying, shipping and regasifying such gas for ultimate sale in California to PGandE and SoCalGas. PacAlaska has over the past few years been intensively engaged in the negotiation of contracts in order to secure the necessary volumes of Alaskan gas so that it may transport LNG from Alaska to California. PacAlaska has entered into contracts for the purchase of gas with several producers in the Cook Inlet area of south Alaska.

The Federal Energy Regulatory Commission (FERC) in Docket Nos. CP75-140 et al. issued certificates of public convenience and necessity to PacAlaska for its project. The FERC decision imposed several conditions, including that

PacAlaska obtain additional gas supplies in south Alaska to support its project. Due to extensive additional regulatory proceedings in connection with the siting of the receiving terminal in California, the PacAlaska project has been delayed substantially.

## II

In a Federal Power Commission (FPC) order issued on April 19, 1967, in FPC Docket Nos. CI 67-1226 and CI 67-1227, Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon) were authorized to export LNG from Alaska to Japan for sale to Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited under a sales agreement dated March 6, 1967, as amended. The firms were authorized to sell a total of up to 35.295 trillion Btu of LNG from March 1, 1969, to May 31, 1970, and 50.57 trillion Btu of LNG annually from June 1, 1970, to May 31, 1984.

The initial term of the March 6, 1967, sales agreement expires on May 31, 1984, with an option to renew the arrangement by mutual agreement between June 1, 1981, and June 1, 1982.

Pursuant to this option, the parties have entered into an Amendatory Extension Agreement dated April 15, 1982, which would continue the export for five additional years, through May 31, 1989. The quantities of LNG to be exported during the extended term will remain the same, 50.57 trillion Btu annually. Phillips and Marathon seek approval of their export of LNG during this extended term. They also seek approval of certain make-up deliveries, so that any annual volumes of LNG not delivered under either the 1967 sales agreement or the Amendatory Extension Agreement in a given year due to unforeseen circumstances or to a reduction in the amount taken by buyers may be delivered as soon as possible thereafter in subsequent contract years or during a maximum seven-month period beginning June 1, 1989.

## III

PGandE, SoCalGas and PacAlaska support the continued exportation of Alaska LNG for the limited period requested by Phillips and Marathon in this docket. Due to the unfortunate delays that have occurred to the PacAlaska project, the project sponsors cannot anticipate completion of a California LNG

receiving terminal before 1989. Thus PacAlaska can not provide a domestic market for Alaskan LNG supplies during the limited extension period requested by Phillips and Marathon. For this reason and the fact that there is a ready foreign buyer, the authorization requested by Phillips and Marathon should be granted.

IV.

SoCalGas and PGandE, which together serve most of California, which is the largest gas consuming state in the United States. SoCalGas and PGandE are actively developing Alaskan LNG as a means of obtaining needed new gas supplies. PacAlaska is actively engaged in a program for bringing Alaskan LNG to California. PGandE, SoCalGas and PacAlaska have a direct and substantial interest in these proceedings which cannot be adequately represented by any other party. PGandE, SoCalGas and PacAlaska, therefore, should be permitted to intervene and participate in these proceedings.

V

WHEREFORE, PGandE, SoCalGas and PacAlaska request that an order be issued authorizing them to intervene and participate in these proceedings with the full rights of parties thereto in order to protect their interests and the interests of their customers. PGandE, SoCalGas and PacAlaska urge the Economic Regulatory Administration to grant the application of Phillips and Marathon without a formal hearing, at the earliest possible date.

Respectfully submitted,

By *Michael D. Gayda*  
Michael D. Gayda

T. D. Clarke  
E. R. Island  
Harry W. Long  
Attorneys for  
SOUTHERN CALIFORNIA GAS COMPANY  
PACIFIC ALASKA LNG COMPANY AND  
PACIFIC GAS AND ELECTRIC COMPANY

Dated: June 25, 1982

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all interested parties pursuant to the Commission's Rules of Practice and Procedure.

Dated at Los Angeles, California, this 25th day of June, 1982.

  
Michael D. Gayda, Attorney

UNITED STATES OF AMERICA  
BEFORE THE  
ECONOMIC REGULATORY ADMINISTRATION

In the Matter of )  
 )  
Phillips Petroleum Company ) Docket No. 82-04-LNG  
Marathon Oil Company )

PETITION OF NORTHWEST NATURAL GAS  
COMPANY FOR LEAVE TO INTERVENE

Northwest Natural Gas Company (Northwest Natural) respectfully requests permission to intervene in the above-captioned proceeding before the Economic Regulatory Administration (ERA) pursuant to the provisions of the Rules of Practice and Procedure, 18 CFR 1.8 and 1.10. In support thereof, Northwest Natural states as follows:

I

Northwest Natural Gas Company is a corporation organized and existing under the laws of the State of Oregon and its principal place of business is located in Portland, Oregon. All communications respecting this petition should be addressed to:

Robert M. Johnson, Esq.  
Northwest Natural Gas Company  
Suite 1900  
200 Southwest Market Street  
Portland, Oregon 97201

and

Justin R. Wolf, Esq.  
1625 K. Street, N. W.  
Washington, D. C. 20006

II

Northwest Natural distributes natural gas in Portland, Oregon and other communities located in the States of Oregon and Washington. The service territory in Oregon stretches from the Oregon Coast to the foothills of the Cascade Mountains, encompassing the majority of the population centers of Oregon. The service territory in Washington centers around Vancouver, Washington and other communities along the Columbia River. Northwest Natural purchases the majority of its supply of natural gas from Northwest Pipeline Corporation. The remaining portion of Northwest Natural's supply comes from its own production in Oregon.

11:20:04

III

In 1974 Phillips Petroleum Company and Marathon Oil Company, in conjunction with Northwest Natural, sought authorization from the Federal Power Commission (now the Federal Energy Regulatory Commission) to bring Alaskan LNG into Northwest Natural's service territory (FPC Docket Nos. CI74-537 and CI74-538). Although the outcome of that proceeding did not culminate in implementing the transaction at that time, Northwest Natural has a continuing interest in the use of Alaskan LNG as a source of supply for its future system needs.

In view of the foregoing, it is clear that Northwest Natural has a substantial interest in this proceeding, which interest cannot properly be represented by any other party.

WHEREFORE, Northwest Natural respectfully requests that this Petition for Leave to Intervene be granted and that it be made a party to this proceeding for all purposes.

Respectfully submitted,

NORTHWEST NATURAL GAS COMPANY

By

  
Justin R. Wolf  
Its Attorney

Dated: July 12, 1982

DISTRICT OF COLUMBIA )  
                                  ) SS:  
                                  )

Justin R. Wolf, being first sworn, deposes and says that he is one of the Attorneys for Northwest Natural Gas Company; that he has read the foregoing Petition for Leave to Intervene and knows the contents thereof; that the facts set forth therein are true and correct to the best of his information, knowledge and belief; and that he is duly authorized to sign and file said Petition on its behalf.

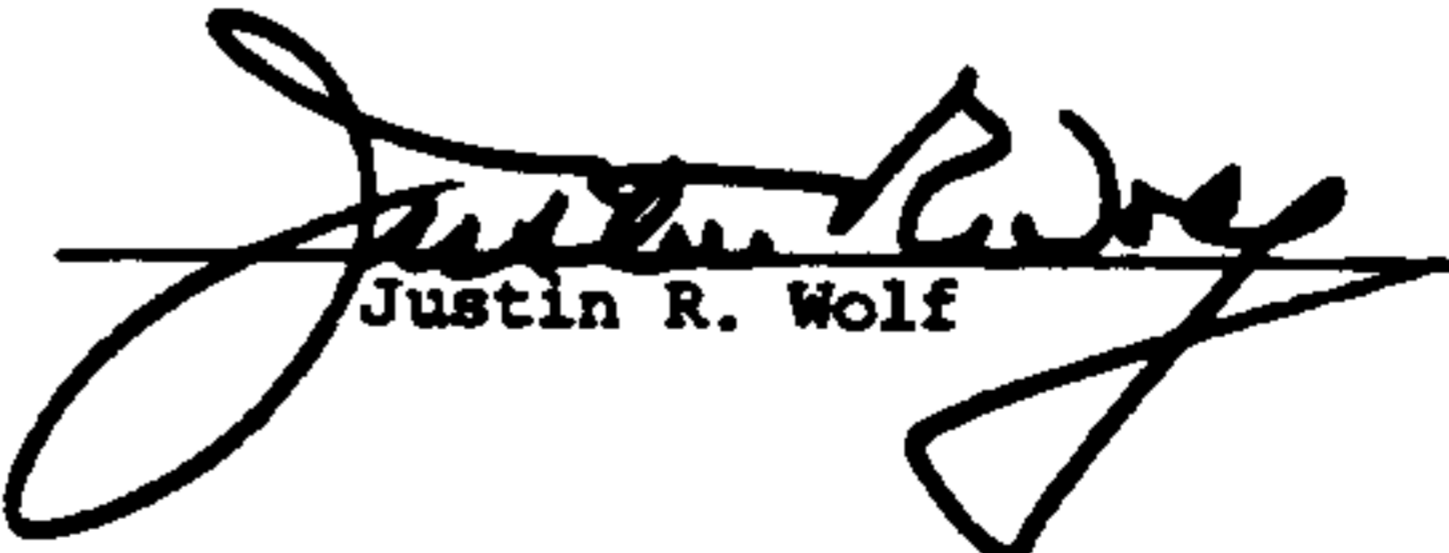
  
Justin R. Wolf

Subscribed and sworn to before me, a Notary Public, in and for the District of Columbia, this 12th day of July, 1982.

  
Notary Public  
My Commission expires: March 31, 1985

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of § 1.17 of the Rules of Practice and Procedure.

  
Justin R. Wolf

Of Counsel for  
Northwest Natural Gas Company

Dated: July 12, 1982



U.S. DEPARTMENT OF ENERGY  
**memorandum**

DATE JUN 21 1982

RE TO  
ATTN OF EP-36

SUBJECT National Environmental Policy Act (NEPA) Determination for  
Phillips Petroleum Company and Marathon Oil Company Application  
to Export Liquefied Natural Gas (LNG)

TO Paula Daigneault, Chief  
Natural Gas Branch

In response to your request of June 3, 1982, we have reviewed the subject application with respect to NEPA requirements and have determined, after consultation with the Office of the General Counsel, that granting of the application will clearly have no significant effects on the quality of the human environment. Accordingly, neither an environmental assessment nor an environmental impact statement will be required. (The attachment explains the basis for this determination.)

This memorandum should be retained in the files for this application as a record of the NEPA review.

*R. J. Stern*  
Robert J. Stern, Acting Director  
Office of Environmental Compliance

Attachment

Office of the General Counsel

Concur *W. J. Dennis for Stephen H. Granly* Date 6/18/82

Nonconcur \_\_\_\_\_ Date \_\_\_\_\_

ATTACHMENT

Subject: National Environmental Policy Act (NEPA) Determination  
for Phillips Petroleum Company and Marathon Oil Company  
Application to Export Liquefied Natural Gas (LNG)

The Phillips Petroleum Company and Marathon Oil Company have applied to the Department to amend and extend their authorization to export liquefied natural gas (LNG) from Alaska to Japan. Currently these companies have authority to export up to 50.57 trillion Btu of LNG annually to Japan for sale to Tokyo Electric Power Company and Tokyo Gas Company. Consistent with their Amendatory Extension Agreement of April 15, 1982, Phillips and Marathon seek to amend and extend their current export authorization to permit the continued exportation of LNG from Alaska to Japan for five years beyond the scheduled expiration date of May 31, 1984. Also requested is authorization to ship limited additional volumes to make up for under-deliveres of authorized volumes which either have occurred during prior contract years, or may occur during future contract years. The contractual annual volumes of LNG to be exported during the five-year extended term of the agreement will remain the same as under the April 19, 1967, agreement, 50.57 trillion Btu per year. The new expiration date will be May 31, 1989. However, under the terms of the Amendatory Extension Agreement, the annual contract volumes which are not delivered in the amount taken by the buyer, will be delivered as soon as possible thereafter in subsequent contract years, or during a maximum seven-month period beginning June 1, 1989.

No alterations or additions to existing transportation, liquefaction, and storage facilities are anticipated during the period of the extension.

Since continuation of exports under the authorization will not result in a change in environmental impacts due to Department action, grant of reauthorization will clearly have no significant effect on the quality of the human environment within the meaning of Section 102(2)(C) of NEPA.

Executive Order 12114 does not impose any special review requirements with respect to this proposed reauthorization.

**JONES, DAY, REAVIS & POGUE**

1735 EYE STREET, N.W.  
WASHINGTON D.C. 20006  
202/861 3939

CABLE ATTORNEYS WASHINGTON  
TELEX: DOMESTIC 892410  
TELEX: INTERNATIONAL 64363  
TELECOPIER: 202 466-8642

IN DALLAS  
2700 BRYAN TOWER 75201 AND  
3000 DIAMOND SHAMROCK TOWER 75201  
214/748-3939

IN LOS ANGELES  
2029 CENTURY PARK EAST 90067  
213/553-3939

454100-008-061  
7004:slb

IN CLEVELAND  
1700 UNION COMMERCE BUILDING 44115  
216/896-3939

IN COLUMBUS  
50 WEST BROAD STREET 43215  
614/469-3939

August 4, 1982


Paula Daigneault, Chief  
Natural Gas Branch  
Economic Regulatory Administration  
Room 6144  
12th and Pennsylvania Avenue, N.W.  
Washington, D.C. 20461

Re: In the Matter of Phillips Petroleum  
and Marathon Oil Company, ERA Docket  
No. 82-04-LNG

Dear Ms. Daigneault:

Enclosed for filing are the original and seven copies of the Applicants' Supplement to Application to Amend Authorization to Export Liquefied Natural Gas. Copies of this Supplement have been served upon all parties of record in the captioned proceeding.

Sincerely yours,

  
James F. Bell  
Counsel for Applicant  
Marathon Oil Company

Enclosure

cc: Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
(FPC Docket No. CI67-1226)

All parties of record

UNITED STATES OF AMERICA  
ECONOMIC REGULATORY ADMINISTRATION

In the Matter of )  
Phillips Petroleum Company )  
Marathon Oil Company )

Docket No. 82-04-NG

SUPPLEMENT TO APPLICATION TO  
AMEND AUTHORIZATION TO EXPORT  
LIQUEFIED NATURAL GAS

Pursuant to Section 3 of the Natural Gas Act, 15 U.S.C. § 717b, DOE Delegation Order 0402-54 (1979), and 18 C.F.R. Parts 1 and 153, and in accordance with ERA proposed rules of procedure 10 C.F.R. §§ 590.204 and 590.405, Phillips Petroleum Company and Marathon Oil Company hereby submit this supplement to the application filed in the above referenced docket on May 10, 1982:

In March of this year, United States Steel Corporation (hereinafter "U.S. Steel") completed its acquisition of Marathon Oil Company. On July 10, 1982, in order to improve operating efficiencies and productivity and to more accurately reflect the cost to U.S. Steel of its acquisition of Marathon, a corporate restructuring of Marathon took place by separating its business operations into two corporations. The transaction is more fully described in the attached Marathon Oil Company news release (Exhibit A hereto). These structural changes have no impact upon the LNG export operations which are the subject of the instant Application.

Under the new corporate structure, all of the domestic oil and gas exploratory and producing properties and related facilities and equipment previously held and operated by Marathon Oil Company (hereinafter "Oil Company") are held and operated by the former USS Holdings Company, the company through which U.S. Steel made its acquisition, which itself has now been named Marathon Oil Company (hereinafter "Marathon Oil"). Thus, all of the interests of Oil Company in the facilities related to the Phillips/Marathon Alaskan LNG project, including the natural gas fields, the liquefaction plant, the LNG tankers and all related facilities, are now beneficially owned by Marathon Oil. All employees of Oil Company who were employed by its Production United States Organization have become employees of Marathon Oil. Oil Company, which will operate as a subsidiary of Marathon Oil, has been renamed Marathon Petroleum Company. The subsidiary will continue to conduct all corporate functions not conducted by its parent, Marathon Oil.

The board of directors of Marathon Oil is identical to the former board of Oil Company. In addition, the chief executive officer and certain of the other senior officers of Marathon Oil hold the same positions and titles that they held in Oil Company prior to the restructuring.

As indicated, the restructuring will have no actual impact on the export operations related to the Phillips/Marathon LNG


project. There will be no operational change in the property, facilities or personnel engaged in the project as a result of the restructuring. Thus, the description of the project and the other factual information contained in the application filed by Phillips and Marathon on May 10, 1982 is unchanged. Coincidentally, because of the change of USS Holdings Company's name to Marathon Oil Company, the information contained on page 2 of the application is still literally accurate. That is, Marathon Oil is also an Ohio corporation licensed to do business in the states listed therein.

Thus, while no amendment to the actual language of the May 10, 1982 application is necessary, the proper applicant before ERA -- the present Marathon Oil Company -- is a different corporate entity although it remains a wholly-owned subsidiary of U.S. Steel. Phillips and Marathon have submitted this supplement to avoid any potential confusion and so that any action taken by the ERA on the instant application will be taken in recognition of the corporate restructuring of Marathon. To keep the record before the ERA as clear and accurate as possible, the applicants submit herewith the Articles of Incorporation and Code of Regulations of Marathon Oil (Exhibit B), and a statement (including a signed opinion of counsel) that the exportation of natural gas is within the corporate powers of Marathon Oil (Exhibit C).


WHEREFORE, applicants respectfully submit the foregoing Supplement to Application to Amend Authorization to Export Liquefied Natural Gas so that ERA may take appropriate note of the above-described corporate restructuring of Marathon.

Respectfully submitted,


PHILLIPS PETROLEUM COMPANY

By   
Kenneth Heady  
Vice President and General Counsel

MARATHON OIL COMPANY

By   
J. H. Herring  
Senior Vice President

MARATHON PETROLEUM COMPANY

By   
V. G. Beghini  
Vice President

Dated: July 29, 1982

cc: All Parties

VERIFICATION

STATE OF OKLAHOMA     )  
                                  )  
COUNTY OF WASHINGTON )   SS:

BEFORE ME, the undersigned authority, on this day personally appeared KENNETH HEADY, who, having been by me first duly sworn, on oath says that he is Vice President and General Counsel of Phillips Petroleum Company and duly authorized to make this Verification; that he has read the foregoing instrument and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

*Kenneth Heady*

Subscribed and sworn to before me this 3rd day of August, 1982.

*B. J. Anderson*  
Notary Public

My commission expires:  
November 21, 1984



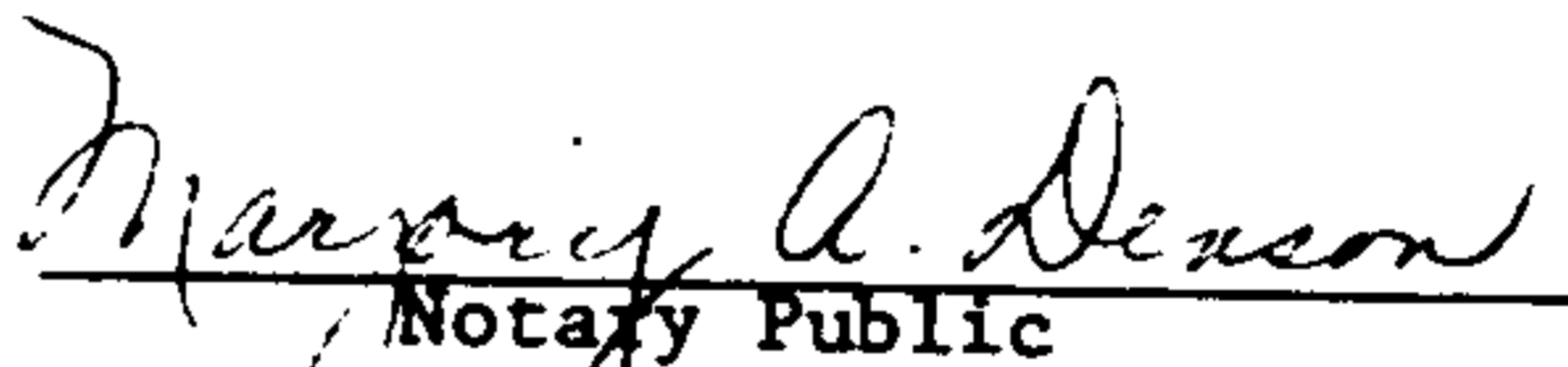
VERIFICATION

STATE OF OHIO        )  
                          )  
COUNTY OF HANCOCK )    SS:

BEFORE ME, the undersigned authority, on this day personally appeared J. H. HERRING, who, having been by me first duly sworn, on oath says that he is Senior Vice President of Marathon Oil Company and duly authorized to make this Verification; that he has read the foregoing instrument and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
J. H. Herring

Subscribed and sworn to before me this 29th day of  
July, 1982.

  
\_\_\_\_\_  
Notary Public

My commission expires:  
August 28, 1982

MARJORY A. DENSON  
Notary Public, State of Ohio  
My Commission Expires 8-28-82

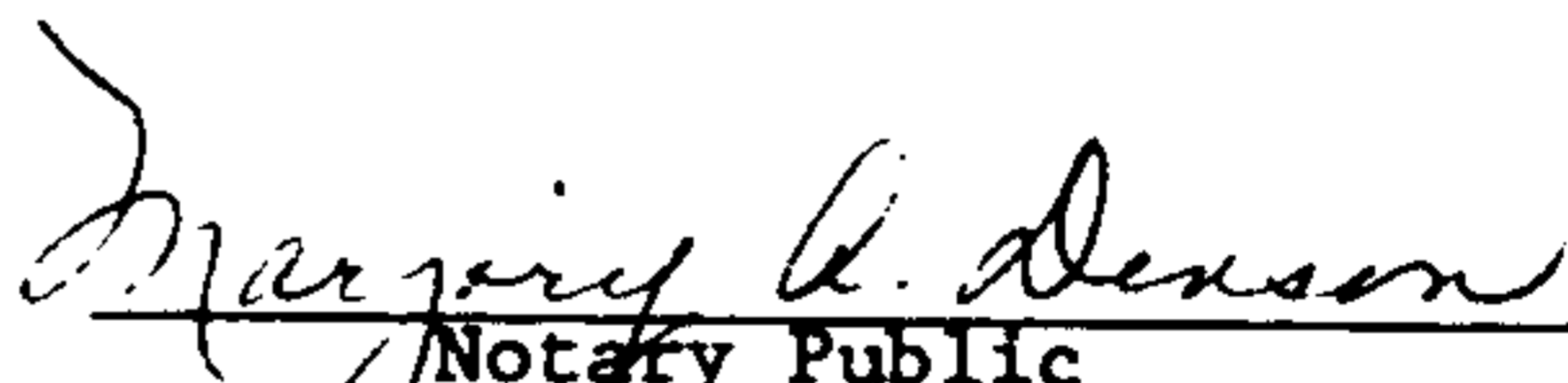
VERIFICATION

STATE OF OHIO            )  
                                  )  
COUNTY OF HANCOCK )    SS:

BEFORE ME, the undersigned authority, on this day personally appeared V. G. Beghini, who, having been by me first duly sworn, on oath says that he is Vice President of Marathon Petroleum Company and duly authorized to make this Verification; that he has read the foregoing instrument and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
V. G. Beghini

Subscribed and sworn to before me this 29th day of July, 1982.

  
\_\_\_\_\_  
Notary Public  
MARJORY A. DENSON  
Notary Public, State of Ohio  
My Commission Expires 8-28-82

My commission expires:  
August 28, 1982

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all parties of record in said proceeding in accordance with the requirements of Section 1.17 of the Rules of Practice and Procedure.

Dated this 4<sup>TH</sup> day of AUGUST, 1982, at  
Washington, D.C.

  
Kevin D. McDonald

Of Counsel for Marathon Oil Company  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N.W.  
Washington, D.C. 20006  
(202) 861-3939



# NEWS RELEASE



**Marathon  
Oil Company**

GENERAL OFFICE: Findlay, Ohio 45840 Telephone: 419 422-2121 TWX: 810 445-2850

For release: IMMEDIATE

William P. Ryder

FINDLAY, O., July 12--Marathon Oil Company announced that it has transferred all of its U. S. exploration and production personnel and assets to USS Holdings Company, another subsidiary of United States Steel Corporation. Prior to the transfer of assets, the name of USS Holdings was changed to Marathon Oil Company. The transfer was effective July 10.

Marathon's refining, marketing, transportation and international exploration and production personnel and assets remain in the present company which has been renamed Marathon Petroleum Company. Marathon Petroleum will continue to be a wholly owned subsidiary of the corporation now named Marathon Oil. The two companies together will engage in the same activities and perform the same services as were formerly performed by the one entity.

Harold D. Hoopman is the president and chief executive officer of the new Marathon Oil Company. William E. Swales, who was senior vice president, production international, of the Marathon Oil Company, has been named president of Marathon Petroleum Company. Each company has its own board of directors and complement of officers. Headquarters for both remain in Findlay.

Hoopman said the reorganization was undertaken to improve operating

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efficiency and profitability. The restructuring more accurately reflects the cost to United States Steel Corporation of the acquisition of Marathon Oil Company. Hoopman emphasized that the change in corporate structure will have no effect on the size and location of Marathon's employee work force or employees' compensation and benefits.

The new Marathon Oil Company, with approximately 5,000 employees, owns and operates all of the domestic oil and gas exploratory and producing properties and related facilities and equipment previously held and operated by the old Marathon Oil Company. This company, in addition, will provide certain administrative and staff support services for its subsidiaries and owns and operates the company's Research Center at Littleton, Colorado.

Marathon Petroleum Company, directly and through its subsidiaries and affiliates, owns the assets and will continue the operation of all functions not conveyed or transferred to its parent, Marathon Oil. These include: all international holdings and operations; crude oil purchasing and trading activities; the transportation of crude oil and petroleum products; all refining, distribution and marketing activities; and the domestic exploration and production of minerals other than oil and gas. Marathon Petroleum Company has approximately 4,000 employees, and approximately 7,000 additional personnel continue in the employment of various subsidiaries of that company.

The directors of the former Marathon Oil Company form the board of the new parent company. Officers, in addition to Hoopman, are: Elmer A. Graham, senior vice president, finance & administration; Jack H. Herring, senior vice president, production, United States; James H. Brannigan, vice president, research; Ronald R. Burke, vice president, production exploration, United States; James S. Dimling, vice president, finance; Kent B. Hampton, vice president & general counsel; Howard H. Harris, vice president, corporate

---more---

external affairs; Charles E. Merzbacher, vice president & general tax counsel; Burrell L. Walters Jr., vice president, production operations, United States; Harold B. Colvin, controller; Girard R. Jetton Jr., secretary, and Charles K. Morgan, treasurer.

In addition to Swales, officers of Marathon Petroleum Company are: Charles H. Barre', vice president, refining; Victor G. Beghini, vice president, supply & transportation; W. L. Kinney, vice president, production operations, international; G. Norman Nicholson, vice president, marketing, United States; Fred D. Spindle Jr., vice president, production exploration, international; Rex D. Cooley, vice president, finance & administration; Jack E. Waldron, controller; James H. Fix, treasurer, and James F. Brucklacher, secretary.

# # #

July 12, 1982





CERTIFICATE

The undersigned, J. F. Brucklacher, Assistant Secretary of Marathon Oil Company (formerly known as USS Holdings Company), an Ohio corporation, does hereby certify that the instrument attached hereto marked Exhibit A is a true and exact counterpart of the Amended Articles of Incorporation which are currently in full force and effect of Marathon Oil Company.

The undersigned, as Assistant Secretary of Marathon Oil Company, does hereby further certify that the instrument attached hereto marked Exhibit B is a true and exact copy of the Code of Regulations of said corporation which are currently in full force and effect.

Dated: July 29, 1982

  
J. F. Brucklacher  
Assistant Secretary  
Marathon Oil Company

CORPORATE SEAL

EXHIBIT A  
AMENDED ARTICLES OF INCORPORATION  
OF  
MARATHON OIL COMPANY

ARTICLE I

The name of the corporation is MARATHON OIL COMPANY.

ARTICLE II

The place in the State of Ohio where the principal office of the corporation is located is the City of Findlay, County of Hancock.

ARTICLE III

The purpose for which the corporation is formed is to engage in any lawful act or activity for which corporations may be formed under Sections 1701.01 to 1701.98, inclusive, of the Revised Code of Ohio.

ARTICLE IV

The number of shares which the corporation is authorized to have outstanding is 10,000 common shares with no par value.

ARTICLE V

The foregoing amended Articles of Incorporation supersede and take the place of the original Articles of Incorporation of the corporation.

EXHIBIT B

CODE OF REGULATIONS

OF

MARATHON OIL COMPANY

ARTICLE I.

Offices

SECTION 1. Principal Office - The principal office of the corporation (hereinafter referred to as the "Company") shall be in the City of Findlay, County of Hancock, State of Ohio.

SECTION 2. Other Offices - The Company may also have such other office or offices, within or without the State of Ohio as the Board of Directors may determine or as its business may require.

ARTICLE II.

Shareholder Meetings

SECTION 1. Place of Meetings - The annual meeting of shareholders shall be held at such place, within or without the state of Ohio as the Board of Directors may designate. The notice of the place shall be given to each shareholder as provided in Section 4 of this Article II.

A special meeting of shareholders may be held at such place as designated in the notice of such meeting.

SECTION 2. Annual Meeting - The annual meeting of the shareholders shall be held on the first Thursday in May in each year, if not a legal holiday at the place held, but if a legal holiday, then on the next day following which is not a legal holiday. At such meeting the shareholders shall elect a Board of Directors and transact such other business as may be properly brought before the meeting.

SECTION 3. Special Meetings - A special meeting of shareholders may be held whenever called (a) by the Chairman of the Board, (b) by the President, (c) by the Board of Directors by action at a meeting or by a majority of the directors acting without a meeting, or (d) by the holder or

holders of twenty-five percent (25%) of all the outstanding shares of the Company and entitled to vote at the meeting.

SECTION 4. Notice of Meetings - Except as provided in Section 5 of this Article II, a written notice of every meeting of the shareholders stating the time, place and purposes thereof shall be given to each shareholder of record, not less than seven (7) nor more than sixty (60) days before the date of the meeting, either by delivering such notice to him personally or by depositing same in the post office, postage prepaid, and properly addressed to him at his address as the same appears on the records of the Company.

SECTION 5. Meetings Held on Waivers - Anything in these Regulations to the contrary notwithstanding, any meeting of the shareholders may be held without call or notice if all shareholders are present in person or by proxy or if the shareholders not present and entitled to vote thereat shall waive notice thereof in writing, either before or after the holding of the meeting.

SECTION 6. Quorum - The presence, in person or by proxy, of the holder or holders of a majority of all the outstanding shares of stock of the Company entitled to vote at any meeting of the shareholders, exclusive of the shares owned by the Company, if any, shall constitute a quorum.

SECTION 7. Proxies - At any meeting of the shareholders any shares of stock of this Company may be voted by proxy appointed by an instrument in writing subscribed by the shareholder.

### ARTICLE III.

#### Directors

SECTION 1. Number, Term of Office and Qualification - The affairs of the Company shall be managed by a Board of not less than three (3) nor more than fifteen (15) directors, as fixed from time to time by the Board of Directors. Unless his office is sooner terminated by death or any other cause, each director shall hold office until the next annual meeting of the shareholders following his election or until his successor shall have been elected and shall qualify.

SECTION 2. Removal of Directors - At any meeting of the shareholders called for that purpose, any one or more of the directors may be removed with or without cause at any

time before the expiration of the term for which he or they shall have been elected, by the affirmative vote of the holder or holders of a majority of all the outstanding shares of stock of the Company.

SECTION 3. Vacancies - If any vacancy occurs in the Board of Directors through death, resignation, disqualification, removal or any other cause whatsoever, the remaining directors, provided there are at least three (3) remaining directors, may, by the affirmative vote of the majority thereof, fill such vacancy or vacancies. In the event that there are less than three (3) remaining directors, such vacancy or vacancies shall be filled by the shareholders at a meeting called for that purpose. In the event and until the filling of any such vacancy or vacancies, the remaining directors, provided there are at least three (3) such remaining directors, shall constitute the Board of Directors of the Company.

SECTION 4. Place of Meetings - The directors may hold their meetings at such time and place within or without the State of Ohio as designated by the Board of Directors or by the chief executive officer of the Company.

SECTION 5. Notice of Meetings - Except as provided in Section 6 of this Article III, a written notice of the time and place of each meeting of the Board of Directors shall be given to each director either by personal delivery or by mail, telegram, or cablegram at least two (2) days before the day set for the meeting, which notice need not specify the purposes of the meeting.

SECTION 6. Meetings Held on Waivers, by Presence of All the Directors or by Communications Equipment - Anything in these Regulations to the contrary notwithstanding, any meeting of the Board of Directors may be held at any time and place, without call or notice, if all the directors are present or if those not present shall have waived notice thereof in writing, either before or after the meeting, provided that a quorum is present. At any such meeting any and all general or ordinary business may be transacted. There may also be transacted at such meeting any extraordinary business which might be transacted after due notice, provided that no director present objects to the consideration thereof and that consent to said consideration shall have been specifically given in the waivers of the directors. Meetings of the Board may be held through any communications equipment if all persons participating can hear each other, and participation in a meeting pursuant to this provision shall constitute presence at such meeting.

SECTION 7. Quorum - At any meeting of the Board of Directors, a majority of the directors in office shall constitute a quorum and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors.

SECTION 8. Committees -

- (a) The Board of Directors may from time to time create an executive committee or any other committee of directors, to consist of not less than three directors, and may delegate to any such committee any of the authority of the directors, however conferred, other than that of filling vacancies among the directors or of any committee of the directors.
- (b) The Board may appoint one or more directors as alternate members of any such committee, who may take the place of any absent member or members at any meeting of such committee.
- (c) Each such committee shall serve at the pleasure of the Board, shall act only in the intervals between meetings of the Board, and shall be subject to the control and direction of the Board.
- (d) Any such committee may act at a meeting by a majority of its members or by a writing or writings signed by all of its members.
- (e) An act or authorization of an act by any such committee within the authority delegated to it shall be effective for all purposes as an act or authorization of the Board.
- (f) All committees shall keep regular minutes of their proceedings and report the same to the Board when required.

## ARTICLE IV.

### Officers

SECTION 1. Election - After their election at the annual meeting of the shareholders, the Board of Directors shall elect the Executive Officers of the Company.

SECTION 2. Executive Officers - The Board of Directors shall elect a President, a Secretary, and a Treasurer, and, at its discretion, may elect a Chairman of the Board, one or more Vice Presidents, a Controller, a General Counsel and such other Executive Officers as it may deem necessary. The Chairman of the Board shall be a director; none of the other officers need be a director. Two or more offices may be held by the same person, but no officer shall execute, acknowledge or verify any instrument in more than one capacity if such instrument is required by law or by the Articles of Incorporation or by these Regulations to be executed, acknowledged or verified by two or more officers.

Other Officers and Agents - The Board of Directors may also elect one or more Assistant Secretaries, Assistant Treasurers, Assistant Controllers, Associate General Counsels and such other officers as it may deem necessary or advisable for the proper conduct of the business of the Company. The Board of Directors and, subject to the supervision and control of the Board of Directors, each of the Executive Officers may also appoint such agents as it or he may deem necessary or advisable for the proper conduct of the business of the Company.

SECTION 3. Term of Office; Vacancies - Each elected officer of the Company shall hold office until the next organization meeting of the Board of Directors and his successor is chosen, or until his earlier resignation, retirement, death or removal from office. Any officer elected or assistant officer appointed by the Board may be removed by the Board at any time, with or without cause. The Board may fill any vacancy in any office occurring from whatever reason.

SECTION 4. Powers, Authorities and Duties of Officers - Subject to the control of the Board of Directors, the several officers of the Company, in addition to the powers and authorities conferred and duties imposed upon them elsewhere in these Regulations, shall have and shall be charged with the powers, authorities and duties set forth in the following Sections of this Article IV.

SECTION 5. Chief Executive Officer - If no Chairman of the Board be elected, the President shall be the chief executive officer of the Company. If a Chairman of the Board be elected, the Board shall designate either the Chairman of the Board or the President as Chief Executive Officer. Subject to the directions of the Board, the Chief Executive Officer of the Company shall have general direction of the Company's business, affairs and property, and over its several officers, in addition to his duties set forth in Section 6 or 7 of this Article IV, as the case may be.

SECTION 6. Chairman of the Board - The Chairman of the Board, if one be elected, shall preside at all meetings of the shareholders and at all meetings of the Board, may execute any documents in the name of the Company, and shall have such other powers and duties as may be prescribed by the Board.

SECTION 7. President - The President shall have general and active supervision of the operations of the Company and, unless he shall be serving as Chief Executive Officer, shall be responsible to the Chairman of the Board. In the absence or incapacity of the Chairman of the Board, or if one shall not have been elected, he shall perform all duties and functions of the Chairman of the Board. The President shall see that all orders and resolutions of the Board are carried into effect, and shall be ex officio a member of all management committees. He may execute any documents in the name of the Company, and shall have such other powers and duties as may be prescribed by the Board.

SECTION 8. Vice Presidents - Each Vice President shall have such authority and shall perform such duties as are from time to time assigned to him by the Board of Directors or by any officer to whom he is responsible. In the absence or disability of the President, the Vice Presidents, in the order designated by the Board, shall perform the duties and possess the authority of the President. Should the Board fail to make such designation or in the absence or disability of the Vice President or Vice Presidents so designated, the available Vice President having seniority in office shall so serve as President, and, if two or more Vice Presidents shall have been first elected to such office at the same time, the Vice President having seniority in age shall so serve.

SECTION 9. Secretary - The Secretary shall keep the minutes of all meetings of the shareholders and of the Board. He shall keep such records as may be required by the Board, give notice of meetings of the shareholders and of the Board as required by law or by these Regulations, and perform



such other duties as pertain to his office or are assigned to him by the Board or any officer to whom he is responsible.

SECTION 10. Treasurer - The Treasurer shall have custody of the corporate funds and securities. He shall deposit, invest and disburse corporate funds and moneys as authorized by the Board, and shall perform such other duties as pertain to his office or are assigned to him by the Board or by any officer to whom he is responsible.

SECTION 11. Controller - The Controller shall have charge of and shall maintain the operational and financial records of the Company, and shall perform such other duties as pertain to his office or are assigned to him by the Board or any officer to whom he is responsible.

SECTION 12. General Counsel - The General Counsel shall have charge of all legal matters of the Company, and shall perform such other duties as are assigned to him by the Board or any officer to whom he is responsible.

SECTION 11. Assistant Officers - The Assistant Secretaries, Assistant Treasurers, Assistant Controllers and Associate General Counsels, in the order designated by the board of directors, shall, in the absence or disability of their principal officer, respectively, perform the duties and possess the powers of such officer, and shall perform such other duties and have such other powers as are assigned to them by their principal officer or by the Board or any officer to whom they are responsible.

## ARTICLE V.

### Capital Stock

SECTION 1. Certificates - The certificates for shares of this Company shall be in such form, not inconsistent with its Articles of Incorporation and the laws of Ohio, as shall be approved by the Board of Directors. Every shareholder of this Company shall be entitled to a certificate or certificates, signed by the Chairman of the Board or the President or a Vice President and either the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary, and sealed with the corporate seal, certifying the number of shares owned by him in the Company, and no share certificate not so signed and sealed shall be valid. All certificates for shares shall be consecutively numbered and the names and addresses of all persons owning shares of this Company, with the number of shares owned by each and the

date or dates of issue or transfer of the shares, shall be entered in books kept for that purpose by the proper officer or agent of the Company.

The Company shall be entitled to treat the holder of record of any share or shares as the holder in fact and the owner thereof for all purposes including the right to vote and, accordingly, shall not be bound to recognize any equitable or other claim to or interest in such share on the part of any other person, whether or not it has actual notice thereof, save as may be expressly otherwise provided by the laws of Ohio.

SECTION 2. Transfers - Shares of the Company shall be transferred only on the books of the Company by the holder thereof in person or by his duly authorized attorney and upon the surrender and cancellation of the certificate or certificates for a like number of shares.

## ARTICLE VI.

### Dividends

Board to Declare Dividends - Subject to the provisions of the Articles of Incorporation of the Company and any amendment thereof and to the laws of Ohio, the Board of Directors in its discretion may from time to time declare dividends upon the issued and outstanding shares of the Company from surplus or net profits as defined by the laws of Ohio and may fix and change the dates for the declaration and payment of dividends; provided, however, that no dividend shall be declared or paid which would result in an impairment of the capital of the Company.

## ARTICLE VII.

### Execution of Documents

SECTION 1. Authorized Signatures - Any document evidencing a conveyance by or contract or other obligation of the Company may be executed on behalf of the Company by the Chairman of the Board, the President, or any Vice President, and may be attested and have the corporate seal affixed thereto by the Secretary or any Assistant Secretary. Authority for any other person to execute any such document may be granted by or pursuant to special or general resolution of the Board or a committee of directors, and such authority

may be restricted, modified or terminated from time to time.

SECTION 2. Facsimile Signatures - Facsimile signatures of any officer or officers of the Company may be used whenever and as authorized by the Board of Directors.

#### ARTICLE VIII.

##### Indemnification of Directors, Officers, Employees, Agents and Others

To the extent permitted by applicable law, the Company shall indemnify any present or former director, officer, employee or agent of the Company, and may indemnify any other person serving at the request of the Company as a director, trustee, officer, employee or agent of another company, domestic or foreign, nonprofit or for profit, partnership, joint venture, trust or other enterprise, against expenses, including attorneys' fees, judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with any threatened, pending or completed action, suit or proceeding to which any such person is, or is threatened to be made, a party and which may arise by reason of the fact he is or was a person occupying any such office or position.

#### ARTICLE IX.

##### Miscellaneous

SECTION 1. Corporate Seal - The Board of Directors may provide a suitable seal containing the name of the Company, which shall be in the charge of the Secretary. If and when so ordered by the Board of Directors, a duplicate of the seal may be kept and used by the Treasurer or by any Assistant Secretary or Assistant Treasurer. A facsimile of such seal may be used or it may be reproduced in any other manner.

SECTION 2. Fiscal Year - The fiscal year of the Company shall commence on the 1st day of January and end on the 31st day of December, each year, or otherwise as the Board of Directors may determine.

## ARTICLE X.

### Emergency Regulations

The Board of Directors may adopt emergency regulations, either before or during "an emergency," as that term is defined in division (U) of Section 1701.01 of the Ohio Revised Code, or in any other relevant law in effect at the time of adoption of the emergency regulations. Such regulations shall be operative only during such an emergency so defined, but shall be applicable during such an emergency notwithstanding any different provisions elsewhere in these Regulations. The emergency regulations may include such provisions as are authorized by law to be included in regulations. Unless otherwise provided by such emergency regulations, or in the event the Board does not adopt emergency regulations, the special rules contained and set forth in division (F) of Section 1701.11 of the Ohio Revised Code, or other relevant law then in effect, shall be applicable during such an emergency notwithstanding any different provisions elsewhere in these Regulations.

## ARTICLE XI.

### Amendments

This Code of Regulations of the Company may be amended or new regulations may be adopted by the shareholders at a meeting held for such purpose by the affirmative vote of the holders of shares entitling them to exercise a majority of the voting power of the Company on such proposal.

Exhibit C

1

Clifford O. Robinson  
Associate General Counsel

**Marathon  
Oil Company**

Findlay, Ohio 45840  
Telephone 419/422-2121

July 23, 1982

United States of America  
Economic Regulatory Administration  
Washington, D.C.

Re: In the Matter of Phillips Petroleum  
Company and Marathon Oil Company

Docket No. 82-04-NG

Gentlemen:

As legal counsel to Marathon Oil Company, an Ohio corporation, organized on November 18, 1981 (formerly called USS Holdings Company), I am familiar with its Articles of Incorporation and its Code of Regulations. I am also familiar with the Application to Amend the Authorization to Export Liquified Natural Gas pending before the Economic Regulatory Administration. One of the parties to this Application is Marathon Petroleum Company, an Ohio corporation, organized in 1887 (formerly called Marathon Oil Company), which changed its name on July 10, 1982, and transferred all of its United States oil and gas properties including properties covered by the above Application to its parent corporation, Marathon Oil Company.

I also have knowledge of the LNG properties, facilities and operations which have been conducted pursuant to the current authorization and it is my opinion that the exportation of natural gas by Marathon Oil Company pursuant to such authorization or any extension thereof is permitted by its charter and regulations and is otherwise within its corporate powers.

Very truly yours,



Clifford O. Robinson,  
Associate General Counsel.

COR:md

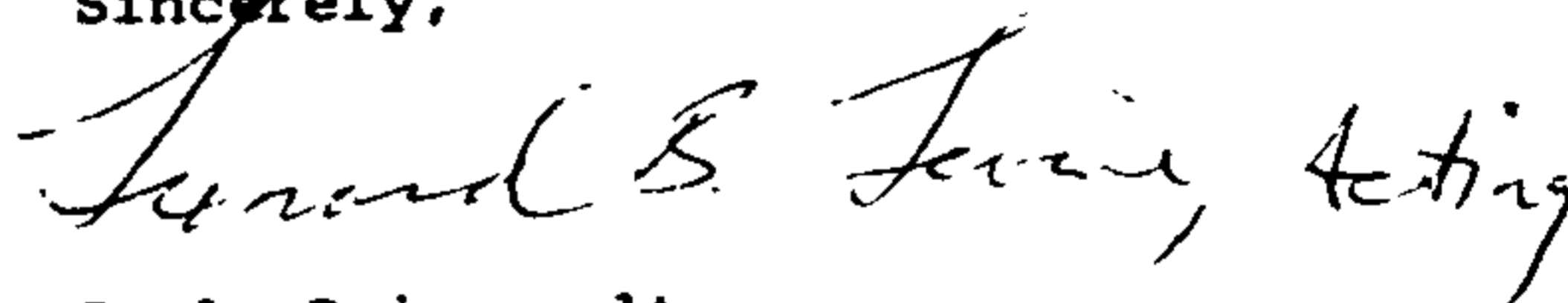
Pursuant to section 3 of the Natural Gas Act, ERA is required to approve an application for the export of natural gas unless, after opportunity for hearing, it finds that the proposed export "will not be consistent with the public interest." ERA bases its determination upon a number of considerations including, but not limited to, those delineated in Department of Energy (DOE) Delegation Order No. 0204-54 (46 FR 56735, October 2, 1979) (Delegation Order).

Section (a) (2) of the Delegation Order specifies that ERA's determination take into account the following consideration (among others): "The price proposed to be charged at the point of exportation." Your application does not contain this specific information. It includes only the price delivered at the Tokyo flange. In order to complete our evaluation of your application we request that you provide the price of the LNG at the point of exportation in Alaska in cents per million Btu. Please furnish this information as soon as possible, and no later than October 15, 1982.

Your response to this inquiry should be sent to the Natural Gas Branch, Economic Regulatory Administration, Room 6144, RG-631, 12th and Pennsylvania Avenue, N.W., Washington, D. C. 20461. A copy should also be served on all who have submitted petitions to intervene or notices of intervention in this docket, as indicated by the enclosed official service list.

If you should have any questions or need for clarification regarding this letter, please contact Mr. R. T. Gehring of the Natural Gas Branch at (202) 633-9296.

Sincerely,



Paula Daigneault  
Chief, Natural Gas Branch  
Office of Fuel Programs  
Economic Regulatory Administration

Enclosure

cc: All Petitioners for  
Intervention

OFFICIAL SERVICE LIST

PHILLIPS PETROLEUM COMPANY  
AND  
MARATHON OIL COMPANY

ERA DOCKET NO. 82-04-LNG

APPLICANT

REPRESENTATIVES

PHILLIPS PETROLEUM COMPANY

Mr. John Horn  
Manager, Natural Gas and LNG  
Sales Division  
Gas and Gas Liquids Group  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Kenneth Heady, Esquire  
Vice President and General Counsel  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

MARATHON OIL COMPANY

Mr. S. C. Sandusky  
Manager, Natural Gas Division  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

C. O. Robinson, Esquire  
Associate General Counsel-Production  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

J. F. Bell, Esquire  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N. W.  
Washington, D. C. 20006



PETITIONS TO INTERVENE

PACIFIC ALASKA LNG ASSOCIATES  
PACIFIC GAS AND ELECTRIC COMPANY  
AND  
SOUTHERN CALIFORNIA GAS COMPANY

E. R. Island  
Michael D. Gayda  
Attorneys at Law  
810 South Flower Street  
Los Angeles, California 90017

Keith C. McKinney  
Pacific Alaska LNG Associates  
810 South Flower Street  
Los Angeles, California 90017

Harry W. Long  
Pacific Gas & Electric Company  
Law Department  
P. O. Box 7442  
San Francisco, California 94120

NORTHWEST NATURAL GAS COMPANY

Robert M. Johnson, Esq.  
Northwest Natural Gas Company  
Suite 1900  
200 Southwest Market Street  
Portland, Oregon 97201

Justin R. Wolf, Esq.  
1625 K Street, N.W.  
Washington, D. C. 20006



Department of Energy  
Washington, D.C. 20461

15 SEP 1982

Mr. John Horn  
Manager, Natural Gas and LNG Sales Division  
Gas and Gas Liquids Group  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Kenneth Heady, Esquire  
Vice President and General Counsel  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Mr. S. C. Sandusky  
Manager, Natural Gas Division  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

C. O. Robinson, Esquire  
Associate General Counsel-Production  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

J. F. Bell, Esquire  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N.W.  
Washington, D. C. 20006

Re: Application in ERA Docket No. 82-04-LNG

Gentlemen:

This is in reference to the application filed on May 10, 1982, by Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon) with the Economic Regulatory Administration (ERA) requesting extension of and amendment to the order issued by the Federal Power Commission on April 19, 1967, authorizing the exportation by Phillips and Marathon of liquefied natural gas (LNG) from Alaska to Japan.

Pursuant to section 3 of the Natural Gas Act, ERA is required to approve an application for the export of natural gas unless, after opportunity for hearing, it finds that the proposed export "will not be consistent with the public interest." ERA bases its determination upon a number of considerations including, but not limited to, those delineated in Department of Energy (DOE) Delegation Order No. 0204-54 (46 FR 56735, October 2, 1979) (Delegation Order).

Section (a) (2) of the Delegation Order specifies that ERA's determination take into account the following consideration (among others): "The price proposed to be charged at the point of exportation." Your application does not contain this specific information. It includes only the price delivered at the Tokyo flange. In order to complete our evaluation of your application we request that you provide the price of the LNG at the point of exportation in Alaska in cents per million Btu. Please furnish this information as soon as possible, and no later than October 15, 1982.

Your response to this inquiry should be sent to the Natural Gas Branch, Economic Regulatory Administration, Room 6144, RG-631, 12th and Pennsylvania Avenue, N.W., Washington, D. C. 20461. A copy should also be served on all who have submitted petitions to intervene or notices of intervention in this docket, as indicated by the enclosed official service list.

If you should have any questions or need for clarification regarding this letter, please contact Mr. R. T. Gehring of the Natural Gas Branch at (202) 633-9296.

Sincerely,

*Leonard B. Levine, Acting*

Paula Daigneault  
Chief, Natural Gas Branch  
Office of Fuel Programs  
Economic Regulatory Administration

Enclosure

cc: All Petitioners for  
Intervention

OFFICIAL SERVICE LIST

PHILLIPS PETROLEUM COMPANY  
AND  
MARATHON OIL COMPANY

ERA DOCKET NO. 82-04-LNG

APPLICANT

PHILLIPS PETROLEUM COMPANY

MARATHON OIL COMPANY

REPRESENTATIVES

Mr. John Horn  
Manager, Natural Gas and LNG  
Sales Division  
Gas and Gas Liquids Group  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Kenneth Heady, Esquire  
Vice President and General Counsel  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Mr. S. C. Sandusky  
Manager, Natural Gas Division  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

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Associate General Counsel-Production  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

J. F. Bell, Esquire  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N. W.  
Washington, D. C. 20006

## PETITIONS TO INTERVENE

PACIFIC ALASKA LNG ASSOCIATES  
PACIFIC GAS AND ELECTRIC COMPANY  
AND  
SOUTHERN CALIFORNIA GAS COMPANY

E. R. Island  
Michael D. Gayda  
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Los Angeles, California 90017

Keith C. McKinney  
Pacific Alaska LNG Associates  
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Harry W. Long  
Pacific Gas & Electric Company  
Law Department  
P. O. Box 7442  
San Francisco, California 94120

NORTHWEST NATURAL GAS COMPANY

Robert M. Johnson, Esq.  
Northwest Natural Gas Company  
Suite 1900  
200 Southwest Market Street  
Portland, Oregon 97201

Justin R. Wolf, Esq.  
1625 K Street, N.W.  
Washington, D. C. 20006

Clifford O. Robinson  
Associate General Counsel

**Marathon  
Oil Company**

Findlay, Ohio 45840  
Telephone 419/422-2121

October 7, 1982

Mr. R. T. Gehring  
Natural Gas Branch  
Office of Fuel Programs  
Economic Regulatory Administration  
Department of Energy  
Washington, D.C. 20461

Re: Application of Phillips Petroleum Company  
and Marathon Oil Company/ERA Docket #82-04-LNG

Dear Tom:

In line with our telephone conversation of yesterday afternoon, I enclose copies of the following documents which were the subject of filings Marathon and Phillips made with FERC in 1980, 1981 and 1982 reflecting pricing revisions and agreements by the parties to the LNG sales agreement:

1. The Eleventh Amendatory Agreement filed with FERC on July 10, 1980, with copies furnished to ERA. Also attached to the Eleventh Amendatory Agreement are explanatory letters of January 4, 1980 and the transmittal letter of July 10, 1980.
2. The Twelfth Amendatory Agreement filed with FERC on July 16, 1981, with copies furnished to ERA. Also attached is an explanatory letter of May 13, 1981 and the letter of transmittal of July 16, 1981.
3. The Thirteenth Amendatory Agreement filed on April 23, 1982 with FERC, with copies to ERA. Also attached is an explanatory letter of April 14, 1982 and the transmittal letter of April 23, 1982.

Mr. R. T. Gehring  
October 7, 1982  
Page Two

We trust the enclosures contain the background information concerning recent price revisions which you have requested.

Very truly yours,



Clifford O. Robinson,  
Associate General Counsel.

COR:md

Enclosures

xc: K. Heady - Phillips  
J. F. Bell

w/encs.

ELEVENTH AMENDATORY AGREEMENT

THIS ELEVENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers",

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 2nd day of March, 1979) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective January 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended by deleting the words and figure "two hundred and thirty-six cents (236¢)" and substituting the words and figure "three hundred and thirty-six cents (336¢)" therefor.



2. Effective April 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, shall be the weighted average price (expressed in United States cents per million BTU) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports - Commodity by Country" published monthly by the Japan Tariff Association."

3. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 13th day of December, 1979.

BUYER:

THE TOKYO ELECTRIC  
POWER COMPANY, INC.

BY:

Taichi Hiraoka  
President

TOKYO GAS COMPANY, LTD.

BY:

Takeo Murakami  
President

SELLER:

MARATHON OIL COMPANY

BY:

[Signature]  
President

PHILLIPS PETROLEUM COMPANY

BY:

[Signature]  
President

January 4, 1980

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

Dear Sir:

Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

This is to advise that agreement has been reached concerning price increases for the sale of LNG to The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd. by Marathon Oil Company and Phillips Petroleum Company as follows:

- 1) Effective January 1, 1980, the price will be \$3.36 per MMBtu; and
- 2) Effective April 1, 1980, the price will be equated to the weighted average price of crude oil imported into Japan during the third month previous to the month of LNG delivery.

Payment for LNG delivered after January 1, 1980, will be made at the increased price. The document evidencing this agreement is in the process of being executed. Copies of the agreement will be filed pursuant to Section 153.8 of the Commission's regulations after execution.

Yours very truly,

*MARATHON OIL CO*

*/s/ S. C. Sandusky, Mgr.  
Natural Gas Division*

SCS:blc

July 10, 1980

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.W.  
Washington, D.C. 20426

Dear Mr. Plumb:

Re: Docket No. CI67-1226  
Marathon Oil Company  
Phillips Petroleum Company  
Eleventh Amendatory Agreement

In accordance with my letter to you dated January 4, 1980, please find attached two copies of the Eleventh Amendatory Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd., as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, of LNG.

This Amendatory Agreement is filed pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket.

Since ERA has indicated a desire to receive copies of contract amendments relating to this docket, a copy is being sent to them.

Respectfully submitted,

MARATHON OIL COMPANY

S. C. Sandusky, Manager  
Natural Gas Division

SCS:blc  
Attachments (2)

cc w/att: Mr. Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, NW  
Washington, D.C. 20461

cc w/o att: Mr. W. B. Gaul (Phillips)

TWELFTH AMENDATORY AGREEMENT

THIS TWELFTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers",

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement — as partially amended as of the 13th day of December, 1979) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1981, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984 shall be a base price of 592.8 U.S. cents per

million Btu as indexed in accordance with the formula stated in this Sub-Section so as to reflect changes in the weighted average of Government Selling Prices of a basket of twenty (20) crude oils imported into Japan.

$$\begin{aligned} & \text{Price for calendar month} \\ & = 592.8 \times \frac{\text{Av GSP (Month Prior to Calendar Month)}}{34.48 \text{ (the Av GSP for March 1981)}} \end{aligned}$$

WHERE:

Av GSP is the average of the Government Selling Prices (in U.S. dollars per barrel) weighted by the 1980 volumes for the top twenty (20) crude oils (ranked by descending volumes) imported into Japan during the calendar year of 1980.

If the Government Selling Price (GSP) for any of such top twenty (20) crude oils applicable on the last day of the month prior to the month in which LNG is sold and delivered is different from the GSP used in calculating the applicable LNG price, and the different GSP is announced before the end of the month following the month of delivery, then the applicable LNG price shall be re-calculated using the different GSP and appropriate adjusting payments shall be made at the next regular payment date. If at any time any of the Government Selling Prices used in the formula ceases to be published or is quoted on a revised basis, Sellers and Buyers shall promptly meet to agree on an appropriate modification.

Notwithstanding the above, for the months of April, May and June 1981, the price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder shall be the weighted average price (expressed in United States

cents per million Btu) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports - Commodity by country" published monthly by the Japan Tariff Association.

Sellers and Buyers shall be free to request a renegotiation of the price if there are significant changes in circumstances."

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 17th day of June 1981.

BUYERS:

SELLERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

MARATHON OIL COMPANY

By: Isidori Hiraiwa  
President

By: [Signature]  
President  
SCS  
nal

TOKYO GAS COMPANY LIMITED

PHILLIPS PETROLEUM COMPANY

By: Takeshi Murakami  
President

By: [Signature]  
President

May 13, 1981

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

Dear Sir:

Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

This is to advise that a provisional price of \$6.00/MMBTU has been agreed upon between Sellers and Buyers in the captioned sale effective April 1, 1981, but no written agreement has been signed.

When an amendment of the contract is executed, it will be filed with the Commission.

For its information we are providing ERA with a copy of this letter.

Very truly yours,

MARATHON OIL COMPANY

S. C. Sandusky, Manager  
Natural Gas Division

SCS:blc

cc: Mr. Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M. Street, N.W.  
Washington, D. C. 20461

Mr. W. B. Gaul (Phillips)

July 16, 1981

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.W.  
Washington, D.C. 20462

Dear Mr. Plumb:

Re: Docket No. CI67-1226  
Marathon Oil Company  
Phillips Petroleum Company  
Twelfth Amendatory Agreement

In accordance with my letter to you dated May 13, 1980, please find attached two copies of the Twelfth Amendatory Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd., as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, of LNG.

This Amendatory Agreement is filed pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket.

Said Agreement is effective April 1, 1981, and the provisional price which was notified to you in my letter dated May 13, 1981, has been adjusted to reflect this agreement.

A copy of this amendment is also being sent to the Economic Regulatory Administration.

Respectfully submitted,

MARATHON OIL COMPANY

S. C. Sandusky, Manager  
Natural Gas Division

SCS:blc  
Attachments

cc: Mr. Finn K. Nelsén, Director (w/att.)  
Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, N.W.  
Washington, D.C. 20461

cc: Mr. W. B. Gaul (w/o att.)  
Phillips Petroleum Company



THIRTEENTH AMENDATORY AGREEMENT

THIS THIRTEENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 17th day of June, 1981) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1982, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984 shall be a base price of 592.8 U.S. cents per million Btu as indexed in accordance with the formula stated in this Sub-Section so as to reflect changes in the weighted average of Government Selling Prices of a basket of twenty (20) crude oils imported into Japan.

$$\begin{aligned} & \text{Price for calendar month} \\ & = 592.8 \times \frac{\text{Av GSP (Month Prior to Calendar Month)}}{34.48} \end{aligned}$$

WHERE:

Av GSP is the average of the Government Selling Prices (in U.S. dollars per barrel) weighted by the 1981 volumes for the top twenty (20) crude oils (ranked by descending volumes) imported into Japan during the calendar year of 1981.

If the Government Selling Price (GSP) for any of such top twenty (20) crude oils applicable on the last day of the month prior to the month in which LNG is sold and delivered is different from the GSP used in calculating the applicable LNG price, and the different GSP is announced before the end of the month following the month of delivery, then the applicable LNG price shall be re-calculated using the different GSP and appropriate adjusting payments shall be made at the next regular payment date. If at any time any of the Government Selling Prices used in the formula ceases to be published or is quoted on a revised basis, Sellers

and Buyers shall promptly meet to agree on an appropriate modification.

Sellers and Buyers shall be free to request a renegotiation of the price if there are significant changes in circumstances."

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 24th day of March, 1982.

BUYERS:

SELLERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

MARATHON OIL COMPANY

By: *Genichi Hiraiwa*  
President

By: *[Signature]*  
President

TOKYO GAS COMPANY LIMITED

PHILLIPS PETROLEUM COMPANY

By: *Mitsushi Watanabe*  
President

By: *C. J. Piles*  
President

April 14, 1982

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

Dear Sir:

Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

This is to advise that agreement has been reached to modify slightly the price formula for the sale of LNG to Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd. by Marathon Oil Company and Phillips Petroleum Company.

The agreement provides that effective April 1, 1982, the top twenty crudes imported into Japan shall be determined from 1981 data rather than from 1980 data. Government selling prices for the twenty crudes are used in the price index.

The document evidencing this agreement is in the process of being executed. Copies of the agreement will be filed pursuant to Section 153.8 of the Commission's regulations after execution.

Yours very truly,

S. C. Sandusky  
Manager, Natural Gas Division

SCS:blc

cc: Mr. Finn K. Neilsen  
Economic Regulatory Administration  
Department of Energy  
Forrestal Bldg.  
G H 060  
Washington, D.C. 20585

Mr. W. B. Gaul  
Phillips Petroleum Company

April 23, 1982

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

Dear Sir:

Re: Docket No. CI67-1226  
Marathon Oil Company  
Phillips Petroleum Company  
Thirteenth Amendatory Agreement

In accordance with my letter to you dated April 14, 1982, please find attached two copies of the Thirteenth Amendatory Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd., as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, of LNG.

This Amendatory Agreement is filed pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket.

A copy of this amendment is also being sent to the Economic Regulatory Administration.

Respectfully submitted,

MARATHON OIL COMPANY

S. C. Sandusky  
Manager, Natural Gas Division

SCS:blc  
Attachments (2)

cc w/att: Mr. Finn K. Neilsen  
Economic Regulatory Administration  
Department of Energy  
Forrestal Bldg.  
GH 060  
Washington, D.C. 20585

Mr. W. B. Gaul  
Phillips Petroleum Company

PHILLIPS PETROLEUM COMPANY

MARATHON OIL COMPANY

October 11, 1982

Natural Gas Branch  
Economic Regulatory Administration  
Room 6144, RG-631  
12th & Pennsylvania Avenue, N.W.  
Washington, D.C. 20461

Re: Application of Phillips  
Petroleum, Inc., and  
Marathon Oil Company in  
ERA Docket No. 84-04-LNG

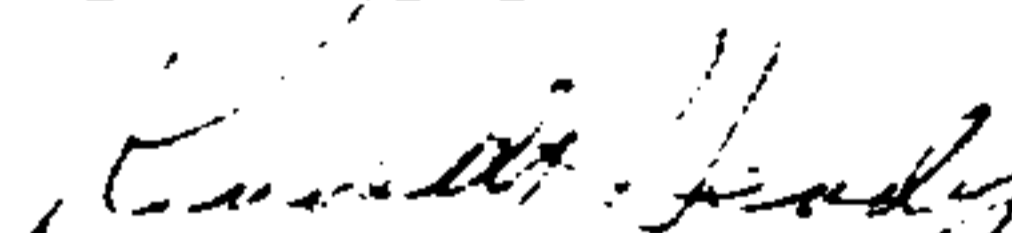
Gentlemen:

This is in response to your letter of September 15, 1982.

The Alaskan LNG export project is structured with a delivered price in Japan. There is no contractual price at the point of export, i.e., an FOB price. From its conception the project was considered to be a single entity to take gas produced in Alaska and deliver it as liquid in Japan. Because no true export price exists, only an estimate can be made of the value of the gas at the point of export.

Based upon current conditions we believe a reasonable approximate estimate of the value of the gas at the point of exportation is \$3.90/MMBTU.

Very truly yours,



Kenneth Heady, Esquire  
Vice President and General Counsel  
Phillips Petroleum Company



C. O. Robinson, Esquire  
Associate General Counsel-Production  
Marathon Oil Company

cc: All Petitioners for  
Intervention

UNITED STATES OF AMERICA  
DEPARTMENT OF ENERGY  
ECONOMIC REGULATORY ADMINISTRATION

PHILLIPS PETROLEUM COMPANY  
MARATHON OIL COMPANY

ERA DOCKET NO. 82-04-LNG

DOE/ERA OPINION AND ORDER NO. 49

ORDER AMENDING AUTHORIZATION OF  
PHILLIPS PETROLEUM COMPANY AND  
MARATHON OIL COMPANY TO EXPORT  
LNG FROM ALASKA

DEC 14 11:45

DECEMBER 14, 1982

## I. Background

On May 10, 1982, Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon)<sup>1/</sup> filed a joint application with the Department of Energy's (DOE) Economic Regulatory Administration (ERA), pursuant to section 3 of the Natural Gas Act (NGA), to amend an existing export authorization granted by the Federal Power Commission (FPC) on April 19, 1967, to Phillips and Marathon in FPC Docket Nos. CI67-1226 and CI67-1227, 37 FPC 777 (1967), to export LNG to Japan for sale to Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited. The initial authorization by the FPC covered a fifteen-year period ending May 31, 1984. By their joint application, Phillips and Marathon request the ERA to extend the term of the current authorization for a term of five years, through May 31, 1989, and to allow authorized quantities of LNG which have not been delivered or will not be delivered in a particular year to be delivered during a subsequent year in the extended five-year term or during a maximum seven-month make-up period beginning June 1, 1989. Phillips and Marathon seek to continue the annual volumes of LNG previously authorized to be exported, 50.57 trillion Btu.

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<sup>1/</sup> In March 1982, United States Steel Corporation completed its acquisition of Marathon, which was restructured on July 10, 1982. These corporate changes will have no actual impact on the export of LNG considered herein.



The initial sales agreement dated March 6, 1967 (Basic Agreement), expires on May 31, 1984, and contains an option to renew the arrangement by mutual agreement between June 1, 1981, and June 1, 1982. Pursuant to this option, the parties have entered into an Amendatory Extension Agreement dated April 15, 1982 (Amendment) which would continue the export for five additional years through May 31, 1989.

Under the Basic Agreement, the parties were to ship additional LNG in excess of contracted annual volumes as soon as reasonably possible during the remaining term of the agreement when necessary to make up for under-deliveries caused by circumstances beyond the reasonable control of the parties. No other make-up provisions appear. The Amendment modifies the Basic Agreement to provide that any annual volumes of LNG not delivered under either the basic agreement or the Amendment in a given year may be delivered as soon as possible thereafter in subsequent contract years or during a maximum seven-month period beginning June 1, 1989.

The current price of these LNG exports under the Basic Agreement, as amended March 24, 1982, delivered to the flange connecting the unloading piping of the LNG tankers with the the piping of Tokyo gas, is determined by a base price of 592.8 U.S. cents per MMBtu indexed in accordance with a formula based upon changes in the weighted average of the official Japanese Government Selling Prices of the top twenty crude oils imported by Japan. Application of the formula resulted in a price delivered in Tokyo of approximately

\$5.76 per MMBtu in April, 1982.

Phillips and Marathon own, or control either directly or indirectly (through subsidiaries), the gas reserves and liquefaction plant in Alaska and the LNG tankers associated with this project. In each instance, Phillips' share of ownership and control is 70% and Marathon's 30%. No alterations or additions to existing facilities are anticipated during the period of the extension. Therefore, the pipeline transportation, liquefaction, storage facilities, and export point will be the same as previously authorized.

In their application, Phillips and Marathon assert that, for the past twelve years, this project has continually improved both the economy of the State of Alaska and the United States' balance of payments with respect to Japan. They state that the LNG exported from Alaska by them has been an important and reliable source of energy for their Japanese customers,<sup>2/</sup> and that its continued exportation will be extremely beneficial to United States-Japanese relations. The applicants further assert that the continuation of this export will affect favorably the United States' balance of payments by providing annual revenues of almost \$300 million or more for an additional five years and represents one of the largest exports of any product from Alaska.

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<sup>2/</sup> There have been only insignificant interruptions in the supply of LNG for export to Japan that have caused less than 4% of the volumes contracted for not to be delivered since 1967. Phillips-Marathon Application at 15-16.

Phillips and Marathon indicate that there will be no national or regional need for this gas over the term of the proposed extension. They state that it is not physically possible to deliver any of this LNG to the Pacific Coast of the lower 48 states because of the lack of any LNG receiving facility there and that it is uneconomic to deliver the LNG to existing United States East Coast or Gulf Coast LNG receiving facilities under present circumstances. With respect to regional need, that is, the possible need for the gas in Alaska, the applicants assert that all of Alaska's natural gas uses are presently being supplied and those for the foreseeable future can easily be satisfied by the available reserves in the Cook Inlet Basin area of Alaska, not including the reserves from which this exported LNG is produced.

On September 15, 1982, the ERA requested additional information from Phillips and Marathon specifically regarding the applicable price for the LNG at the point of exportation. Phillips and Marathon responded on October 14, 1982. Phillips and Marathon stated in response that no true export price for this LNG exists, since the LNG is sold on the basis of a delivered price in Japan. The applicants did make an approximate estimate of the value of the gas at the point of exportation of \$3.90/MMBtu. The ERA request, and the response, are part of the record in this case.

## II. Intervenors and Comments

On June 3, 1982, the ERA issued a notice of the Phillips and Marathon application to amend their existing authorization to export LNG from Alaska to Japan.<sup>3/</sup> The notice invited protests or petitions to intervene in the proceeding from interested persons. The ERA received two petitions to intervene.<sup>4/</sup> There is no opposition to any petition. Intervention is granted to all petitioners.

The ERA has not received any request for a hearing, nor does any intervenor oppose the application. Pac Alaska and affiliated companies urged that ". . . ERA grant the application of Phillips and Marathon, without a formal hearing, at the earliest possible date." Pac Alaska, as potential purchasers, processors, transporters, and/or sellers of Alaskan LNG at some future date, having received certificates of public convenience and necessity for the above purposes from the FPC in Docket No. CP75-140 et al., and affiliated companies support the continued exportation of Alaskan LNG for the limited period requested by the applicants. Pac Alaska does not anticipate completion of a California LNG receiving terminal before 1989 and thus cannot provide a domestic market for the Alaskan LNG until then, whereas there is a ready foreign buyer for the gas during the period of extension proposed for this import.

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<sup>3/</sup> 47 FR 25177 (June 10, 1982).

<sup>4/</sup> Petitions of Northwest Natural Gas Company (Northwest), dated July 12, 1982 and a joint petition from Pacific Alaska LNG Associates (PacAlaska), Pacific Gas and Electric Company (PG&E), and Southern California Gas Company, (SoCal Gas), dated June 25, 1982.

Northwest neither supported nor opposed the application. Because of its own past efforts to obtain Alaskan LNG for its service area in Oregon and Washington, and its potential as a source of supply for its future system needs, Northwest asserts that it has a continuing interest in its use.

### III. Decision

Sections 301 and 402(f) of the DOE Organization Act<sup>5/</sup> gave the Secretary of Energy (the Secretary) jurisdiction over imports and exports of natural gas pursuant to section 3 of the NGA. This responsibility was delegated to the Administrator of the ERA on October 1, 1977.<sup>6/</sup> On October 2, 1979, the Secretary issued two delegation orders delineating the areas of authority between the ERA and the FERC with respect to section 3 applications, and setting forth certain criteria to aid the ERA in executing its responsibilities.<sup>7/</sup>

The Phillips and Marathon application has been evaluated in accordance with the standards established by section 3 of the NGA, and the criteria set forth in DOE Delegation Order No. 0204-54. Under Section 3 of the NGA, the ERA must determine

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<sup>5/</sup> Pub. L. 95-91 (1977), 42 U.S.C. §§7151 and 7172(f).

<sup>6/</sup> DOE Delegation Order No. 0204-4, 42 FR 60725 (November 29, 1977).

<sup>7/</sup> DOE Delegation Order Nos. 0204-54 and 0204-55 (44 FR 56735, October 2, 1979). These superseded two other DOE Delegation Orders, No. 0204-25 (to ERA) and 0204-26 (to FERC), both dated October 17, 1978 (43 FR 47769, October 17, 1978).

whether an export is not inconsistent with the public interest. In applying this standard, the ERA has authority to review and determine certain issues including but not limited to national and regional need for the gas, the price proposed to be charged for the gas at the point of exportation, the effect on the U.S. balance of payments, and consistency with relevant DOE regulations or statements of policy.

The ERA has concluded that the proposed extension of this LNG export will not be "inconsistent with the public interest," and the application should be approved. Our decision takes into account the lack of opposition to the extension of the authorization for five years and is based on the following findings. This is an ongoing project that has been successfully exporting LNG without significant interruption since 1969 and contributes favorably to the United States' balance of payments. There is no regional or national need for the gas to be exported, and the price of the export is reasonable.

DOE has determined that, because the proposed extension of this export will use existing pipeline and liquefaction facilities, granting this application is not a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq. (1976)). Therefore, neither an environmental impact statement nor an environmental assessment is required.

A. Domestic Need for the Gas to be Exported

A fundamental issue to be addressed in this proceeding is whether there will be a domestic need for the natural gas that the applicants seek to continue to export over the period requested. Analysis of this issue properly focuses on possible need for the gas in Alaska, the applicable region, and in the United States generally. The applicants have furnished ERA with a detailed study by the National Economic Research Associates, Inc. (NERA), to support their contention that there is no domestic need for this gas.<sup>8/</sup> No party to this proceeding has contested the applicants' position on domestic need for the gas to be exported or furnished the ERA with any information that would conflict with the NERA study. The ERA therefore relies on the record, as discussed below, to support its decision that there is no domestic need for the gas sought to be exported over the period requested.

1. Regional Need

The applicants have asserted that Alaska will not need this gas within the five-year extended contract period. As of January 1, 1982, the proven reserves of natural gas in the Cook Inlet Basin area alone were approximately 3,592 Bcf, while the 1981 annual sales of gas from the area (including this export) were 176 Bcf.<sup>9/</sup> Therefore, at recent

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<sup>8/</sup> The National Economic Research Associates, Inc. (NERA), An Economic Analysis of the Proposed Extension of the Phillips-Marathon Contract with Tokyo Gas and Tokyo Electric, May 1982 (NERA Study), furnished as Appendix A to the application of Phillips and Marathon.

<sup>9/</sup> NERA Study at 4, 12.

rates of production, proven reserves in the area constituted a 20-year supply to serve Alaska's needs. Existing proven gas reserves in the area are sufficient to meet a projected minimum annual demand of 197 Bcf for gas in the 1980's (including the proposed export), a 12 percent increase over 1981 demand.<sup>10/</sup> These projections allow for normal growth in demand and extraordinary factors that may affect demand, such as possible new gas-powered generating facilities supplying a potential new electrical transmission intertie with Fairbanks, and increased residential and commercial use of gas caused by the possible establishment of a new State capital in Willow, Alaska.

Accordingly, there is no need for this LNG within the Alaskan region now or during the proposed extension period.

## 2. National Need

There is no national need for the Alaskan LNG proposed to be exported over the period requested. This Alaskan LNG cannot be delivered at a reasonable price to purchasers in the lower 48 states, principally because of the lack of any receiving facilities on the Pacific Coast and the high costs of shipping to the East and Gulf Coasts for the foreseeable future.

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<sup>10/</sup> Id. at 33.



Pac Alaska has applied for authorization from United States regulatory agencies to transport LNG from Alaska to a receiving and regasification terminal in California to serve West Coast markets. Proceedings to authorize the siting of the receiving terminal are still pending before the FERC in Docket Nos. CP75-140 et al. Because of the substantial delay in this project, no receiving terminals for LNG presently exist on the West Coast, and none are likely to be constructed during the period proposed for the export in this case.<sup>11/</sup> There is also no pipeline available to transport gas from the Cook Inlet Basin area to any of the lower 48 states. There is, therefore, no means available to transport to the West Coast any of the gas proposed to be exported.

Although there are LNG receiving terminals on the United States Gulf and Atlantic Coasts, no U.S. flag LNG carriers can pass through the Panama Canal. No pipeline connects the Cook Inlet Basin with any of the lower 48 states. Therefore, delivery of this gas to the only possible market for it in the lower 48 states would require the passage by LNG carriers from Alaska south around South America and north again to the Gulf or Atlantic Coasts, a voyage of at least 20,000 miles.<sup>12/</sup> The costs for transportation

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<sup>11/</sup> Pac Alaska petition at 2-4; Application at 11; and NERA Study at 17.

<sup>12/</sup> We note in comparison the distance to Japan from Alaska is approximately 6,000 miles.

of gas in this manner, when added to liquefaction and regasification costs, would make the gas unmarketable.

In light of the above, we conclude that there is no national need for this gas over the course of the extended authorization.

B. Price

The price of the LNG under Article 9 of the Basic Agreement between the parties, as amended, was \$5.76 per MMBtu delivered to the Tokyo Gas Flange, Tokyo, Japan, as of April 1982. This price is based upon a base price of 592.8 cents per MMBtu as adjusted by a formula indexing that base to the weighted average of the Government Selling Prices (GSP) in U.S. dollars per barrel weighted by the 1981 volumes for the top twenty crude oils (ranked by descending volumes) imported into Japan during calendar year 1981.

The formula by which Phillips and Marathon determine the applicable price for any given month is expressed as follows:

$$\text{Price for calendar month} = 592.8 \left( \frac{\text{Av. GSP (Month Prior to Calendar Month)}}{34.48} \right)$$

We have examined the delivered price of \$5.76 per MMBtu, the formula utilized in calculating the price, and the estimated value of the LNG at the point of exportation, and determined

that the price is reasonable.<sup>13/</sup> The price and the related pricing formula represent an agreement between a willing seller and buyer as to an appropriate price to be charged for this LNG export which is marketable in Japan, the importing country.<sup>14/</sup> ERA needs continuing information to monitor this changing price and to ensure that it remains reasonable. We will therefore require quarterly reports to be filed on the price of this export, which should cover the period since April 1982 when the Amendment was executed. Should the applicants wish to alter the pricing formula, they must seek ERA approval before any change becomes effective.

C. Balance of Payments

The dollar value of this export (about \$300 million per year) represents a positive contribution to the overall balance of payments picture, as well as to bilateral trade between the U.S. and Japan. Specifically, \$300 million represents an offset of roughly 1 percent of the U.S. overall balance of trade deficit of \$28.668 billion in 1981 (projected),

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<sup>13/</sup> In previous proceedings, the ERA established a policy that the price of gas exported from the United States should equal that of imports of gas from the same country. There is no natural gas or LNG imported into the U.S. from Japan with which to compare this export. Therefore, the policy is not applicable and need not be considered in this case. (See El Paso Natural Gas Co., DOE/ERA Opinion and Order No. 18, August 21, 1980, ERA Docket No. 78-15-NG, 1 ERA Para. 70,513, Federal Energy Guidelines).

<sup>14/</sup> Application at 10, 13; NERA Study at 15, 38-42.

and an offset of about 2 percent of the U.S. bilateral trade deficit with Japan of \$14.491 billion in 1981 (projected).<sup>15/</sup>

D. Additional Conditions

With respect to take-or-pay and make-up provisions, Phillips and Marathon have asked us expressly to authorize them to export, on a best-efforts basis, any annual volumes of LNG not delivered under the Basic Agreement or the Amendment during the remainder of the extended contract term, including the seven-month period beginning June 1, 1989. Provisions to this effect are included in the Amendment in a new Section 6.3 to enable the parties to be more flexible and responsive to changing market conditions. Since the quantities of LNG which have not been delivered during the term of the Basic Agreement are small (20,722 MMBtu over 13 years--less than 4 percent of the total contract quantity from its start through May 31, 1982), the applicants assert that their delivery in accordance with the new provisions will have no impact on the export operations.

The applicants are requesting no substantive change in the take-or-pay and make-up provisions and no increase in the total volumes authorized to be exported. Our approval of Phillips' and Marathon's requests will improve flexibility and response to market changes under the contract and is not inconsistent with the public interest.

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<sup>15/</sup> NERA Study at 43 and 44.

ORDER

For the reasons set forth above, pursuant to section 3 of the Natural Gas Act the ERA hereby orders that:

A. The export authorization previously granted Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon) by the FPC, in the Order Authorizing Exportation of Liquefied Natural Gas and Dismissing Application for Permit, issued April 19, 1967, Docket Nos. CI67-1226 and CI67-1227, is hereby amended by extending the export authorization for an additional five years, until May 31, 1989, and for a maximum seven-month make-up period beginning June 1, 1989. The maximum annual quantities of LNG that may be exported for sale to the Tokyo Electric Power Company, Inc., and the Tokyo Gas Company Limited during the five-year extension shall not exceed the following, except as authorized in Paragraph B below:

June 1, 1984, to May 31, 1985, and each of the subsequent four years: 50,570,000,000,000 Btu.

B. The above-referenced order is further amended to allow Phillips and Marathon to export any volumes of LNG authorized for export which have not been delivered or will not be delivered in a particular year during a subsequent year in the five-year extension ending May 31, 1989, or during the seven-month make-up period beginning June 1, 1989.

C. The above-referenced order is further amended to establish the following price terms. The LNG that is the subject of this authorization shall reflect a delivered base price of 592.8 U.S. cents per million Btu effective April 1, 1982, subject to change in accordance with the pricing formula in Article 9, Subsection 9.1(a) of the Thirteenth Amendatory Agreement, dated March 24, 1982:

$$\text{Price for calendar month} = 592.8 \left( \frac{\text{Av. GSP (Month Prior to Calendar Month)}}{34.48} \right)$$


**WHERE:**

Av. GSP is the average of the Government Selling Prices (in U.S. dollars per barrel) weighted by the 1981 volumes for the top twenty crude oils (ranked by descending volumes) imported into Japan during the calendar year of 1981.

D. Effective in January 1983 and in the month following the end of each calendar quarter thereafter, Phillips and Marathon shall file a quarterly report with the ERA reflecting their applicable monthly sales price to Tokyo Electric Power Company, Inc., and Tokyo Gas Company, Limited, delivered at the Tokyo Flange for each month of the preceding quarter. The January 1983 report shall reflect, on a one-time basis, monthly prices from April 1982 through December 1982.

E. The petitions for leave to intervene filed by Pacific Alaska LNG Associates, Pacific Gas and Electric Company, Southern California Gas Company, and Northwest Natural Gas Company are hereby granted, subject to such rules of practice and procedure as may be in effect, provided that their participation shall be limited to matters affecting asserted rights and interests specifically set forth in their petitions for leave to intervene and that the admission of such intervenors shall not be construed as recognition by the ERA that they might be aggrieved because of any order issued by ERA in this proceeding.

Issued in Washington, D. C., December 14, 1982.

  
\_\_\_\_\_  
Rayburn Hanzlik  
Administrator  
Economic Regulatory Administration

**OFFICIAL SERVICE LIST**

**PHILLIPS PETROLEUM COMPANY  
AND  
MARATHON OIL COMPANY**

**ERA DOCKET NO. 82-04-LNG**

**APPLICANT**

**PHILLIPS PETROLEUM COMPANY**

**MARATHON OIL COMPANY**

**REPRESENTATIVES**

**Mr. John Horn  
Manager, Natural Gas and LNG  
Sales Division  
Gas and Gas Liquids Group  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004**

**Kenneth Heady, Esquire  
Vice President and General Counsel  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004**

**Mr. S. C. Sandusky  
Manager, Natural Gas Division  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840**

**C. O. Robinson, Esquire  
Associate General Counsel-Productio  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840**

**J. F. Bell, Esquire  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N. W.  
Washington, D. C. 20006**



**PETITIONS TO INTERVENE**

**PACIFIC ALASKA LNG ASSOCIATES  
PACIFIC GAS AND ELECTRIC COMPANY  
AND  
SOUTHERN CALIFORNIA GAS COMPANY**

**E. R. Island  
Michael D. Gayda  
Attorneys at Law  
810 South Flower Street  
Los Angeles, California 90017**

**Keith C. McKinney  
Pacific Alaska LNG Associates  
810 South Flower Street  
Los Angeles, California 90017**

**Harry W. Long  
Pacific Gas & Electric Company  
Law Department  
P. O. Box 7442  
San Francisco, California 94120**

**NORTHWEST NATURAL GAS COMPANY**

**Robert M. Johnson, Esq.  
Northwest Natural Gas Company  
Suite 1900  
200 Southwest Market Street  
Portland, Oregon 97201**

**Justin R. Wolf, Esq.  
1625 K Street, N.W.  
Washington, D. C. 20006**

OFFICIAL SERVICE LIST

PHILLIPS PETROLEUM COMPANY  
AND  
MARATHON OIL COMPANY

ERA DOCKET NO. 82-04-LNG

APPLICANT

PHILLIPS PETROLEUM COMPANY

MARATHON OIL COMPANY

REPRESENTATIVES

Mr. John Horn  
Manager, Natural Gas and LNG  
Sales Division  
Gas and Gas Liquids Group  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Kenneth Heady, Esquire  
Vice President and General Counsel  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Mr. S. C. Sandusky  
Manager, Natural Gas Division  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

C. O. Robinson, Esquire  
Associate General Counsel-Production  
Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

J. F. Bell, Esquire  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N. W.  
Washington, D. C. 20006

## PETITIONS TO INTERVENE

PACIFIC ALASKA LNG ASSOCIATES  
PACIFIC GAS AND ELECTRIC COMPANY  
AND  
SOUTHERN CALIFORNIA GAS COMPANY

E. R. Island  
Michael D. Gayda  
Attorneys at Law  
810 South Flower Street  
Los Angeles, California 90017

Keith C. McKinney  
Pacific Alaska LNG Associates  
810 South Flower Street  
Los Angeles, California 90017

Harry W. Long  
Pacific Gas & Electric Company  
Law Department  
P. O. Box 7442  
San Francisco, California 94120

NORTHWEST NATURAL GAS COMPANY

Robert M. Johnson, Esq.  
Northwest Natural Gas Company  
Suite 1900  
200 Southwest Market Street  
Portland, Oregon 97201

Justin R. Wolf, Esq.  
1625 K Street, N.W.  
Washington, D. C. 20006



**PHILLIPS PETROLEUM COMPANY**  
 BARTLESVILLE, OKLAHOMA 74004 918 661-6600

3 JAN 31 AM 11:58

GAS AND GAS LIQUIDS GROUP

January 27, 1983

Economic Regulatory Administration  
 Room 4304  
 12th and Pennsylvania Avenue, NW  
 Washington, DC 20461

Attention: Rayburn Manzlik  
 Administrator

Re: Phillips Petroleum Company  
 Marathon Oil Company  
 ERA Docket No. 82-04-LNG

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for April, 1982, through December, 1982:

<u>Month/1982</u>	<u>US Cents Per MMBtu</u>
April	576.5
May	576.5
June	576.5
July	576.5
August	577.3
September	577.0
October	577.0
November	577.0
December	575.1

Very truly yours,

PHILLIPS PETROLEUM COMPANY

By Boyle Gilstrap  
 M. D. Gilstrap

MDG:lr

cc: Marathon Oil Company  
 Attn: Mr. Sam C. Sandusky  
 539 South Main Street  
 Findlay, OH 45840

S. C. Sandusky  
Manager, Natural Gas Division  
Production United States



Findlay, Ohio 45840  
Telephone 419/422-2121

OFFICE OF THE ADMINISTRATOR

83 JAN 31 P 2: 29

January 28, 1983

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982, in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April 1982 through December 1982:

	<u>Cents per MMBtu</u>
April 1982	576.5
May 1982	576.5
June 1982	576.5
July 1982	576.5
August 1982	577.3
September 1982	577.0
October 1982	577.0
November 1982	577.0
December 1982	575.1

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

  
S. C. Sandusky

SCS:blc

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004 918 661-6600

GAS AND GAS LIQUIDS GROUP

April 25, 1983

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Rayburn Hanzlik  
Administrator

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the first calendar quarter ending March 31, 1983:

<u>Month/1983</u>	<u>US Cents Per MMBtu</u>
January	575.1
February	573.5
March	519.9

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*Boyle Gilstrap*  
M. D. Gilstrap

MDG:lr

cc: Marathon Oil Company  
Attn: Mr. Sam C. Sandusky  
539 South Main Street  
Findlay, OH 45840

S. C. Sandusky  
Manager, Natural Gas Division  
Production United States



Findlay, Ohio 45840  
Telephone 419/422-2121

April 25, 1983

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-ING

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982, in the above Docket, Marathon Oil Company hereby submits the prices for ING at the delivery point in Japan for the months January 1983 through March 1983:

	<u>Cents per MMBTU</u>
January 1983	575.1
February 1983	573.5
March 1983	519.9

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

  
S. C. Sandusky

SCS:blc

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

} Done  
5/2/83  
Tomy

S. C. Sandusky  
Manager, Natural Gas Division  
Production United States



Findlay, Ohio 45840  
Telephone 419/422-2121

June 10, 1983

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

For your information and file we have attached hereto the 14th Amendatory Agreement to that LNG Sales Agreement dated March 6, 1967, between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Limited, Buyers, and Marathon Oil Company and Phillips Petroleum Company, Sellers. The amendment implements an update of the crude slate under the existing formula.

A copy of this amendment is also being sent to the Federal Energy Regulatory Commission pursuant to Section 153.8 of the Commission's Regulations and Order Paragraph (C) of the Order authorizing exportation in Docket No. CI67-1226.

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Respectfully submitted,

MARATHON OIL COMPANY

  
S. C. Sandusky  
Manager, Natural Gas Division

SCS:blc  
Attachments (2)

cc w/att: Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

cc w/o att: Mr. W. B. Gaul  
Phillips Petroleum Company



CF

FOURTEENTH AMENDATORY AGREEMENT

THIS FOURTEENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LIMITED (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 24th day of March, 1982 and the 15th day of April, 1982) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, the United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1983, Article Nine Sub-Section 9.1(a)

of the Basic Agreement shall be amended as follows:

The year "1981" appearing in the definition of Av GSP immediately following the formula shall be deleted and the year "1982" substituted therefor.

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 6th day of April 1983.

BUYERS:

SELLERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

MARATHON OIL COMPANY

BY: *Yuzhi Hiraiwa*  
President

BY: *[Signature]*  
President

TOKYO GAS COMPANY, LIMITED

PHILLIPS PETROLEUM COMPANY

BY: *Hiroshi Watanabe*  
President

BY: *[Signature]* *b* *Ch P*  
President

CP  
FOURTEENTH AMENDATORY AGREEMENT

THIS FOURTEENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LIMITED (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 24th day of March, 1982 and the 15th day of April, 1982) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, the United States of America.

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1. Effective April 1, 1983, Article Nine Sub-Section 9.1(a)

of the Basic Agreement shall be amended as follows:

The year "1981" appearing in the definition of Av GSP immediately following the formula shall be deleted and the year "1982" substituted therefor.

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 6th day of April 1983.

BUYERS:

SELLERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

MARATHON OIL COMPANY

BY: Yasushi Hiroawa  
President

BY: [Signature]  
President

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TOKYO GAS COMPANY, LIMITED

PHILLIPS PETROLEUM COMPANY

BY: Hiroschi Watanabe  
President

BY: [Signature]  
President

dit

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FOURTEENTH AMENDATORY AGREEMENT

THIS FOURTEENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LIMITED (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 24th day of March, 1982 and the 15th day of April, 1982) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, the United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1983, Article Nine Sub-Section 9.1(a)

of the Basic Agreement shall be amended as follows:

The year "1981" appearing in the definition of Av GSP immediately following the formula shall be deleted and the year "1982" substituted therefor.

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 6th day of April 1983.

BUYERS:

SELLERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

MARATHON OIL COMPANY

BY: Iszhi Iwawawa  
President

BY: [Signature]  
President

TOKYO GAS COMPANY, LIMITED

PHILLIPS PETROLEUM COMPANY

BY: Hisshi Watanabe  
President

BY: [Signature]  
President



**PHILLIPS PETROLEUM COMPANY**  
 BARTLESVILLE, OKLAHOMA 74004 918 661-6600

GAS AND GAS LIQUIDS GROUP

July 26, 1983

AUG 5 P 2: 29

DOE/ERA

Economic Regulatory Administration  
 Room 4304  
 12th and Pennsylvania Avenue, NW  
 Washington, DC 20461

Attention: Rayburn Hanzlik  
Administrator

Re: Phillips Petroleum Company  
 Marathon Oil Company  
 ERA Docket No. 82-04-LNG

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the second calendar quarter ending June 30, 1983:

<u>Month/1983</u>	<u>US Cents Per MMBtu</u>
April	490.2
May	490.2
June	490.2

It has come to our attention that the March 1983 price was retroactively revised to 517.8¢ per MMBtu and we are requesting that your records be so noted.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*Boyle Gilstrap*  
 M. J. Gilstrap

MDG:dch

cc: Marathon Oil Company  
 Attn: Mr. Sam C. Sandusky  
 539 South Main Street  
 Findlay, OH 45840

S. C. Sandusky  
Manager, Natural Gas Division  
Production United States

NG



Findlay, Ohio 45840  
Telephone 419/422-2121

July 25, 1983

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April 1983 through June 1983:

	<u>Cents per MMBTU</u>
April 1983	490.2
May 1983	490.2
June 1983	490.2

Additionally, subsequent to our letter of April 25, 1983, the applicable price for March 1983 was retroactively revised to 517.8¢ per MMBTU in accordance with the terms of the contract. Please revise your records accordingly.

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'S. C. Sandusky', with a flourish at the end.  
S. C. Sandusky

SCS:JRG:vm  
Enclosure

cc: Mr. W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

JUL 30 8:06

DOE/ERA  
NATURAL GAS DIV.





**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 661-6600

344 HS&L Bldg.  
GAS AND GAS LIQUIDS GROUP

October 24, 1983

Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Rayburn Hanzlik  
Administrator

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the third calendar quarter ending September 30, 1983:

Month/1983

US Cents Per MMBtu

July  
August  
September

490.2  
490.2  
490.3

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*Boyle Gilstrap*  
M. D. Gilstrap

MDG:dch

cc: Marathon Oil Company  
Attn: Mr. Sam C. Sandusky  
539 South Main Street  
Findlay, OH 45840

OCT 1 9 46

DOE/ERA



S. C. Sandusky  
Manager, Natural Gas Division  
Production United States

Findlay, Ohio 45840  
Telephone 419/422-2121

DOE/ERA  
NOV 1 8 3: 46

October 25, 1983

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D. C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months July 1983 through September 1983:

	<u>Cents per MMBTU</u>
July 1983	490.2
August 1983	490.2
September 1983	490.3

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

  
S. C. Sandusky

SCS:JRG:vm  
Enclosure

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

NOV 1 10: 18  
DOE/ERA



**PHILLIPS PETROLEUM COMPANY**  
 BARTLESVILLE, OKLAHOMA 74004 918 661-6600

GAS AND GAS LIQUIDS GROUP

January 24, 1984

Phillips Petroleum Company  
 Marathon Oil Company  
 ERA Docket No. 82-04-LNG

JAN 27 11:27 AM '84

DOE/ERA

Economic Regulatory Administration  
 Room 4304  
 12th and Pennsylvania Avenue, NW  
 Washington, DC 20461

Attention: Rayburn Hanzlik  
 Administrator

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the fourth calendar quarter ending December 31, 1983:

<u>Month/1983</u>	<u>US Cents Per MMBtu</u>
October	490.3
November	490.3
December	490.3

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*M. D. Gilstrap*  
 M. D. Gilstrap

MDG:rl

cc: Marathon Oil Company  
 Attn: Mr. Sam C. Sandusky  
 539 South Main Street  
 Findlay, OH 45840

S. C. Sandusky  
Manager, Natural Gas Division  
Production United States



Findlay, Ohio 45840  
Telephone 419/422-2121

*To Tom Berling*

January 25, 1984

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

JAN 30 P 3: 07

DOE/ERA

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months October through December 1983:

	<u>Cents per MMBTU</u>
October 1983	490.3
November 1983	490.3
December 1983	490.3

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

*S. C. Sandusky*  
S. C. Sandusky

SCS:JRG:vm  
Enclosure

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004

918 661-6600

April 24, 1984

GAS AND GAS LIQUIDS GROUP

Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Rayburn Hanzlik  
Administrator

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the first calendar quarter ending March 31, 1984.

APR 2 17:33  
DOE/ERA

Month/1984

US Cents Per MMBtu

January	490.3
February	490.0
March	490.0

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*Boyle Gilstrap*  
M. D. Gilstrap

MDG:cdp

cc: Marathon Oil Company  
Attn: Mr. Sam C. Sandusky  
539 South Main Street  
Findlay, OH 45840

S. C. Sandusky  
Manager, Natural Gas Division  
Production United States



Findlay, Ohio 45840  
Telephone 419/422-2121

April 25, 1984

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months January through March 1984:

	<u>Cents per MMBTU</u>
January 1984	490.3
February 1984	490.0
March 1984	490.0

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'S. C. Sandusky', with a large flourish at the end.  
S. C. Sandusky

SCS:JRG:1c  
Enclosure

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

APR 27 1984  
1:33  
/PFA



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004 918 661-6600

GAS AND GAS LIQUIDS GROUP

July 27, 1984

Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

1003 A0:23

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Rayburn Hanzlik, Administrator

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the second calendar quarter ending June 30, 1984.

<u>Month/1984</u>	<u>US Cents Per MMBtu</u>
April	490.0
May	490.0
June	490.0

Very truly yours,

Phillips Petroleum Company

*M. D. Gilstrap*  
M. D. Gilstrap

MDG:lr

cc: Marathon Oil Company  
Attn: Mr. Sam C. Sandusky  
539 South Main Street  
Findlay, OH 45840

S. C. Sandusky  
Manager, Natural Gas Division  
Exploration & Production United States



Findlay, Ohio 45840  
Telephone 419/422-2121

July 27, 1984

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April through June 1984:

	<u>Cents per MMBTU</u>
April 1984	490.0
May 1984	490.0
June 1984	490.0

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

*S. C. Sandusky/vm*

S. C. Sandusky

SCS:JRG:vm  
Enclosures

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

31 03:06

7/27/84  
- 121 2/



S. C. Sandusky  
Manager, Natural Gas Division  
Exploration & Production United States



Findlay, Ohio 45840  
Telephone 419/422-2121

October 25, 1984

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months July through September 1984:

	<u>Cents per MMBTU</u>
July 1984	490.0
August 1984	490.0
September 1984	490.0

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'S. C. Sandusky', with a flourish at the end.  
S. C. Sandusky

SCS:JRG:vm  
Enclosures

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



Findlay, Ohio 45840  
Telephone 419/422-2121

January 15, 1985

85 JAN 22 P 2: 21

REC'D DOE/ENR  
NAT. GAS DIV.

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

For your information and file we have attached hereto the 15th Amendatory Agreement to that LNG Sales Agreement dated March 6, 1967, between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Limited, Buyers, and Marathon Oil Company and Phillips Petroleum Company, Sellers. The amendment implements an update of the crude slate under the existing formula.

Subsequent to our letters of July 27, 1984 and October 25, 1984, the applicable price for the months of April through September 1984 was retroactively revised to 488.1¢ per MMBTU in accordance with the terms of the contract. Please revise your records accordingly.

Additionally, we have attached for your file a copy of a letter dated October 22, 1984 wherein Sellers grant to Buyers an option not exercisable until 1988 which, if exercised, could reduce by about three percent the total volume of LNG Buyers must otherwise purchase during years 16 through 20 of the contract.

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Very truly yours,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads 'J. A. Davis, Jr.'.

J. A. Davis, Jr.  
Manager, Natural Gas Division

JAD/vm  
Attachments  
cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

*[Handwritten initials and date]*  
1/22/85

FIFTEENTH AMENDATORY AGREEMENT

THIS FIFTEENTH AMENDATORY AGREEMENT, made by and between The Tokyo Electric Power Company, Incorporated (Tokyo Electric) and Tokyo Gas Co., Ltd. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and Marathon Oil Company (Marathon) and Phillips Petroleum Company (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 6th day of April, 1983) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, the United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1984, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended as follows:

The year "1982" appearing in the definition of Av GSP immediately following the formula shall be deleted and the year "1983" substituted therefor.

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 22nd day of October 1984.

BUYERS:

The Tokyo Electric Power Company, Incorporated

By: Shoh Masu  
President

Tokyo Gas Co., Ltd.

By: Hiroschi Watanabe  
President

SELLERS:

Marathon Oil Company

By: W. E. Swales *WES*  
President

Phillips Petroleum Company

By: [Signature]  
President *5/11*

October 22, 1984

The Tokyo Electric Power Company, Incorporated  
1-3, Uchisaiwai-cho, 1-chome  
Chiyoda-ku, Tokyo 100

The Tokyo Gas Co., Ltd.  
5-20, Kaigan 1-chome,  
Minato-ku, Tokyo 105

Gentlemen:

Reference is made to that certain LNG Sales Agreement dated March 6, 1967 (as heretofore amended) between The Tokyo Electric Power Company, Incorporated and Tokyo Gas Co., Ltd. (Buyers) and Phillips Petroleum Company and Marathon Oil Company (Sellers).

The second paragraph of Section 6.3(b) of the referenced Agreement provides that the term of the Agreement shall automatically be extended to enable Buyers to receive any "deficient quantity".

In response to Buyers' request Sellers hereby irrevocably grant to Buyers an option not to purchase, receive and pay for a portion of such deficient quantity, said portion not to exceed seven trillion, five hundred eighty-five billion, five hundred million (7,585,500,000,000) Btu's.

To exercise this option Buyers must give appropriate notice to Sellers early in November, 1988, so that the period of extension and rates of delivery and receipt applicable thereto for the remainder of the deficient quantity may be determined prior to November 30, 1988.

Should Buyers exercise this option, the parties will formally amend the Agreement if in Sellers' judgement it is necessary to do so.

Yours very truly,

Phillips Petroleum Company

By:   
Manager, Natural Gas Sales

Marathon Oil Company

By:   
Manager, Natural Gas Division

J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



Findlay, Ohio 45840  
Telephone 419/422-2121

January 25, 1985

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months October through December 1984:

	<u>Cents per MMBTU</u>
October 1984	488.1
November 1984	487.6
December 1984	487.6

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads 'J. A. Davis, Jr.'  
J. A. Davis, Jr.

JAD:JRG:vm  
Enclosures

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 681-6600

GAS AND GAS LIQUIDS GROUP

January 18, 1985

RECEIVED  
OFFICE OF THE SECRETARY  
1985 JAN 22 AM 11:34

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, DC 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

65 JAN 30 P 4: 03  
RECEIVED  
U.S. GAS DIV.

Enclosed for your information and file is one copy of Fifteenth Amendatory Agreement to that LNG Sales Agreement dated March 6, 1967, between Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Limited, Buyers and Marathon Oil Company and Phillips Petroleum Company, Sellers. The amendment implements an annual update of the crude slate under the existing formula.

Subsequent to our letters dated July 27, 1984 and October 29, 1984, the applicable price for the months of April through September 1984 was retroactively revised to 488.1¢ per MMBTU in accordance with the terms of the contract. Please revise your records accordingly.

We have also attached, for your file, a copy of a letter dated October 22, 1984, wherein Sellers grant to Buyers an option not exercisable until 1988 which, if exercised, could reduce by about three percent the total volume of LNG Buyers must otherwise purchase during years 16 through 20 of the contract.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*Joseph D. Gilstrap*  
M. D. Gilstrap

MDG:sjb:5:29  
Enclosure

cc: Mr. J. A. Davis, Jr.  
Marathon Oil Company  
539 South Main Street  
Findlay, OH 45840

FIFTEENTH AMENDATORY AGREEMENT

THIS FIFTEENTH AMENDATORY AGREEMENT, made by and between The Tokyo Electric Power Company, Incorporated (Tokyo Electric) and Tokyo Gas Co., Ltd. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and Marathon Oil Company (Marathon) and Phillips Petroleum Company (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 6th day of April, 1983) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, the United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:



1. Effective April 1, 1984, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended as follows:

The year "1982" appearing in the definition of Av GSP immediately following the formula shall be deleted and the year "1983" substituted therefor.

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 22nd day of October 1984.

BUYERS:

The Tokyo Electric Power Company, Incorporated

By: Shoh Naey  
President

Tokyo Gas Co., Ltd.

By: Haroshi Wakamato  
President

SELLERS:

Marathon Oil Company

By: W. F. Kunkin  
President

Phillips Petroleum Company

By: C. J. Selles  
President

October 22, 1984

The Tokyo Electric Power Company, Incorporated  
1-3, Uchisaiwai-cho, 1-chome  
Chiyoda-ku, Tokyo 100

The Tokyo Gas Co., Ltd.  
5-20, Kaigan 1-chome,  
Minato-ku, Tokyo 105

Gentlemen:

Reference is made to that certain LNG Sales Agreement dated March 6, 1967 (as heretofore amended) between The Tokyo Electric Power Company, Incorporated and Tokyo Gas Co., Ltd. (Buyers) and Phillips Petroleum Company and Marathon Oil Company (Sellers).

The second paragraph of Section 6.3(b) of the referenced Agreement provides that the term of the Agreement shall automatically be extended to enable Buyers to receive any "deficient quantity".

In response to Buyers' request Sellers hereby irrevocably grant to Buyers an option not to purchase, receive and pay for a portion of such deficient quantity, said portion not to exceed seven trillion, five hundred eighty-five billion, five hundred million (7,585,500,000,000) Btu's.

To exercise this option Buyers must give appropriate notice to Sellers early in November, 1988, so that the period of extension and rates of delivery and receipt applicable thereto for the remainder of the deficient quantity may be determined prior to November 30, 1988.

Should Buyers exercise this option, the parties will formally amend the Agreement if in Sellers' judgement it is necessary to do so.

Yours very truly,

Phillips Petroleum Company

By:   
Manager, Natural Gas Sales

Marathon Oil Company

By:   
Manager, Natural Gas Division



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 661-6600

January 25, 1985

GAS AND GAS LIQUIDS GROUP

Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Mr. Rayburn Hanzlik, Administrator

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the fourth calendar quarter ending December 31, 1984.

<u>Month/1984</u>	<u>US Cents Per MMBtu</u>
October	488.1
November	487.6
December	487.6

Very truly yours,

Phillips Petroleum Company

*M. D. Gilstrap*  
M. D. Gilstrap

MDG:lr/1:9

cc: Marathon Oil Company  
Attn: Mr. J. A. Davis, Jr.  
539 South Main Street  
Findlay, OH 45840

J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



**Marathon  
Oil Company**

Findlay, Ohio 45840  
Telephone 419/422-2121

January 25, 1985

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months October through December 1984:

ST JAN 31 1985 15

DOE/ERA  
NATURAL GAS DIV.

	<u>Cents per MMBTU</u>
October 1984	488.1
November 1984	487.6
December 1984	487.6

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

J. A. Davis, Jr.

JAD:JRG:vm  
Enclosures

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 661-6600

April 22, 1985

GAS AND GAS LIQUIDS GROUP

Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Rayburn Hanzlik, Administrator

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the first calendar quarter ending March 31, 1985.

<u>Month/1985</u>	<u>US Cents Per MMBtu</u>
January	487.6
February	488.3
March	477.6

Very truly yours,

Phillips Petroleum Company

*Joseph D. Gilstrap*  
M. D. Gilstrap

MDG:sjb:9

cc: Marathon Oil Company  
Attn: Mr. J. A. Davis, Jr.  
P.O. Box 3128  
Houston, TX 77253

APR 23 1985 3:22

J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

April 25, 1985

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

APR 26 1985 3:22

DOE/ER  
945 0001

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months January through March 1985:

	<u>Cents per MMTBU</u>
January 1985	487.6
February 1985	488.3
March 1985	477.6

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'J.A. Davis, Jr.'

J.A. Davis, Jr.

JAD:JRG:cp  
Enclosures

cc: W.B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

July 9, 1985

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

For your information and file we have attached hereto the 16th Amendatory Agreement to that LNG Sales Agreement dated March 6, 1967, between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Limited, Buyers, and Marathon Oil Company and Phillips Petroleum Company, Sellers. The amendment implements an update of the crude slate under the existing formula.

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Very truly yours,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'J. A. Davis, Jr.'.

J. A. Davis, Jr.  
Manager, Natural Gas Division

JAD:cp  
Attachments

cc: W.B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

8/2/85 P2:48

SIXTEENTH AMENDATORY AGREEMENT

THIS SIXTEENTH AMENDATORY AGREEMENT, made by and between The Tokyo Electric Power Company, Incorporated (Tokyo Electric) and Tokyo Gas Co., Ltd. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and Marathon Oil Company (Marathon) and Phillips Petroleum Company (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 22nd day of October, 1984) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, the United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:



1. Effective April 1, 1985, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended as follows:

The year "1983" appearing in the definition of Av GSP immediately following the formula shall be deleted and the year "1984" substituted therefor.

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 10th day of April 1985.

BUYERS:

The Tokyo Electric Power Company, Incorporated

By:

Shoh Masu  
President

Tokyo Gas Co., Ltd.

By:

Hiroshi Watanabe  
President

SELLERS:

Marathon Oil Company

By:

W. E. Swaho  
President

Phillips Petroleum Company

By:

Alvin C. Cox  
President



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 661-6600

GAS AND GAS LIQUIDS GROUP

July 29, 1985

Re: Phillips Petroleum Co.  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the second calendar quarter ending June 30, 1985.

<u>Month/1985</u>	<u>US Cents Per MMBtu</u>
April	476.6
May	475.9
June	475.9

Also, subsequent to Phillips' letter of April 22, 1985, and in accordance with the contract, the applicable price for March 1985 was retroactively revised to 476.6¢ per MMBTU. We request that your records be noted/revised to reflect this change.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*M. D. Gilstrap*  
M. D. Gilstrap

MDG:bls:9

cc: Marathon Oil Company  
Attn: Mr. J. A. Davis, Jr.  
P. O. Box 3128  
Houston, TX 77253

PHILLIPS  
AUG 5  
11:22

→ *Comin*  
7-21-85

J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

July 25, 1985

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April 1985 through June 1985:

	<u>Cents per MMBTU</u>
April 1985	476.6
May 1985	475.9
June 1985	475.9

Additionally, subsequent to our letter of April 25 1985, the applicable price for March 1985 was retroactively revised to 476.6¢ per MMBTU in accordance with the terms of the contract. Please revise your records accordingly.

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

J.A. Davis, Jr.

JAD:JRG:cp  
Enclosure

cc: Mr. W.B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

JUL 30 9:01



**PHILLIPS PETROLEUM COMPANY**  
 BARTLESVILLE, OKLAHOMA 74004 918 681-6600

GAS AND GAS LIQUIDS GROUP

October 25, 1985

Re: Phillips Petroleum Company  
 Marathon Oil Company  
 ERA Docket No. 82-04-LNG

31 29:20

Economic Regulatory Administration  
 Room 4304  
 12th and Pennsylvania Avenue, NW  
 Washington, DC 20461

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the third calendar quarter ending September 30, 1985.

<u>Month/1985</u>	<u>US Cents Per MMBtu</u>
July	475.2
August	472.5
September	472.5

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*Wayle Gilstrap*  
 M. D. Gilstrap

MDG:bls:9

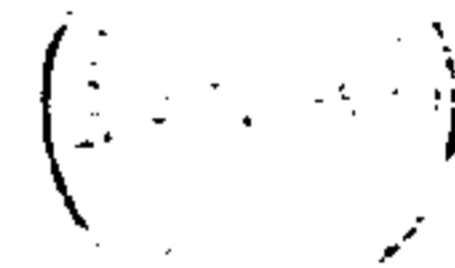
cc: Marathon Oil Company  
 Attn: Mr. J. A. Davis, Jr.  
 P. O. Box 3128  
 Houston, TX 77253



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004

M. D. Gilstrap  
342 HS&L Bldg.



332

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Mr. Rayburn Hanzlik, Administrator



J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



October 25, 1985

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

10/28 PD: 11

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months July 1985 through September 1985:

	<u>Cents per MMBTU</u>
July 1985	475.2
August 1985	472.5
September 1985	472.5

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

J.A. Davis, Jr.

JAD:JRG:cp  
Enclosure

cc: Mr. W.B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

*J. A. Davis, Jr.* cc: *Yehring*  
J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

November 1, 1985

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG  
Marathon Oil Company Letter dated October 25, 1985

7  
10:24

Dear Sir:

In the referenced letter, Marathon submitted the prices for LNG at the delivery point in Japan for the months July 1985 through September 1985.

Subsequent to this submission, it was determined that the price of 472.5 cents per MMBTU shown for August 1985 was incorrect and should be 472.6 cents per MMBTU. Please revise your records accordingly.

Any inconvenience caused by this revision is regretted.

It would be appreciated if you would date stamp the duplicate copy of this letter and return it in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

*J. A. Davis, Jr.*  
J. A. Davis, Jr.

JAD:JRG:cp  
Enclosure

cc: Ms. Barbara Price  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 661-6600

January 27, 1986

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Economic Regulatory Administration  
Room 4304  
12th and Pennsylvania Avenue, NW  
Washington, DC 20461

Attention: Mr. Rayburn Hanzlik, Administrator

Dear Sir:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips Petroleum lists below the monthly prices received for LNG delivered at the Tokyo Flange for the fourth calendar quarter ending December 31, 1985.

<u>Month/1985</u> <u>MMBtu</u>	<u>US Cents Per</u>
October	472.5
November	472.5
December	472.8

Very truly yours,

PHILLIPS PETROLEUM COMPANY

*Doyle Gilstrap*  
M. D. Gilstrap

MDG:bls:9

cc: Marathon Oil Company  
Attn: Mr. J. A. Davis, Jr.  
P. O. Box 3128  
Houston, TX 77253



J. A. Davis, Jr.  
Manager, Natural Gas Division  
Exploration & Production, United States



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

January 27, 1985

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attention: Mr. Rayburn Hanzlik, Administrator

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months October 1985 through December 1985:

	<u>Cents per MMBTU</u>
October 1985	472.5
November 1985	472.5
December 1985	472.8

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

J.A. Davis, Jr.

JAD:JRG:cp  
Enclosure

cc: Ms. Barbara Price  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004 918 661-6600

March 19, 1986

Re: Docket No. ~~82-04-LNG~~  
Application to Amend  
Authorization

*86-21-LNG*

MAR 29 11:47

National Gas Division  
Economic Regulatory Administration  
Forrestal Building  
1000 Independence Avenue, S.W.  
Washington, D. C. 20585

Attn: Ms. Paula Daigneault

Gentlemen:

Attached for filing in the captioned docket are an original and fifteen copies of Application to Amend Authorization to Export Liquefied Natural Gas. This filing is being made to reflect the reorganization of Phillips Petroleum Company which resulted in the transfer of certain assets and operations to a new wholly-owned subsidiary Phillips 66 Natural Gas Company. Included in the transfer are most of the assets and operations involved in the LGN export.

Our fifty dollar (\$50.00) filing fee is enclosed, Phillips Petroleum Company check No. 779627 dated March 19, 1986.

Very truly yours,

*M. D. Gilstrap*  
M. D. Gilstrap, Agent for  
Phillips Petroleum Company

MDG:bls:26  
Attachments

cc: Marathon Oil Company  
P. O. Box 3128  
Houston, TX 77056  
Attn: V. G. Beghini

UNITED STATES OF AMERICA  
ECONOMIC REGULATORY ADMINISTRATION

In the matter of )  
 ) Docket No. 82-04-LNG *86-21-LNG*  
Phillips Petroleum Company )  
Marathon Oil Company )

APPLICATION TO AMEND AUTHORIZATION  
TO EXPORT LIQUEFIED NATURAL GAS

Phillips Petroleum Company ("Phillips") and  
Marathon Oil Company ("Marathon") hereby make application  
pursuant to Section 3 of the Natural Gas Act, 15 U.S.C.  
§717b, and 10 C.F.R. §590.201 and §590.405, for authority to  
amend the authorization established in Opinion and Order No.  
49 in this proceeding to reflect a recent reorganization of  
Phillips which resulted in the transfer of certain  
operations to a new wholly-owned subsidiary Phillips 66  
Natural Gas Company ("Phillips 66"). In support hereof,  
applicants submit the following.

I. GENERAL INFORMATION.

The exact legal name of applicant Phillips is  
Phillips Petroleum Company. Phillips is a Delaware  
corporation with principal offices in Bartlesville, Oklahoma.  
Phillips is authorized to do business in all fifty states of  
the United States.

The exact legal name of applicant Marathon is  
Marathon Oil Company. Marathon is a wholly-owned subsidiary  
of United States Steel Corporation.

The exact legal name of Phillips 66 is Phillips 66 Natural Gas Company. Phillips 66 is a Delaware corporation with principal offices in Bartlesville, Oklahoma. Phillips 66 is a wholly-owned subsidiary of Phillips Petroleum Company and is authorized to do business in the various states where Phillips has previously conducted natural gas activities, including the State of Alaska.

All correspondence and communications regarding this application, including service of pleadings and notices, should be directed to the following persons:

Mr. Larry Pain, Attorney  
Mrs. Jennifer A. Cates, Attorney  
Phillips Petroleum Company  
1254 Adams Building  
Bartlesville, Oklahoma 74004  
(918) 661-8372

Mr. C. B. Friley, Agent for  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Ms. B. J. Price  
Vice President  
Phillips 66 Natural Gas Company  
Bartlesville, Oklahoma 74004  
(918) 661-4355

Mr. V. G. Beghini  
Senior Vice President  
Exploration & Production, U.S.  
Marathon Oil Company  
P.O. Box 3128  
5555 San Felipe Road  
Houston, Texas 77056

Gary Prescott, Esquire  
Marathon Oil Company  
P.O. Box 3128  
5555 San Felipe Road  
Houston, Texas 77056

J. F. Bell, Esquire  
Jones, Day, Reavis & Pogue  
1735 Eye Street, N.W.  
Washington, D.C. 20006  
(202) 861-3939

## II. AUTHORIZATION REQUESTED.

On December 14, 1982, the Economic Regulatory Administration ("ERA") issued Opinion and Order No. 49 which granted Phillips and Marathon authority to extend the initial export authorization for an additional five year term, ending May 31, 1989. Initial export authorization was granted by the Federal Power Commission ("FPC") in Docket Nos. CI67-1226 and CI67-1227 by order issued April 19, 1967.

Phillips, Phillips 66 and Marathon request an ERA order to amend the authorization currently held by Phillips to reflect the new wholly-owned subsidiary, Phillips 66. Marathon will continue to retain the same authorization it currently holds.

Phillips is currently involved in a reorganization of its operations designed to more closely align operating group responsibilities with ownership of business assets, to better identify results of its operating groups and to enable management to react more quickly to changing business environments. As one part of the overall reorganization,

Phillips 66 will have responsibility for natural gas and natural gas liquids operations. These operations transfers are to be effective January 1, 1986. Most of the assets and operations involved in the export of LNG covered by Order and Opinion No. 49 are included in those operations proposed to be transferred.

The reorganization will have no actual impact on the export operations. There will be no operational change in the property, facilities or personnel involved in the export project; therefore, approval of the requested amendment is not inconsistent with the public interest.

Phillips 66 will perform Phillips' obligations under the Basic Agreement and the Extension Amendment. Phillips' interest in the liquefaction plant,<sup>1</sup> the LNG tankers<sup>2</sup> and related facilities will be transferred to Phillips 66. Employees of Phillips will continue to administer and operate the LNG facility pursuant to a service agreement between Phillips and Phillips 66.

The natural gas liquefied for export to Japan is produced in the Cook Inlet Basin Area of Alaska. Seventy percent has been from reserves owned or controlled by

---

<sup>1</sup>The plant is owned by Kenai LNG Corporation, which is owned 70% by Phillips and 30% by Marathon.

<sup>2</sup>The Arctic Tokyo is owned by Arctic LNG Transportation Company. The Polar Alaska is owned by Polar LNG Shipping Corporation. Each corporation is owned 70% by Phillips and 30% by Marathon.

Phillips in the North Cook Inlet Field; thirty percent has been produced from reserves owned or controlled by Marathon in the Kenai Field. Phillips will continue to own those reserves in the North Cook Inlet Field and will continue to produce the gas which will be sold to Phillips 66 under a new gas sales agreement for the balance of the term of the Basic Agreement and Extension Agreement. Thus, the gas supply for export will remain the same which was found to be not inconsistent with the public interest in Order and Opinion No. 49.

The structural changes of Phillips' overall reorganization will have no adverse impact upon the LNG export operations. As described above, there will be no change in the facilities, operations or personnel. Contracts between Phillips and Phillips 66 assure that the same gas supply will be available for the export. Phillips 66 will perform fully all duties and obligations heretofore undertaken by Phillips. For the same reasons stated in Order and Opinion No. 49, the amendment of the export authorization to reflect the reorganization of Phillips and the role of Phillips 66 is not inconsistent with the public interest.

Wherefore, for the foregoing reasons, applicants respectfully submit the foregoing Application to Amend Authorization to Export Liquefied Natural Gas so that ERA may be advised of Phillips' corporate restructuring; and

further request that ERA approve the amendment of export authorization to be effective as of January 1, 1986.

Respectfully submitted,  
PHILLIPS PETROLEUM COMPANY

BY *C. B. Feilley* *CF*

PHILLIPS 66 NATURAL GAS COMPANY

BY *P. J. Price* *JP*

MARATHON OIL COMPANY

BY *C. B. Feilley* *GMP*



VERIFICATION

STATE OF OKLAHOMA )  
 ) SS:  
COUNTY OF WASHINGTON )

BEFORE ME, the undersigned authority, on this day personally appeared C. B. Friday, who, having been by me first duly sworn, on oath says that he is agent for Phillips Petroleum Company and duly authorized to make this Verification; that he has read the foregoing instrument and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

C. B. Friday

Subscribed and sworn to before me this 14<sup>th</sup> day of March 1986.

Connie D. Piguet  
Notary Public

My commission expires:  
CONNIE D. PIGUET, Notary Public  
State of Oklahoma

My commission expires 9-19-88

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all parties of record in this proceeding in accordance with the requirements of Section 590.107 of the ERA Administrative Procedures.

Dated this 17<sup>TH</sup> day of MARCH,  
1986, at Bartlesville, Oklahoma.

BY M. D. Gilstrap  
M. D. Gilstrap, Agent for  
Phillips Petroleum Company



VERIFICATION

STATE OF OKLAHOMA                    )  
  ) SS:  
COUNTY OF WASHINGTON                )

BEFORE ME, the undersigned authority, on this day personally appeared B. J. PRICE, who, having been by me first duly sworn, on oath says that she is VICE PRESIDENT of Phillips 66 Natural Gas Company and duly authorized to make this Verification; that she has read the foregoing instrument and that the facts therein stated are true and correct to the best of her knowledge, information and belief.

B. J. Price

Subscribed and sworn to before me this 14<sup>d</sup> day of MARCH, 1986.

Edward K. Bell  
Notary Public

My commission expires:

August 23, 1989



**Department of Energy**  
Washington, DC 20585

APR 3 1986

Mr. Larry Pain  
Ms. Jennifer A. Cates  
Phillips Petroleum Company  
1254 Adams Building  
Bartlesville, Oklahoma 74004

Mr. V. G. Beghini  
Senior Vice President  
Exploration and Production, U.S.  
Marathon Oil Company  
P.O. Box 3128  
5555 San Felipe Road  
Houston, Texas 77056

Re: Joint Application in ERA Docket No. 82-04-LNG

**Applicants:**

This is in reference to your joint application filed on March 20, 1986, requesting a change to the liquefied natural gas (LNG) export authorization granted to Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon) by the Economic Regulatory Administration (ERA) in DOE/ERA Opinion and Order No. 49 in ERA Docket No. 82-04-LNG on December 14, 1982. Your application requests that the ERA issue an order to change the authorization to reflect a recent Phillips reorganization of its operations which resulted in the transfer of all natural gas functions, including this export project, to a wholly-owned Phillips subsidiary, Phillips 66 Natural Gas Company (Phillips 66).

Your application indicates that the reorganization, which became effective January 1, 1986, transferred Phillips' interest in the liquefaction plant, the LNG tankers, and related facilities to Phillips 66. It was also noted that Phillips 66 will perform all duties and contractual obligations heretofore undertaken by Phillips and that the reorganization will not result in any operational change in the property, facilities, or personnel involved in the export project.

After taking into consideration all of the information contained in the joint filing, the ERA finds that the contract change resulting from Phillips' reorganization is not

inconsistent with the public interest. Therefore, I signed today an order (see enclosure) transferring the LNG export authorization granted to Phillips in DOE/ERA Opinion and Order No. 49 to Phillips 66, effective January 1, 1986. This order does not affect the export authorization currently held by Marathon under the same DOE/ERA Opinion and Order No. 49. A copy of this letter and enclosed order are being served on all parties of this docket.

Sincerely,

*Marshall A. Staunton*  
Marshall A. Staunton  
Acting Administrator  
Economic Regulatory Administration

Enclosure

cc:  
Mr. C. B. Friley  
Ms. B. J. Price  
Mr. Gary Prescott  
J. F. Bell  
All parties to proceeding

UNITED STATES OF AMERICA  
DEPARTMENT OF ENERGY  
ECONOMIC REGULATORY ADMINISTRATION

PHILLIPS PETROLEUM COMPANY )  
MARATHON OIL COMPANY )

ERA DOCKET NO. 82-04-LNG

APR 7 1986  
114  
61

ORDER TRANSFERRING THE LNG EXPORT  
AUTHORIZATION OF PHILLIPS PETROLEUM COMPANY TO  
PHILLIPS 66 NATURAL GAS COMPANY


DOE/ERA OPINION AND ORDER NO. 49A

ORDER

Pursuant to Section 3 of the Natural Gas Act and  
10 CFR §590.405, it is hereby ordered that:

The authorization granted to "Phillips Petroleum Company"  
to export liquefied natural gas from Alaska to Japan pursuant  
to DOE/ERA Opinion and Order No. 49 in ERA Docket No. 82-04-LNG is  
hereby transferred to "Phillips 66 Natural Gas Company," effective  
January 1, 1986.

Issued in Washington, D.C., on April 3, 1986.

  
Marshall A. Staunton  
Acting Administrator  
Economic Regulatory Administration

Kevin M. Henning  
Manager, Natural Gas Division  
Exploration & Production United States



April 25, 1986

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months January 1986 through March 1986:

	<u>Cents per MMBTU</u>
January 1986	472.3
February 1986	469.0
March 1986	426.0

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY



K. M. Henning

KMH:JRG:cp  
Enclosure

cc: Ms. Barbara Price  
Phillips Petroleum Company  
336 HS&L Building  
Bartlesville, Oklahoma 74004

APR 29 1986 10:20





**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

April 24, 1986

Re: Phillips 66 Natural  
Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

APR 30 1986 29

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, S. W.  
Washington, DC 20585

Attention: Ms Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the first calendar quarter ending March 31, 1986.

<u>Month/1986</u>	<u>US Cents Per MMBtu</u>
January	472.3
February	469.0
March	426.0

Very truly yours,

PHILLIPS 66 NATURAL GAS COMPANY

*M. D. Gilstrap*  
M. D. Gilstrap

MDG:bls:9

cc: Marathon Oil Company  
Attn: Mr. V. G. Beghini  
P. O. Box 3128  
Houston, TX 77253

Kevin M. Henning  
Manager, Natural Gas Division  
Exploration & Production United States



July 25, 1986

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:


In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April 1986 through June 1986:

	<u>Cents per MMBTU</u>
April 1986	400.4
May 1986	400.4
June 1986	362.9

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY



K. M. Henning

KMH:JRG:cp  
Enclosure

cc: Ms. Barbara Price  
Phillips Petroleum Company  
336 HS&L Building  
Bartlesville, Oklahoma 74004



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

July 29, 1986

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTENTION: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the second calendar quarter ending June 30, 1986.

<u>Month/1986</u>	<u>US Cents Per MMBtu</u>
April	400.4
May	400.4
June	362.9

Very truly yours,  
PHILLIPS 66 NATURAL GAS COMPANY

*Doyle Gilstrap*

M. D. Gilstrap

MDG/pkc054

cc: Marathon Oil Company  
Attn: Mr. K. M. Henning  
P. O. Box 3128  
Houston, TX 77253



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

August 19, 1986

Constance L. Buckley, Director  
Natural Gas Division  
Economic Regulatory Administration  
United States Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Re: ERA Docket No. 82-04-LNG/Opinion and Order 49

Dear Ms. Buckley:

In DOE/ERA Opinion and Order No. 49, issued in ERA Docket No. 82-04-LNG, Phillips 66 Natural Gas Company's predecessor in interest and Marathon Oil Company were authorized to export LNG for a five-year period ending May 31, 1989. The authorization to export LNG included a pricing formula (Article 9, Subsection 9.1(a) of the Thirteenth Amendatory Agreement dated March 24, 1982).

Opinion and Order No. 49 determined that the pricing formula was reasonable and advised Phillips and Marathon that any change to the formula would require ERA approval. The sellers have utilized this formula to calculate the LNG price since July, 1981, and the ERA has been advised on the updates necessary to implement the formula.

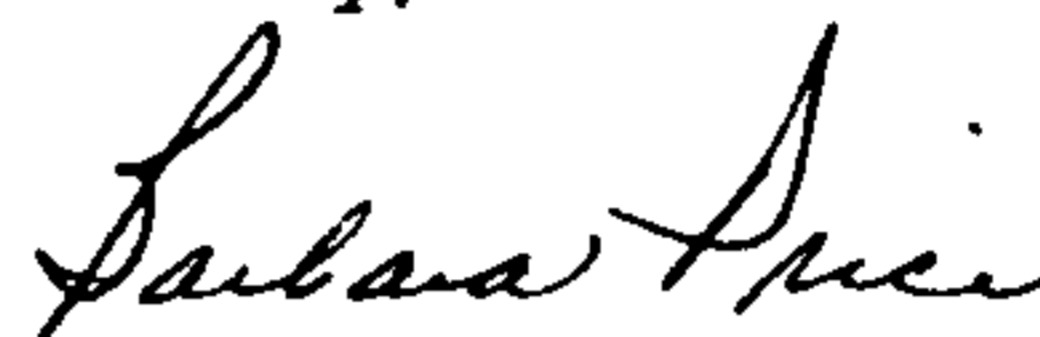
However, as a result of the disruption of the crude oil markets since the beginning of this year, the pricing formula approved by ERA has failed to yield a price which reflects what a willing buyer in Japan will pay for imported energy. Thus, Phillips and Marathon have entered into negotiations with their Japanese purchasers (Tokyo Gas Company, Ltd. and The Tokyo Electric Power Company, Inc.) to amend the pricing formula so that it once more results in the calculation of LNG sales prices that are competitive with crude oil prices in Japan. Pending finalization of an amendment to the pricing formula, Phillips and Marathon have agreed to accept, for all months after March 31, 1986, provisional prices which attempt to reflect the decline in the price of crude oil imported into Japan. All provisional prices, however, are subject to revision following agreement

Constance L. Buckley  
August 19, 1986  
Page 2

upon amendments to the pricing formula and the receipt from ERA of permission for Phillips and Marathon to charge and collect such prices.

Once the contract amendments are concluded, Phillips and Marathon will file promptly with ERA for approval of the new pricing arrangements.

Sincerely,



---

Phillips 66 Natural Gas Company  
Vice President - Regulatory Affairs



---

Marathon Oil Company  
Attorney - Exploration &  
Production United States

BJP:bls:dc26

**Marathon Oil Company**  
P.O. Box 3128, Houston, Texas 77253

Constance L. Buckley, Director  
Natural Gas Division  
Economic Regulatory Administration  
United States Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

(  
[Barcode]

Kevin M. Henning  
Manager, Natural Gas Division  
Worldwide Production



October 24, 1986

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April 1986 through June 1986:

	<u>Cents per MMBTU</u>
July 1986	315.0
August 1986	299.0
September 1986	290.0

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY



K. M. Henning

KMH:JRG:cp  
Enclosure

cc: Ms. Barbara Price  
Phillips 66 Natural Gas Company  
336 HS&L Building  
Bartlesville, Oklahoma 74004



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

October 28, 1986

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTENTION: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 40 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the third calendar quarter ending September 30, 1986.

<u>Month/1986</u>	<u>US Cents Per MMBtu</u>
July	315.0
August	299.0
September	290.0

Very truly yours,  
PHILLIPS 66 NATURAL GAS COMPANY

*Doyle Gilstrap*  
M. D. Gilstrap

MDG/pkc001

cc: Marathon Oil Company  
Attn: Mr. K. M. Henning  
P. O. Box 3128  
Houston, TX 77253



Kevin M. Henning  
Manager, Natural Gas Division  
Worldwide Production



January 23, 1987

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months October 1986 through December 1986:

	<u>Cents per MMBTU</u>
October 1986	285.0
November 1986	280.0
December 1986	280.0

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY



K. M. Henning

KMH:JRG:cp  
Enclosure

cc: Ms. Barbara Price  
Phillips 66 Natural Gas Company  
336 HS&L Building  
Bartlesville, Oklahoma 74004



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004 918 661-6600

January 26, 1987

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTN: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the fourth quarter ending December 31, 1986.

<u>Month/1986</u>	<u>US Cents Per MMBtu</u>
October	285.0
November	280.0
December	280.0

Very truly yours,

*M. D. Gilstrap*  
M. D. Gilstrap,  
PHILLIPS 66 NATURAL GAS COMPANY

MDG/5/pkc

cc: Marathon Oil Company  
Attn: Mr. K. M. Henning  
P. O. Box 3128  
Houston, TX 77253



Kevin M. Henning  
Manager, Natural Gas Division  
Worldwide Production

REC'D DOE/ERA  
NAT. GAS DIV.

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/621-6161

MAY 4 All: 39

April 28, 1987

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months January 1987 through March 1987:

	<u>Cents per MMBTU</u>
January 1987	261.5
February 1987	305.2
March 1987	325.4

Additionally, please be advised that for the period March through December 1986, the LNG was delivered under a provisional pricing system and our quarterly submissions were reflective of that pricing.

We have now reached a settlement with our buyers concerning the provisional pricing issue, which will result in firm prices for the subject time period.

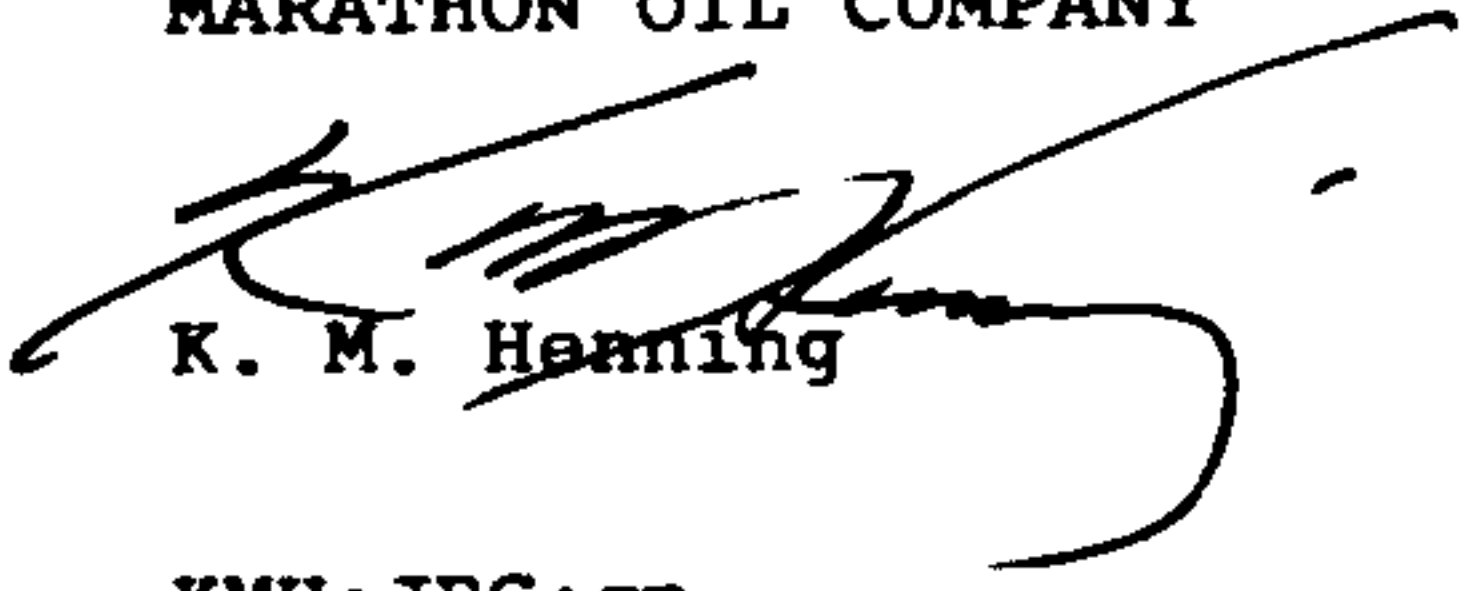
Please accept the following as notice of the change in pricing:

	<u>PROVISIONAL PRICE</u> <u>CENTS PER MMBTU</u>	<u>FIRM PRICE</u> <u>CENTS PER MMBTU</u>
March 1986	426.0	404.1
April	400.4	310.1
May	400.4	272.8
June	362.9	265.8
July	315.0	225.2
August	299.0	185.2
September	290.0	217.6
October	285.0	239.7
November	280.0	239.8
December	280.0	243.1

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY



K. M. Henning

KMH:JRG:cp  
Enclosure

cc: Phillips 66 Natural Gas Company  
Attention: Ms. Barbara Price-Thurman  
920 Plaza Office Building  
Bartlesville, Oklahoma 74004



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

April 29, 1987

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

87 MAY 5 9:22

REC'D DOE/ERA  
NAT. GAS DIV.

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTN: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the first quarter ending March 31, 1987.

<u>Month/1986</u>	<u>US Cents Per MMBtu</u>
January	261.5
February	305.2
March	325.4

Our LNG deliveries for the period March through December, 1986 were made under a provisional pricing system and those provisional prices were reported in our quarterly submissions to ERA. We have now agreed with our buyers on firm prices for this period and are requesting that your records be noted to reflect the below listed changes:

<u>Month</u>	<u>Provisional Prices Previously Reported U.S. Cents Per MMBtu</u>	<u>Firm Price U.S. Cents Per MMBtu</u>
March, 1986	426.0	404.1
April	400.4	310.1
May	400.4	272.8
June	362.9	265.8
July	315.0	225.2
August	299.0	185.2
September	290.0	217.6
October	285.0	239.7
November	280.0	239.8
December	280.0	243.1

Very truly yours,

*M. D. Gilstrap*

M. D. Gilstrap,  
PHILLIPS 66 NATURAL GAS COMPANY

MDG/5/plc

cc: Marathon Oil Company  
Attn: Mr. K. M. Henning  
P. O. Box 3128  
Houston, TX 77253

Kevin M. Henning  
Manager, Natural Gas Division  
Worldwide Production



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

May 12, 1987

Economic Regulatory Administration  
Department of Energy  
Forrestal Building  
Washington, D.C. 20585

Attn: Mr. Rayburn Hanzlik, Administrator

Re: Phillips Petroleum Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

For your information and file, we have attached hereto the 17th Amendatory Agreement to that LNG Sales Agreement dated March 6, 1967, between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Limited, Buyers, and Marathon Oil Company and Phillips Petroleum Company, Sellers. The amendment implements an update of the crude slate under the existing formula.

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Very truly yours,

MARATHON OIL COMPANY



K. M. Henning  
Manager, Natural Gas Division

KMH:ped

Attachments

cc: W. B. Gaul  
Phillips Petroleum Company  
Bartlesville, Oklahoma

87MAY15 P12:22

REC'D  
MAY 15 1987

87MAY15 A13:31

SEVENTEENTH AMENDATORY AGREEMENT

THIS SEVENTEENTH AMENDATORY AGREEMENT is effective March 27, 1987, by and between The Tokyo Electric Power Company, Incorporated ("Tokyo Electric") and Tokyo Gas Co., Ltd. ("Tokyo Gas"), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers" and Marathon Oil Company ("Marathon") and Phillips 66 Natural Gas Company as successor to Phillips Petroleum Company ("Phillips"), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 22nd day of October, 1984) providing for the purchase by Buyers from Sellers of LNG manufactured from natural gas produced from natural gas reserves located in the State of Alaska, United States of America.

NOW THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. By a "Memorandum of Agreement" dated April 8, 1986, the parties recognized the need to discuss LNG prices and agreed that for the interim purpose of payment after March 31, 1986, the price formula and crude slate in effect on March 31, 1986, would continue to be used on a provisional basis until such time as Buyers and Sellers mutually agreed to a new price basis.

*ds*  
*T.K.* *PH*  
*7/23*



Thereafter, additional modifications of the provisional prices were negotiated by the parties. The parties now hereby agree on the final prices for LNG sold and delivered from April 1, 1986 to March 31, 1987, and a revision to the price for March, 1986 as follows:

<u>Month</u>	<u>Price, Cents per MMBtu</u>
March, 1986	404.1
April, 1986	310.1
May, 1986	272.8
June, 1986	265.8
July, 1986	225.2
August, 1986	185.2
September, 1986	217.6
October, 1986	239.7
November, 1986	239.8
December, 1986	243.1
January, 1987	261.5
February, 1987	305.2
March, 1987	325.4

The difference between the prices payable for the months stated above and the prices actually paid by Buyers for the period March 1, 1986, through March 31, 1987, both dates inclusive (the "Refund Amount") shall be credited against Buyers' payment obligations for future LNG deliveries as outlined in paragraph 2 below.

2. The Refund Amount due to each of the Buyers is as follows:

Tokyo Electric	(US\$) 21,612,576.92
Tokyo Gas	(US\$) 7,204,189.23
Total	(US\$) 28,816,766.15

The Refund Amount shall be amortized and credited against invoiced amounts for each of the Buyers otherwise payable for LNG delivered on and after May 1, 1987, as follows. As of the payment date for each cargo of LNG delivered, \$315,000 for Tokyo Electric and \$105,000 for Tokyo Gas will be deducted from each invoice for each of the first sixty-eight (68) cargos delivered under the terms of the Basic Agreement. A final payment reflecting the remaining unpaid balance shall be deducted from the sixty-ninth (69th) cargo invoices.

*LS* *JH*  
*ZK.* *JHB*

3. Interest shall accrue on the uncredited daily balance on and after April 1, 1987, and the interest rate shall be 6.5% per annum (based on 365 day year). The interest due for the period April 1, 1987 to March 31, 1988 shall be deducted from the invoices for the last LNG cargo submitted for payment prior to April 1, 1988. The interest due for the period April 1, 1988 to March 31, 1989 shall be deducted from the invoices for the last LNG cargo submitted for payment prior to April 1, 1989. Any interest due for the period beyond April 1, 1989 shall be deducted from the invoices for the sixty-ninth (69th) LNG cargo.

4. If any principal of the Refund Amount or interest thereon remains unpaid on May 31, 1989 Sellers shall repay the remaining amount to the Buyers in cash on that date.

5. The Buyers shall seek necessary approval of the Japanese Government for the repayment of the amounts stated in paragraph 2 and 3 above by deduction from future LNG invoices. The Buyers shall advise the Sellers when approval is obtained. Until approval is obtained, the Sellers shall make payments to Buyers in cash on the same day each LNG invoice is paid by the Buyers.

6. To the extent permissible under the laws of the United States, the parties agree to cooperate to minimize or reduce to nil any withholding tax on the interest portion of the amounts under paragraph 3 and 4 above. To that end, the parties agree that the rights and obligations under this Seventeenth Amendatory Agreement are not transferable and furthermore, the parties agree to discuss additional terms and conditions separately.

7. Except as herein specifically amended, all other terms and conditions of the Basic Agreement shall remain unchanged.

*sd*  
*7.11. FHH*  
*TMB*

IN WITNESS WHEREOF, the parties hereto have caused this Seventeenth Amendatory Agreement to be executed in good faith, by their respective duly authorized officers as of the date set forth below.

The Tokyo Electric Power Company, Incorporated

By: Shoh Maen *sh*  
President

Marathon Oil Company

By: W E Swales *WES*  
President

Tokyo Gas Co., Ltd.

By: Hiroschi Watanabe *HW*  
President

Phillips 66 Natural Gas Company

By: A J D'Amalloy *AJD*  
President

Date 16th April, 1987



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

87 NOV 3 11:56

DOE/ERA

October 27, 1987

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTN: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the third quarter ending September 30, 1987.

Month/1987

US Cents Per MMBtu

July	316.5
August	317.3
September	317.2

Very truly yours,

*Doyle Gilstrap*  
M. D. Gilstrap,

PHILLIPS 66 NATURAL GAS COMPANY

MDG/5/plc

cc: Marathon Oil Company  
Attn: John V. Parziale  
P. O. Box 3128  
Houston, TX 77253

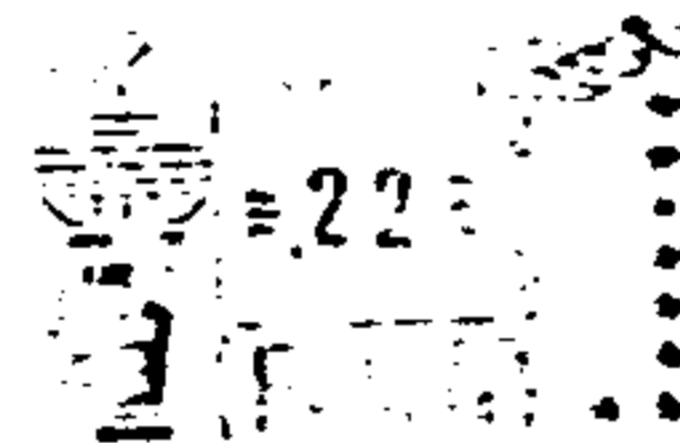
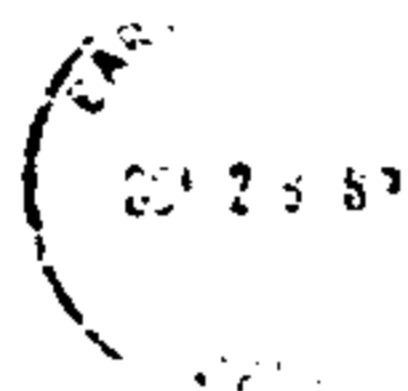


**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004

**FIRST CLASS**



Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585



John V. Parziale  
Manager, Natural Gas Division  
Worldwide Production



October 27, 1987

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600  
Telex 792069

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

87 NOV 3 P 3:35

REC'D DOE/ERA  
NATURAL GAS DIV.

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months July 1987 through September 1987:

	<u>Cents per MMBTU</u>
July 1987	316.5
August 1987	317.3
September 1987	317.2

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'John V. Parziale'.

John V. Parziale

JVP:cp  
Enclosure

cc: Phillips 66 Natural Gas Company  
Attention: Ms. Barbara Price-Thurman  
920 Plaza Office Building  
Bartlesville, Oklahoma 74004

John V. Parziale  
Manager, Natural Gas Division  
Worldwide Production



January 25, 1988

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/829-8800  
Telex 782089

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months October 1987 through December 1987:

	<u>Cents per MMBTU</u>
October 1987	316.6
November 1987	316.7
December 1987	315.5

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

John V. Parziale

JVP:cp  
Enclosure

cc: Phillips 66 Natural Gas Company  
Attention: Ms. Barbara Price-Thurman  
920 Plaza Office Building  
Bartlesville, Oklahoma 74004

08 FEB 3 AIO: 12

REC'D DOE/ERA  
NAT. GAS DIV.



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

January 29, 1988

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

RECEIVED  
AIO: 15

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTN: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the fourth quarter ending December 31, 1987.

<u>Month/1987</u>	<u>US Cents Per MMBtu</u>
October	316.6
November	316.7
December	315.5

Very truly yours,

*M. D. Gilstrap*  
M. D. Gilstrap  
PHILLIPS 66 NATURAL GAS COMPANY

MDG/5/pkc

cc: Marathon Oil Company  
Attn: John V. Parziale  
P. O. Box 3128  
Houston, TX 77253





**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

07 JUL 31 P 2: 03

July 27, 1987

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTN: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the second quarter ending June 30, 1987.

<u>Month/1987</u>	<u>US Cents Per MMBtu</u>
April	315.8
May	316.2
June	316.3

Very truly yours,

*M. D. Gilstrap*

M. D. Gilstrap,

PHILLIPS 66 NATURAL GAS COMPANY

MDG/5/pkc

cc: Marathon Oil Company  
Attn: Mr. K. M. Henning  
P. O. Box 3128  
Houston, TX 77253

Kevin M. Henning  
Manager, Natural Gas Division  
Worldwide Production



July 27, 1987

P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

87 JUL 30 P 2: 54

REC'D DOE/ERA  
NATURAL GAS DIV.

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April 1987 through June 1987:

	<u>Cents per MMBTU</u>
April 1987	315.8
May 1987	316.2
June 1987	316.3

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY

*K. M. Henning*  
K. M. Henning

*by JRG*

KMH:JRG:cp  
Enclosure

cc: Phillips 66 Natural Gas Company  
Attention: Ms. Barbara Price-Thurman  
920 Plaza Office Building  
Bartlesville, Oklahoma 74004

Phillips/Marathon LNG Export

Price per MMBtu as of August :

-----F.O.B. Alaska  
-----Shipping  
---4.80---CIF Japan (*estimated*)  
-----Terminaling/Regasification in Japan  
  
Total

Flowing project

Pacific-Indonesia LNG Import

Estimated Price per MMBtu as of August :

---2.50---F.O.B. Indonesia (*estimated*)  
---1.35---Shipping (*estimated*) + *incidental costs*  
---1.58---Terminaling/Regasification  
  
5.43 Total based on current contract

Start-up estimated for 1985

Trunkline LNG Import

Estimated Price per MMBtu (July through December 1980)

\$3.24 F.O.B. Arzew  
2.02 Shipping (2 U.S., 2 Algerian Vessels)  
.99 Terminaling/Regasification  
.03 Transmission to System  
\$6.29 Total delivered unit cost to Trunkline system  
(unit cost does not add to total due to rounding)

Facilities expected to be ready to receive deliveries in June 1981. Trunkline is currently attempting to develop arrangements for interim terminaling at existing East Coast facilities if Algeria is willing to start deliveries prior to June 1981.

ORIGINAL



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

April 26, 1988

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

MAY 3 8:22

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATTN: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the first quarter ending March 31, 1988.

<u>Month/1988</u>	<u>U.S. Cents Per MMBtu</u>
January	312.0
February	312.4
March	312.4

Subsequent to our January 20, 1988 letter reporting prices for the fourth quarter ending December 31, 1987, there has been a slight revision in the November and December prices. Please note your copy of that report to reflect a November price of 316.4 rather than 316.7 and a December price of 315.2 rather than 315.5.

Very truly yours,

M. D. Gilstrap  
PHILLIPS 66 NATURAL GAS COMPANY

MDG/5/pkc

cc: Marathon Oil Company  
Attn: John V. Parziale  
P. O. Box 3128  
Houston, TX 77253

John V. Parziale  
Manager, Natural Gas Division  
Worldwide Production



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600  
Telex 792089

April 25, 1988

OF MAY 2 ALL: 09

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attention: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982 in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months January 1988 through March 1988:


	<u>Cents per MMBTU</u>
January 1988	312.0
Februray 1988	312.4
March 1988	312.4

Subsequent to our letter of January 25, 1988, the applicable prices for November and December, 1987 were retroactively changed to 316.4 cents and 315.2 cents per MMBtu, respectively, in accordance with the terms of the contract. Please revise your records accordingly.

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Yours very truly,

MARATHON OIL COMPANY



John V. Parziale

JVP:cp  
Enclosure

cc: Phillips 66 Natural Gas Company  
Attention: Ms. Barbara Price-Thurman  
920 Plaza Office Building  
Bartlesville, Oklahoma 74004



**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

July 22, 1988

Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building, Room GA 076  
1000 Independence Avenue, SW  
Washington, DC 20585

ATIN: Ms. Constance L. Buckley

Gentlemen:

Pursuant to Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued December 14, 1982, in the captioned docket, Phillips 66 Natural Gas Company lists below the monthly prices received for LNG delivered at the Tokyo Flange for the second quarter ending June 30, 1988.

<u>Month/1988</u>	<u>U.S. Cents Per MMBtu</u>
April	312.4
May	312.4
June	312.4

Very truly yours,

K. R. Lilley  
PHILLIPS 66 NATURAL GAS COMPANY

MDG/5/pkc

cc: Marathon Oil Company  
Attn: John V. Parziale  
P. O. Box 3128  
Houston, TX 77253

ST JUL 23 AM 1:15

John V. Parziale  
Manager, Natural Gas Division  
Worldwide Production



P.O. Box 3128  
Houston, Texas 77253  
Telephone 713/629-6600  
Telex 782069

July 26, 1988

Natural Gas Division  
Economic Regulatory Administration  
Forrestal Building Room GA076  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Attn: Ms. Constance L. Buckley

Re: Phillips 66 Natural Gas Company  
Marathon Oil Company  
ERA Docket No. 82-04-LNG

Dear Sir:

In compliance with Ordering Paragraph D of DOE/ERA Opinion and Order No. 49 issued on December 14, 1982, in the above Docket, Marathon Oil Company hereby submits the prices for LNG at the delivery point in Japan for the months April 1988 through June 1988:

	<u>Cents per MMBTU</u>
April 1988	312.4
May 1988	312.4
June 1988	312.4

It would be appreciated if you would date stamp the duplicate copy of this letter and return same in the self-addressed envelope enclosed.

Very truly yours,

*J.V. Parziale by*  
John V. Parziale *JRG.*

JVP/azs

Enclosure

cc: Phillips 66 Natural Gas Company  
Attn: Ms. Barbara Price-Thurman  
920 Plaza Office Building  
Bartlesville, OK 74004

000123 P3:23





**PHILLIPS 66 NATURAL GAS COMPANY**

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA 74004 PHONE 918 661-6600

May 30, 1990

Constance L. Buckley  
Office of Fuels Programs,  
Fossil Energy, U.S. Department of Energy  
Forrestal Building  
1000 Independence Ave., S.W.  
Washington, D.C. 20585

REC'D DOE/FE  
OFFICE OF FUEL PROGRAM  
1990 JUN 18 P 4: 20

RE: DOE/ERA Opinion and Order  
No. 49, Docket No. 82-04-ING

Dear Ms. Buckley:

Please accept this letter as notice that Phillips 66 Natural Gas Company ("Phillips") and Marathon Oil Company ("Marathon"), collectively referred to as Sellers, are finalizing negotiations with The Tokyo Electric Power Company, Incorporated, and Tokyo Gas Company, LTD., collectively referred to as Buyers, to amend the price formula contained in the Liquefied Natural Gas Sales and Purchase Extension Agreement dated June 17, 1988 between Sellers and Buyers, which provides for the export of liquefied natural gas (LNG) from Alaska, U.S.A. to Tokyo, Japan.

DOE/ERA Opinion and Order No. 206, issued on November 16, 1987 authorized the amendment to Opinion and Order No. 49 which replaced the previously approved LNG pricing provisions with a more market sensitive pricing formula. Further, Opinion and Order 49 was last amended on July 28, 1988, when DOE approved the Gas Sales and Purchase Extension Agreement dated June 17, 1988, in Opinion and Order No. 261, Docket No. 88-22-ING, extending the export authorization through March 21, 2004.

The parties have been negotiating an amendment to provide for a more representative price for LNG and to maintain a market responsive pricing formula. Once the contract amendment negotiations are finalized Phillips and Marathon intend to submit a formal application for approval by the Office of Fuels Program.

Sincerely,

By: James C. King  
Phillips 66 Natural Gas Company  
Vice-President, Regulatory Affairs

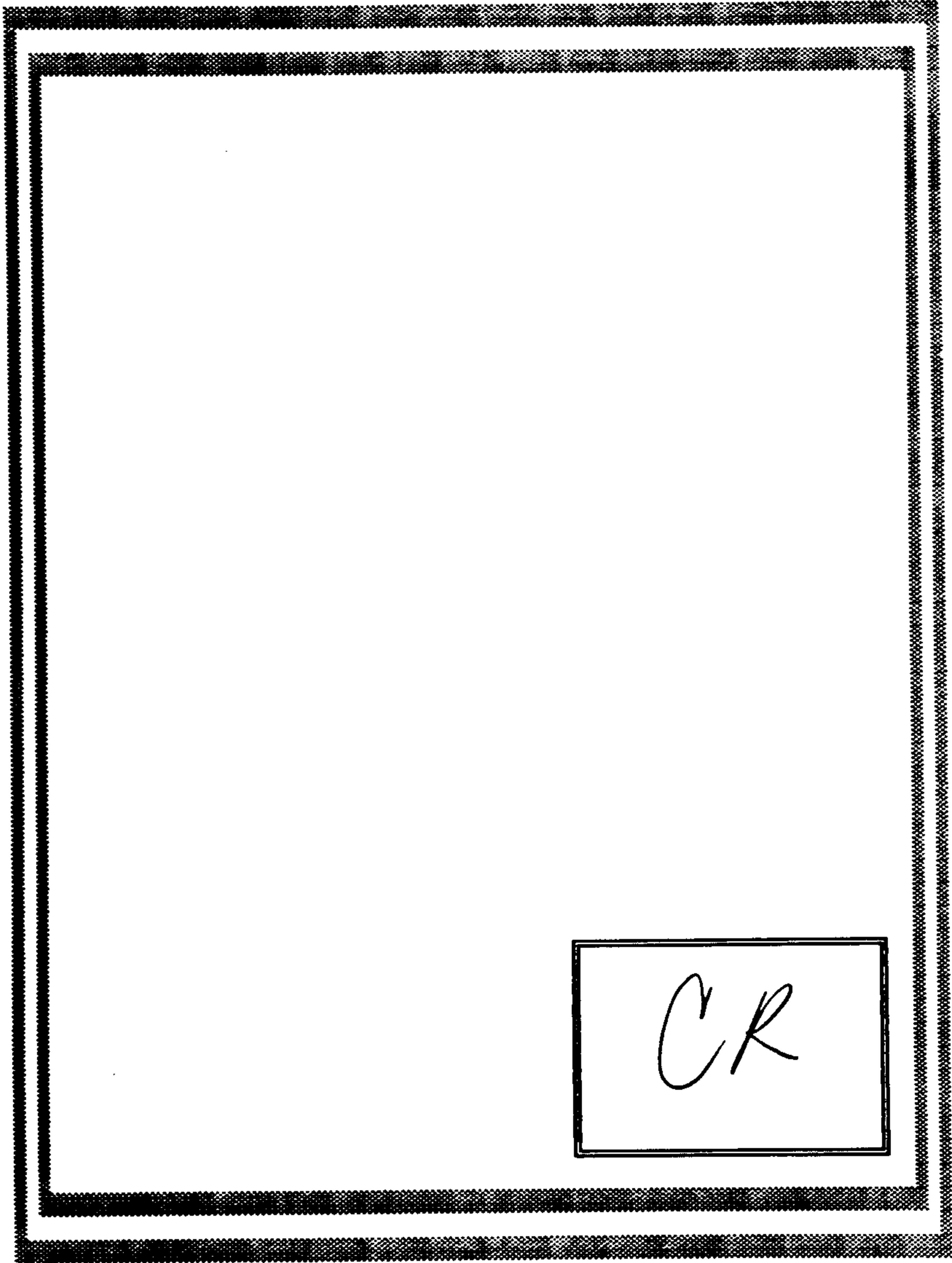
By: J. R. [Signature]  
Marathon Oil Company

Phillips

Marathon

FERC #C167-1226

Part 2



CR

**ROUTING AND TRANSMITTAL SLIP**

Date

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1.		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

**REMARKS**

*Call Phillip Anderson 7/29*  
*IGT*

*312-567-3726 (note about Phillip's price index mechanism)*

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
	Phone No.

5041-102

OPTIONAL FORM 41 (Rev. 7-76)  
 Prescribed by GSA  
 FPMR (41 CFR) 101-11.506

**ROUTING AND TRANSMITTAL SLIP**

Date **7/28/21**

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. <del>LYNNE CHURCH</del>		
2. <i>Mary</i>		
3. <i>Larry</i>		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	For Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

**REMARKS**

**FOR YOUR INFO.**  
*de*

**DO NOT use this form as a RECORD of approvals, concurrences, dispositions, clearances, and similar actions**

<b>FROM: (Name, org. symbol, Agency/Post)</b>	<b>Room No.—Bldg.</b>
	<b>Phone No.</b>



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004 918 661-6600

GAS AND GAS LIQUIDS GROUP

*Dave  
Nat Gas  
Div*

July 15, 1981

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, NE  
Washington, DC 20426

Re: Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226  
Twelfth Amendatory Agreement

Dear Sir:

In accordance with my letter of May 14, 1981, and pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket, there are enclosed two copies of the Twelfth Amendatory Agreement dated June 17, 1981, between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited, as Buyers, and Phillips Petroleum Company and Marathon Oil Company, as Sellers, covering the purchase and sale of Kenai LNG.

A copy of this amendment is being furnished the Economic Regulatory Administration, Attention: Mr. Finn K. Neilsen, Director, Import/Export Division, Office of Petroleum Operations.

Very truly yours,  
PHILLIPS PETROLEUM COMPANY

By

W. B. .Gaul

WBG:dp  
Enclosures - 2

cc: Mr. Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, NW  
Washington, DC 20461

Marathon Oil Company  
Mr. S. C. Sandusky, Manager  
Natural Gas Division  
529 South Main Street  
Findlay, OH 45840

## TWELFTH AMENDATORY AGREEMENT

THIS TWELFTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers",

### WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement — as partially amended as of the 13th day of December, 1979) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1981, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984 shall be a base price of 592.8 U.S. cents per

million Btu as indexed in accordance with the formula stated in this Sub-Section so as to reflect changes in the weighted average of Government Selling Prices of a basket of twenty (20) crude oils imported into Japan.

Price for calendar month

$$= 592.8 \times \frac{\text{Av GSP (Month Prior to Calendar Month)}}{34.48 \text{ (the Av GSP for March 1981)}}$$

WHERE:

Av GSP is the average of the Government Selling Prices (in U.S. dollars per barrel) weighted by the 1980 volumes for the top twenty (20) crude oils (ranked by descending volumes) imported into Japan during the calendar year of 1980.

If the Government Selling Price (GSP) for any of such top twenty (20) crude oils applicable on the last day of the month prior to the month in which LNG is sold and delivered is different from the GSP used in calculating the applicable LNG price, and the different GSP is announced before the end of the month following the month of delivery, then the applicable LNG price shall be re-calculated using the different GSP and appropriate adjusting payments shall be made at the next regular payment date. If at any time any of the Government Selling Prices used in the formula ceases to be published or is quoted on a revised basis, Sellers and Buyers shall promptly meet to agree on an appropriate modification.

Notwithstanding the above, for the months of April, May and June 1981, the price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder shall be the weighted average price (expressed in United States



cents per million Btu) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports - Commodity by country" published monthly by the Japan Tariff Association.

Sellers and Buyers shall be free to request a renegotiation of the price if there are significant changes in circumstances."

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 17th day of June 1981.

BUYERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

By: Seichu Hiraiwa  
President

TOKYO GAS COMPANY LIMITED

By: Takao Murakami  
President

SELLERS:

MARATHON OIL COMPANY

By: [Signature]  
President

PHILLIPS PETROLEUM COMPANY

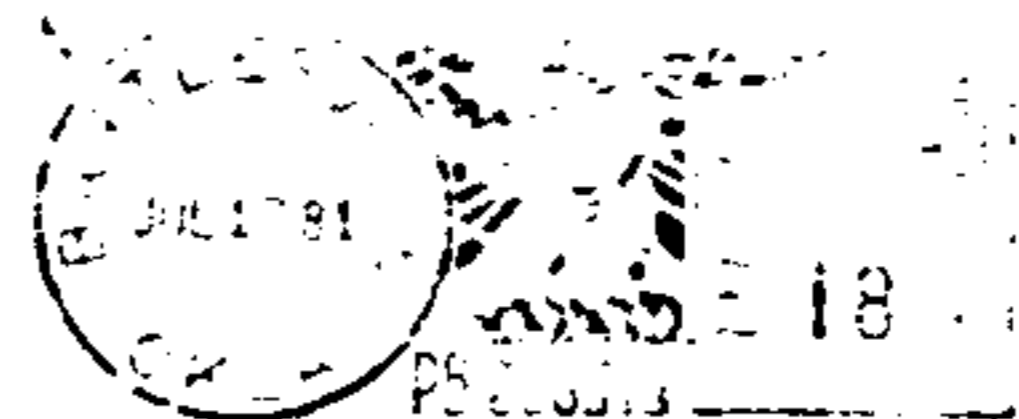
By: [Signature]  
President

8/27/81



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004

W. B. Gault, Manager  
OWS, Bartlesville, Okla.  
1000 Phillips 66



Mr. Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, NW  
Washington, DC 20461

**The Performance Company**

S. C. Sandusky  
Manager, Natural Gas Division  
Production, U.S. & Canada



**Marathon  
Oil Company**

Findlay, Ohio 45840  
Telephone 419/422-2121

July 16, 1981

A handwritten signature that appears to be 'Dave' with a checkmark above it.

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.W.  
Washington, D.C. 20462

Dear Mr. Plumb:

Re: Docket No. CI67-1226  
Marathon Oil Company  
Phillips Petroleum Company  
Twelfth Amendatory Agreement

In accordance with my letter to you dated May 13, 1980, please find attached two copies of the Twelfth Amendatory Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd., as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, of LNG.

This Amendatory Agreement is filed pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket.

Said Agreement is effective April 1, 1981, and the provisional price which was notified to you in my letter dated May 13, 1981, has been adjusted to reflect this agreement.

A copy of this amendment is also being sent to the Economic Regulatory Administration.

Respectfully submitted,

MARATHON OIL COMPANY

A handwritten signature of S. C. Sandusky.

S. C. Sandusky, Manager  
Natural Gas Division

SCS:blc  
Attachments

cc: Mr. Finn K. Neilsen, Director (w/att.)  
Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, N.W.  
Washington, D.C. 20461

cc: Mr. W. B. Gaul (w/o att.)  
Phillips Petroleum Company

## TWELFTH AMENDATORY AGREEMENT

THIS TWELFTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD.\* (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers",

### WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement — as partially amended as of the 13th day of December, 1979) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1981, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984 shall be a base price of 592.8 U.S. cents per

million Btu as indexed in accordance with the formula stated in this Sub-Section so as to reflect changes in the weighted average of Government Selling Prices of a basket of twenty (20) crude oils imported into Japan.

• Price for calendar month

$$= 592.8 \times \frac{\text{Av GSP (Month Prior to Calendar Month)}}{34.48 \text{ (the Av GSP for March 1981)}}$$

WHERE:

Av GSP is the average of the Government Selling Prices (in U.S. dollars per barrel) weighted by the 1980 volumes for the top twenty (20) crude oils (ranked by descending volumes) imported into Japan during the calendar year of 1980.

If the Government Selling Price (GSP) for any of such top twenty (20) crude oils applicable on the last day of the month prior to the month in which LNG is sold and delivered is different from the GSP used in calculating the applicable LNG price, and the different GSP is announced before the end of the month following the month of delivery, then the applicable LNG price shall be re-calculated using the different GSP and appropriate adjusting payments shall be made at the next regular payment date. If at any time any of the Government Selling Prices used in the formula ceases to be published or is quoted on a revised basis, Sellers and Buyers shall promptly meet to agree on an appropriate modification.

Notwithstanding the above, for the months of April, May and June 1981, the price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder shall be the weighted average price (expressed in United States

cents per million Btu) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports - Commodity by country" published monthly by the Japan Tariff Association.

Sellers and Buyers shall be free to request a renegotiation of the price if there are significant changes in circumstances."

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 17th day of June 1981.

BUYERS:

SELLERS:

THE TOKYO ELECTRIC POWER  
COMPANY, INC.

MARATHON OIL COMPANY

By: *Seiei Hiraiwa*  
President

By: *[Signature]*  
President  
*SCS*  
*nal*

TOKYO GAS COMPANY LIMITED

PHILLIPS PETROLEUM COMPANY

By: *Takeshi Murakami*  
President

By: *[Signature]*  
President

S. C. Sandusky  
Manager, Natural Gas Division  
Production, U.S. & Canada

Findlay, Ohio 45840  
Telephone 419-422-2121



**Marathon  
Oil Company**

May 13, 1981

~~Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426~~

Dear Sir:

Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

This is to advise that a provisional price of \$6.00/MMBTU has been agreed upon between Sellers and Buyers in the captioned sale effective April 1, 1981, but no written agreement has been signed.

When an amendment of the contract is executed, it will be filed with the Commission.

For its information we are providing ERA with a copy of this letter.

Very truly yours,

MARATHON OIL COMPANY

  
S. C. Sandusky, Manager  
Natural Gas Division

SCS:blc

cc: Mr. Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M. Street, N.W.  
Washington, D. C. 20461

Mr. W. B. Gaul (Phillips)

5/13/81  
~~Done  
Sator  
FYI  
Finn~~  
~~Lynde~~  
Cary

1 Church

May 14, 1981

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
325 North Capitol Street, NE  
Washington, DC 20426

Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

Dear Sir:

You are advised that a provisional price of \$6.00/MMBtu has been agreed upon between Sellers and Buyers in the captioned sale effective April 1, 1981, but no written amendment has been signed.

When a written modification or amendment of the contract is executed, it will be filed in compliance with Section 153.8 of the Commission's Regulations.

A copy of this letter is being furnished to the Economic Regulatory Administration, Attention: Mr. Finn K. Heilsen, Director, Import/Export Division, Office of Petroleum Operations.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

ORIGINAL SIGNED BY  
W. B. GAUL

By \_\_\_\_\_  
W. B. Gaul

WBG:dp

cc: Mr. Finn K. Heilsen /  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, NW  
Washington, DC 20461

Marathon Oil Company  
Mr. S. C. Sandusky, Manager  
Natural Gas Division  
539 South Main Street  
Findlay, OH 45840



cost B/D

4/19/67 - FPC Order in Dockets CI 67-1226 & CI 67-1227  
(Expend) (Facilities)

15 yr period ending 5/31/84  
Usage - 3/1/69 - 5/31/70 35,295 TBhs  
6/1/70 - 5/31/71 50,570 TBhs  
+ 13 years beyond

+ option for 5yr renewal

initial price ~~\$2.00~~ \$.520/month delivered

automatic termination of authorization 5/31/84  
new filing for 5yr renewal (153.8)

12/29/77 - 1 hr from Phillips to Plans

\$2.15/month effective 1/1/78      Dollar CI 67-1226

1/4/78 1 hr from Marathen same

12/79 Article in Pch Econ. shows  
CIF & expat prices:

1974 - .72  
1975 - 1.35  
1976 - 1.64  
1977 - 1.94  
1978 - 2.17

1/4/80 ltr from Marathan de Plumb

effective 1/1/80 — 3.36 mmbtu  
effective 4/1/80 — city avg price of crude  
imported into Japan during  
the 3rd month previous  
to the month of delivery

<u>Form 14 Date</u>	
1967	.52
1972	.55
1973	.57
1974	.734
1975	1.367
1976	1.66
1977	1.943
1978	2.15
1979	2.30

5/19/80  
Inside FERC  $\Rightarrow$  price \$4.97 mmbtu CIF

6/4/80 — ltr from F. Nelson's request  
(a) approval of any price revision  
P & M might be negotiating  
(b) history of sales (price and vol) since 1967

6/12/80 Ltr from P → FKN

(a) no negotiations

(L) inde filed in FPC/FERC docket  
+ Form 14 1972 - 1979  
EIA 1980 (3-26-80)

6/13/80 Ltr from M → FKN

- (a) last price adj 1/1/80
- (b) no further agreement, Jan 1980
- (c) data in docket / Form 14

1/9/80 Memo to Ren Bailey to D Latham

( 7/21/72 MIP filed Amending Agreement re  
price change 54¢ → 57¢

8/21/72 FPC Secty acknowledged receipt and  
requested submission of an application

11/21/72 P responded by claiming price change  
not subject to ordering power in 11/19/67  
order

3/6/73 Secty agreed

5/24/74 P/M Setl 2nd Amending Agreement  
price change 57¢ → 68.4¢

7/8/74 Setl again request Lhas to justify

11/4 / 11/20/74 P/M <sup>noted</sup> ~~issued~~ earlier price  
change w/o Lhas

No double action by Comm

P/M have filed 11 amendments

7/10 Two Lhas from P/M w/ copy  
of revised price and future  
price trends.

7/15 Ltr from FERC (K. Williams) to P

REFI re Kenai LNG plant

refe 3/7/80 ltr refusing to comply

4-19-67

... unnecessary disturbances, displays of the state, etc." ... "race, creed, color, or national origin" ... "discrimination, which will cover ... of discriminatory exclusion. ... members of the community who have ... that they were not welcome to use the ... right to do so. We are altering the ... will require posting of notice that the ... all members of the public without dis- ... one respondent regarding compliance with ... and state or local laws is sufficiently ... of 48.2(a) which directs the posting of ... and other regulations regarding such use". ... local laws are applicable is, therefore, ... problems of interpretation where all ... still on the books. ... of Part 8 has been accomplished by ... issued December 12, 1966, 36 FPC 1030. ... action is necessary.

... actions, herein prescribed, are necessary ... of the Federal Power Act. ... amendment originally proposed results from ... of Proposed Rulemaking herein ... change in the original proposal ... subject to the regulation, no further ... to the provisions of the Federal Power ... sections 10(a) and 309 thereof (41 Stat. ... orders: ... revised by adding a new sentence. As ... to recreational use and availability of ... amendment of a license, the licensee shall ... of public access which are required by ... as are specifically directed for this ... such other points as are subsequently ... its own motion or upon the recommenda- ... y operating in the area in which the ... sign giving the name of the project and ... ment that it is ... by the Commission ... to the areas of the project which are ... permissible times and activities, and ... use, and advising that further informa- ... of the licensee in the vicinity of the ... shall post at such locations conspicuous ... are open to all members of the public

2. A new §87 is added, as follows:  
§87. (a) ...  
Every licensee maintaining recreation facilities for the use of the public ... or employing or permitting any other person to ... and maintenance of such facilities to all members of ... the public without regard to race, color, religious creed or national origin.  
(Secs. 10(a), 109; 41 Stat. 1968, 40 Stat. 858; 16 U.S.C. 801, 825b)  
(b) The caption of this proceeding is amended to read as set out above. These amendments shall be effective May 22, 1967.  
(c) The Secretary shall cause prompt publication of this order to be made in the Federal Register.

Before Commissioners: Lee C. White, Chairman; L. J. O'Connor, Jr., Charles R. Ross, Carl E. Bagge and John A. Carver, Jr.

PHILLIPS PETROLEUM COMPANY, DOCKET NO. C167-1226 AND MARATHON OIL COMPANY, DOCKET NO. C167-1227

ORDER AUTHORIZING EXPORTATION OF LIQUEFIED NATURAL GAS AND DISMISSING APPLICATION FOR PERMIT

(Issued April 13, 1967)

On March 8, 1967, Phillips Petroleum Company and Marathon Oil Company (Applicants) filed in Docket No. C167-1226 an application pursuant to Section 3 of the Natural Gas Act for authorization to export liquefied natural gas from the United States to Japan, all as more fully set forth in the application.

Applicants propose to export liquefied natural gas from Alaska for sale and delivery in Yokohama, Japan to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited. Applicants agree to sell and buyers agree to purchase the following annual Btu's of liquefied natural gas during a fifteen-year period ending May 31, 1981:

- March 1, 1969, to May 31, 1970: 55,257,000,000,000 Btu's.
June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

The agreement contains an option for a five-year renewal. The application states that the gas will be sold at a rate of 52.0 cents per million Btu's delivered.

Applicants will construct facilities in the Cook Inlet Basin area, Alaska, for the liquefaction of natural gas, the storage of liquefied natural gas, and the loading of such onto ships for export and delivery to Japan to the aforementioned buyers.

Concurrently with the subject application, Applicants filed in Docket No. C167-1227 an application pursuant to Executive Order No. 12187 for a permit authorizing the construction, operation and maintenance of facilities at the border of the United States in the State of Alaska for the exportation of natural gas. Said Order designates and empowers the Commission to issue such a permit upon finding that the issuance would be consistent with the public interest and after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense. During the course of pro-

essence, the question was raised by the Department of State as to whether the facilities in question are of the type contemplated by the Executive Order, though both the Secretary of State and the Secretary of Defense agreed that such facilities of the proposed export was consistent with the public interest of the United States. Consequently, the Commission presented the issue to the Office of the Legal Counsel of the Department of Justice which, upon consideration of the documents pertaining to the application, has concurred in the conclusion of the Department of State that the Executive Order does not apply, because there will not be facilities at the border involving any physical connection between this country and a foreign country. In view of these conclusions by the relevant agencies of the Executive Branch of the Government (with which we are informed, the Department of Defense does not take issue), and in the absence of any basis for our independently reaching a contrary position, we shall dismiss the permit application in Docket No. C167-1227. We shall, however, in future cases of this nature continue to secure the views of the Departments of State and Defense before taking action under Section 3 of the Natural Gas Act.

After due notice, no petitions to intervene, notices of intervention or protests to the granting of the application in Docket No. C167-1226 have been received.

*The Commission finds:*

(1) The exportation of liquefied natural gas by Applicants, Phillips Petroleum Company and Marathon Oil Company, from the United States to Japan, as hereinabove described and as set forth in the application in Docket No. C167-1226, will not be inconsistent with the public interest within the meaning of Section 3 of the Natural Gas Act, provided that said exportation be on the terms and conditions hereinafter set forth:

(a) Applicants shall file statements or reports with the Commission from time to time under oath and in such details as the Commission may require with respect to the whole or any part of the instant export operation.

(b) The authorization granted herein is not transferable or assignable and shall remain in full force and effect only so long as Applicants continue the acts or operations herein authorized in accordance with the terms and conditions herein set forth.

(c) The authorization granted herein shall automatically terminate on May 31, 1964. If the five-year renewal option of the agreement between Applicants and buyers is exercised, Applicants must comply with Section 153.8 of the Regulations under the Natural Gas Act.

(d) Applicants shall not, during the terms of the authorization granted by this order, materially change or alter their export operations without first obtaining the permission and approval of the Commission.

(e) In the event that Applicants should abandon or permanently cease for any reason whatsoever all or any part of the instant export operation prior to the termination date described in (c) hereof, Applicants shall forthwith notify the Commission of said fact and the reason therefor.

(f) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited should not exceed the following:

March 1, 1963, to May 31, 1970: 35,295,000,000,000 Btu's.  
June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years:  
50,570,000,000,000 Btu's.

(2) (A) Commission proposed ex-  
(2) (A) facilities for  
for which  
10485.

*The Commission*

(A) Authority  
from the U.S.  
in the applica-  
forth and s-  
sion's Regula-

(B) The  
for sale to  
Company Ltd.

March

June 1

50,570,000

(C) Applica-  
Commission's  
proposed ex-  
the exercise of

(D) The a-

Before C  
Charles R. H.

CHRISTIE, S  
G-20001, R  
& ASSOCIATE  
NO. R161

ORDER GR

By order is  
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interest of M  
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York City. In  
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agreement and  
the total amo  
agreements in  
excess of the  
Mitchell by  
amounts attrib

\* The July 19  
amount applicab

339-484-

by the Department of State as of the type contemplated by the Department of State and the Secretary of State. It was consistent with the proposed export operation. Consequently, the Commission pre-empted of the Department of Justice's jurisdiction pertaining to the application. The Department of State that the Executive Order facilities at the border involving a foreign country. In accordance with the Executive Order of the Department of Defense on any basis for our independently to dismiss, the permit application in future cases of this nature concerns of State and Defense before the Natural Gas Act.

Notices of intervention or protest in Docket No. C167-1226 have been

gas by Applicants, Phillips Petroleum Company, from the United States to Japan, in the application in Docket No. C167-1226. The interest within the means provided for said exportation be on the following:

Reports with the Commission from Applicants as the Commission may require for instant export operation.

Not transferable or assignable and so long as Applicants continue the operations in accordance with the terms and conditions of the agreement between Applicants and the Commission.

shall automatically terminate on the expiration of the agreement between Applicants and the Commission. Applicants must comply with Section 153.8 of the Natural Gas Act.

of the authorization granted by the Commission for export operations without first obtaining the approval of the Commission.

abandon or permanently cease for the instant export operation prior to the expiration of the term of the agreement. Applicants shall forthwith discontinue the exportation of natural gas to be exported for the instant export operation.

and The Tokyo Gas Company

5,000,000,000 Btu's.

of the subsequent thirteen years:

(1) Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan.

(2) Applicants do not propose to construct, operate or maintain any facilities at the border of the United States within the contemplation of and for which a permit is required to be issued pursuant to Executive Order No. 10485.

*The Commission orders:*

(A) Authorization is granted to Applicants to export liquefied natural gas from the United States to Japan, as heretofore described and as set forth in the application in Docket No. C167-1226, upon the conditions herein set forth and subject to the provisions of the Natural Gas Act and the Commission's Regulations issued thereunder.

(B) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited shall not exceed the following:

March 1, 1970, to May 31, 1970: 55,250,000,000 Btu's.

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000 Btu's.

(C) Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan, and for any other contractual changes including the exercise of the option for renewal.

(D) The application for a permit filed in Docket No. C167-1227 is dismissed.

Before Commissioners: Lee C. White, Chairman; L. J. O'Connor, Jr., Charles H. Ross and Carl E. Bagge.

CHRISTIE, MITCHELL & MITCHELL COMPANY, ET AL., DOCKET NOS. G-29001, R161-123, R163-23, R163-23S AND R163-440; GEORGE MITCHELL & ASSOCIATES, INC., AGENT FOR B. V. CHRISTIE, ET AL., DOCKET NO. R164-231

ORDER GRANTING MOTION FOR RELEASE OF ADDITIONAL ESCROWED FUNDS

(Issued April 20, 1967)

By order issued July 19, 1966, 36 FPC 130, in the above-entitled proceedings, the Commission authorized the release of amounts attributable to the interest of Mitchell & Mitchell Gas & Oil Corporation (Mitchell) previously deposited in escrow agreements with The Chase Manhattan Bank of New York City. In lieu of retaining such amounts in escrow, Mitchell was permitted to collect the increased rates involved here, subject to refund, under an agreement and undertaking and a surety bond in the amount of \$18,213.30, the total amount reported by Mitchell to have been collected in the escrow agreements in excess of the last firm rate approved by the Commission or in excess of the applicable increased rate ceiling.<sup>1</sup>

Mitchell by letter filed on March 20, 1967, states that the previously reported amounts attributable to its interest in the escrow agreements in Docket Nos.

<sup>1</sup>The July 19, 1966 order authorized the release of \$91,540.47, the total reported amount applicable to Mitchell's interest then deposited under escrow agreements.

July 31, 1980

Mr. Diacco,

Here is a  
copy of a memo concerning  
over-deliveries of LNG to  
Japan from Phillips-Marathon.

Thank you for your past  
cooperation in providing us  
information in this matter and  
please continue to inform us  
of any actions taken by ERA  
or the companies in the future.

Ron Banley  
357-8944  
Rm 7005



**ROUTING AND TRANSMITTAL SLIP**

Date **7-23-80**

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2.		
3.		
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As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
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Coordination	Justify	

**REMARKS**

Telecon: w/ Ron Bailey (FERC)  
 he will send over 1-18-80 ltr from  
 W. Williams (FERC) to P/M re:  
 city/ev inspection, 3/7/80 response  
 from Phillips citing non-jurisdiction deficiency.  
 (See 7-15-80 ltr from Williams to Phillips), also  
 copies of missing mandatory agreements which  
 are avoidable.

DO NOT use this form as a RECORD of approvals, concurrences, disposes, clearances, and similar actions

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WORLD  
 SURVEY

# LNG MARKET

## Future clouded by uncertainty

by Jeffrey Segal

WHEN the world's first-ever LNG supply contract officially expired one month ago, it signalled — in more than just symbolic fashion — the end of an era. In the fifteen years since that initial operation started up between Algeria and the United Kingdom, the energy industry has been almost continuously enthusiastic about the product and its potential. But over the past few months that mood of optimism has begun to dissipate.

Estimates of future demand have been sharply reduced with the emergence in the United States of a national policy playing down the role of LNG, while recent moves on pricing and production by the main suppliers are now threatening the long-term outlook for the growing European market. As with oil, a squeeze on output and upward pressure on prices look like being the main elements in LNG trading in the 1980s.

Up to the end of last year those factors hardly entered the picture. The volume of world seaborne trade rose 40.4% over the year, boosting the average annual growth rate for 1974-78 to 26.8% (see Table). LNG's share of total natural gas trade rose to some 17%, against 13% in 1977, with two supplier countries in particular — Algeria and Indonesia — greatly expanding their sales to challenge Brunei's traditional dominance. On the importing side, Japan further strengthened its majority share of the market, and now accounts for almost two-thirds of world imports.

But this impressive rise in past sales masks growing doubts about LNG's future prospects. Since our last survey of world trade (see *Petroleum Economist* November 1978, pages 465-467), the loss of several projects from the "definite" and "probable" listings has meant a cutback in the estimated plateau volume for 1985 from around 13 400 million cubic feet/day (MMcf/d) to some 10 500 MMcf/d. Other recent forecasts either bear out the same prediction or go even lower. At November's Gastech conference in Houston, for instance, the former executive vice-president of Algeria's Sonatrach, Nordine Air Laoussine, gave a mid-1980s figure of only 9 000 MMcf/d, which, while three times the present level of trade, compares badly with the optimistic estimates of 15 000 MMcf/d current only a year ago.

### US policy shift

The main causes of the change in outlook — reflected in the worsening slump in the LNG tanker market — are threefold: first, a shift in US policy; second, moves among Third World producers to limit future output; and third, a rapid rise in price that could damage LNG's competitiveness. The US action — while not unexpected — has meant the biggest immediate setback. The Natural

statement on LNG, though it did establish that future contracts would incorporate provisions for "incremental pricing" — meaning that consumers would pay virtually the true cost of LNG imports rather than having the price averaged out ("rolled in") with other, cheaper natural gas supplies.

Until the January 1979 statement by the then US Energy Secretary, James Schlesinger, on LNG's future role, the only other indications of Administration policy came from increasingly stringent considerations of project proposals by regulatory bodies. Dr Schlesinger's stand backed up their findings. Imported LNG would now be placed fifth in priority after conventional lower 48 gas supplies, Alaskan piped gas, imports from Canada and Mexico, and domestic synthetic gas. The single paragraph in President Carter's May 1979 energy plan which referred to LNG curtailed its role even further, citing insecurity of supply, high cost and environmental hazards as the reasons. And the rejection by the Federal Energy Regulatory Commission in December last year of two schemes to import a total 1 885 MMcf/d of Algerian LNG by El Paso and Tenneco indicated the firmness of the new posture.

That left only two new projects approved: the Trunkline/Panhandle deal for 450 MMcf/d from Algeria, due to come onstream in 1980, and the Indonesian/Alaskan operation planned for California. The final hurdles were cleared for the importing and processing of 539 MMcf/d of LNG from Indonesia and 431 MMcf/d from Alaska only this October — though it was made plain that California's burgeoning gas demand had made the long-delayed scheme a "special case" and not a portent of a more relaxed attitude. US policy has now effectively prohibited all but very short-haul LNG import contracts. So although companies are now re-filing applications for supplies from the Canadian Arctic, Colombia and Trinidad, proposed sales to the US from Australia's North West Shelf, Chile's Magellan Strait, Nigeria, Algeria, Iran and the USSR have now been to all intents and purposes shelved.

However, initial reaction to the stricter American line was far from gloomy. The Algerians had been busy signing up alternative European customers ever since it

were unlikely to emerge from the regulatory quagmire, with the main fail-safe being a contract for equal shares in 1085 MMcf/d for the Netherlands (Gasunie) and West Germany (Ruhrgas and Salzgitter), with deliveries scheduled for 1983. The Dutch were also interested in a further 400 MMcf/d from Sonatrach, Deutsche BP had a firm contract for 450 MMcf/d, and Brigitta/Thyssengas were looking for some 400 MMcf/d. Sweden, too, signed for 165 MMcf/d, while Gaz de France began talks for an extra 500 MMcf/d on top of its third contract for 540 MMcf/d due to start in a year's time. Finally, Belgium's Distrigaz had an agreement for 500 MMcf/d, beginning in 1983.

### Problems in Europe

But several recent developments make it clear that of all those projects only the Distrigaz and Gaz de France deals are certain to go ahead. The Algerians have told the Dutch authorities that they are reconsidering the Gasunie deal, which could jeopardise the West German share. The Deutsche BP contract, which still awaits the two governments' approval, could also now be at risk, while the Swedes themselves have turned down their proposed import plan. The Belgian scheme, too, ran into some difficulties and the Zeebrugge terminal will now not accept deliveries from Algeria until 1985. (Diverted supplies from France will make up the intervening shortfall). Two long-standing contracts are also having problems. Construction setbacks in Algeria are behind the massive under-fulfilment of the contract with Spain, and though the Algeria-UK operation still has a year's undelivered volumes to come, there is some doubt as to whether the 10-year renewal called for by British Gas will be agreed.

Coming on top of the cancellation of the IGAT II exchange deal — whereby 13 billion cubic metres of Iranian gas piped annually to the USSR would have been exchanged for 11 billion cubic metres of Soviet gas for Western Europe — the recent moves by Algeria look set to widen Europe's potential gas shortfall in the 1980s. And with Algeria making it clear that its entire LNG long-term plan is now under close scrutiny, the continued lack of a common EEC policy on gas imports means that supplies from non-established producers will now be bargained for in a piecemeal way. Already French and German buyers are looking to Cameroun, Nigeria and Canada to make up the deficiency.

In Japan, too, ambitious LNG consumption targets are now being revised. The government had forecast a 250% rise in imports by 1985, with LNG meeting 7-8% of energy needs against around 2% at present (virtually all of that in some 29 LNG-fired power-generating plants). But within Japan concern is now being expressed about the lack of suitable terminal sites in the overcrowded islands, while in the gas-producing countries recent developments have cut back available supplies. The first casualty was the Kalingas project, for 350-400 MMcf/d of Iranian LNG. Then Japanese fall-back arrangements to take the contracted quantity if the Indonesian sale to the US was stopped themselves had to be cancelled.

Japan still intends to take extra quantities from Indonesia — an extra 475 MMcf/d from the Badak plant and 200 MMcf/d from Arun — but the Badak plan has run into financial obstacles.

The only firm new supplies for Japan, then, are from Malaysia. Tokyo Electric and Tokyo Gas recently signed

for 870 MMcf/d from the Bintulu development, starting in 1983. The proposal to buy 850 MMcf/d from Australia remains dependent on the outcome of the North West Shelf feasibility study, though Japanese chances of picking up the contract have improved as the Americans are now showing less interest. The likely starting date for supplies has been put back two years to 1986, however. Imports from other sources in the "possible" category remain in the realm of speculation, though New Zealand for one has dropped any idea of exporting a proposed 436 MMcf/d from the Maui field. There has been no movement on plans for supplies from Qatar and Siberia, while a plan recently mooted in Bangladesh for 400 MMcf/d is very much still on the drawing-board.

The lack of progress on these new projects only adds to the uncertainty in the market caused by the apparent change in attitudes on the part of the major existing producers. Algeria is now leading opinion in favour of redirecting gas sales to Europe through pipelines instead of in liquefied form, and is talking of building a second sub-Mediterranean line to Italy and raising the volume of the line now under construction by half. The proposed Segamo line to Spain and then on to France could be expanded, too. There is also a consensus emerging, particularly among Middle East gas producers, that in future reinjection, conservation and local usage of gas (in petrochemicals and industry) will be given precedence over LNG exports. Libya, Algeria and the UAE are reported to have taken this new line, while Saudi Arabia, Iran and Kuwait are also said to be reluctant to sell more gas.

### Price increases

It is, of course, more than just coincidence that this widespread re-appraisal of LNG by producers has come in a year when oil prices have seen such massive gains. Crude price increases have highlighted the comparative cheapness of LNG and, while not producing any operating data to back up their claims, exporters have stated that projects are essentially unprofitable. But rising oil costs have also increased Western demand for alternative fuels, including gas. It is perfectly possible that, so long as safety and environmental concerns in Europe, Japan and the USA stay under the surface, Third World enthusiasm for LNG projects will once again rise proportionately with the price of the product.

There has already been a substantial increase in landed (cif) prices in the past few years (see Table). Average cif prices rose 20.9% per annum between 1974 and 1978 to reach \$1.96 per thousand cubic feet. Japan — because of the great distances involved in transporting the product — had the highest costs, ranging from \$2.12 to \$2.73, while for the other importers prices were generally lower the older the contract. In the UK-Algeria deal, for example, the cif price was still less than \$1.00 in 1978, having risen only 80% since 1964.

But in 1979 alone prices have moved much faster. In Europe, the Algerians claim to be making an average \$3.00 cif and the Libyans have virtually doubled their prices. In Japan average prices in July were 31% up on the year before, while in the US the El Paso I cif price has risen to \$2.62-\$2.72 (an increase of over 40% since the beginning of 1979) and the Distrigaz price has reached \$3.15. Even bigger increases are built into contracts yet to come into operation. The Trunkline supplies are likely to command a cif price of \$3.37 next year, while under

the terms\*of the recently approved PacIndonesia deal, LNG from Indonesia would realise a record \$5.11 if shipped to California today.

Another 40/50 cents (for terminal, re-gasification and importer's costs) then has to be added to the cif price of LNG before a direct comparison can be made with the price of imported pipeline gas, and a further 20 cents (for pipelining and distribution) if LNG is to be compared with domestic gas at the city gate. Taking those first additions into account, LNG in the USA is already roughly equivalent in price to Canadian gas (currently \$3.45 at the border) and Mexican gas (due to cost \$3.625 when deliveries start next month). Relating LNG prices to alternative oil prices (which are quoted on an fob basis) is more complicated. With the exception of deals made with the US, fob prices of LNG are generally confidential, and examination of exporting countries' customs statistics tends to shed little light on the matter. Often the producers' data quote fob unit costs even higher than cif costs in the importing countries. While this could be

explained in terms of statistical unreliability and the fluctuations of dollar exchange rates, a more plausible reason in some cases is the diversion of many cargoes away from their stated destination into the growing LNG spot market, where higher prices can be realised.

But judging from official reports this year fob prices have increased substantially. Libyan LNG fob Brega has been raised recently from some \$1.64 to \$3.24 — compared to a price of 21 cents in 1970. Algerian fob rates are now said to average around \$2.53, against \$1.62 last year, while LNG from Indonesia is now fetching \$2.10 fob. The recent renegotiation of the El Paso I contract gives the clearest indication of current trends in fob prices. As from July the base price was raised to \$1.77, up from just 37 cents at the beginning of the year and 31 cents in the original contract. The new base rate is subject to an initial discount of 61 cents, bringing El Paso I into line with the standard Sonatrach floor price of \$1.32 per thousand cubic feet. Indexation and escalation provisions

Continued on page 520

#### WORLD: LNG TRADE 1974-78 a)

EXPORTING COUNTRY	Abu Dhabi	Algeria	Algeria	Algeria	Algeria	Brunei	Indonesia	Libya	Libya	USA	All countries
IMPORTING COUNTRY	Japan	France	Spain	UK	USA	Japan	Japan	Italy	Spain	Japan	
CONSUMER b)	Tokyo Electric	Gaz de France	Enagas	British(i) Gas(u)	Distrigas El Paso	Various	Various	SNAM	Enagas	Various	—
STARTED	1977	(i) 1965 (u) 1972	1976	1964	(i) 1971 (u) 1978	1972	1977	1970	1970	1969	—
CONTRACT (years)	20	(i) 25 (u) 25	23	15	(i) 20 (u) 20	20	20	20	15	15	—
PLATEAU VOLUME c) (million cu ft/day)	400	(i) 50 (u) 370	450	100	(i) 115 (u) 1000	755	1050	235	110	160	3425
ACTUAL VOLUME d) (million cu ft)											
1974	—	65 073.1	—	24 706.7	481.6	131 640.1	—	72 112.7	34 217.9	47 853.3	376 085.4
1975	—	101 532.5	—	33 622.3	4 904.7	185 830.6	—	86 387.7	37 002.3	55 301.4	504 581.5
1976	—	124 213.6	13 314.4	41 111.6	10 155.3	255 736.8	—	86 049.7	40 082.7	50 548.4	621 212.5
1977	20 213.7	108 440.2	9 974.3	31 828.9	11 684.9	285 304.8	25 895.0	96 570.3	38 775.4	52 488.4	681 175.9
1978	66 521.4	108 893.5	11 987.9	28 268.2	84 421.6	278 411.7	196 721.9	90 469.8	41 289.9	49 173.0	956 158.9
ACTUAL VOLUME (million cu ft/day)											
1974	—	178.3	—	67.7	1.3	360.7	—	197.6	93.7	131.1	1 030.4
1975	—	278.2	—	92.1	13.4	509.1	—	236.7	101.4	151.5	1 382.4
1976	—	339.4	36.4	112.3	27.7	698.7	—	235.1	109.5	138.1	1 697.2
1977	55.4	297.1	27.3	87.2	32.0	761.7	70.9	264.6	106.2	143.8	1 866.2
1978	182.3	298.3	32.8	77.4	231.3	762.8	539.0	247.9	113.1	134.7	2 619.6
TOTAL COST (cif) e) (US\$ thousand)											
1974	—	31 994.2	—	18 915.5	898.1	212 395.6	—	33 288.6	27 177.5	34 691.2	349 360.7
1975	—	96 803.1	—	30 831.4	3 771.9	321 815.8	—	66 661.4	45 256.1	74 561.4	639 701.1
1976	—	132 951.7	21 043.5	37 567.2	8 246.9	468 194.2	—	72 204.8	46 425.6	82 681.3	869 315.2
1977	38 139.0	157 555.3	15 044.8	31 337.0	12 809.2	565 908.3	61 665.9	86 475.8	51 109.3	101 701.5	1 121 746.1
1978	142 822.4	195 113.5	18 411.3	27 850.0	97 706.5	589 191.5	537 862.0	99 146.7	59 745.4	106 587.3	1 874 436.6
UNIT COST (cif) f) (US\$/thousand cu ft)											
1974	—	0.49	—	0.77	1.86	1.54	—	0.46	0.79	0.72	0.93
1975	—	0.95	—	0.92	0.77	1.73	—	0.77	1.22	1.35	1.27
1976	—	1.07	1.58	0.91	0.81	1.83	—	0.84	1.16	1.64	1.40
1977	1.89	1.45	1.51	0.98	1.10	1.98	2.38	0.90	1.32	1.94	1.65
1978	2.15	1.79	1.54	0.99	1.16	2.12	2.73	1.10	1.45	2.17	1.96

a) Table covers only trading in liquefied natural gas (methane) between exporting and importing countries linked by long-term contract. All trade is seaborne; minor trade by road, rail or barge (e.g. from Canada to the USA) is not included, nor are deals on spot on non-contractual basis between countries which are not linked by long-term agreement, or imports from non-recognised suppliers (e.g. Liberia) which are in fact transit points.

b) Where the same importing and exporting countries have more than one contract (France-Algeria, USA-Algeria) details of trading combine them.

c) Volumes in million cubic feet of natural gas equivalent (i.e. regasified LNG). The following conversion factors have been used:

1 million cu ft = 1012.1 million Btu (gas)  
18.91 tonnes (LNG)  
1 599 cu ft (LNG)  
45.27 cu metres (LNG)  
28 316.6 cu metres (gas)

d) Actual volumes derived from individual importing countries' yearly customs returns, except 1974 Algeria-USA figure (from Algerian data), 1978 Algeria-Spain and Libya-Spain figures (from Enagas), and 1978 Algeria-USA figure (from Dept of Energy).

e) Cif costs from importing countries' customs returns, converted to US\$ at average annual exchange rates as listed by IMF. Algeria-UK costs are on "customs" valuation basis (approximately equal to cif figure) and 1974 Algeria-USA figure is fob basis from Algerian data.

f) Unit cost cif is apparent landed cost based on total US\$ cost divided by actual imported volume. Figures for fob unit cost, based either on exporting countries' customs returns or on other published data, are unreliable and often exceed cif cost. Official fob contract prices are generally confidential.

are added to the floor price to give the final fob figure.

Even the top Libyan price of \$3.24 compares badly with fob oil prices. Taking a conversion factor of 5.62 between 1 000 cubic feet of gas and a US barrel of crude, the equivalent is \$18.21 per barrel. Even at \$4.18 fob for LNG — equal to \$23.50/barrel of crude — netbacks to the producer would still be small. Liquefaction costs amount to some 80 cents, production and gathering costs 25 cents and pipeline transportation another 25 cents. That would leave a wellhead netback of \$1.94 for the Libyans at current prices. Allowing that netbacks have increased three- or fourfold in the last year, the equivalent is still only \$10.90 for a barrel of crude.

One danger in greatly increasing these netbacks is that final costs to the consumer then become prohibitive in relation to alternative oil and gas products, in view of the high transportation costs for LNG (proportionately five times greater than for crude). Yet LNG producers, led by Algeria and the OPEC countries, are now stating that LNG deserves to command a considerable premium over oil substitutes (mainly residual fuel oil, gas oil and heating oil) and should be priced at the level of other high-technology, clean-burning fuels with long-term security of supply. The alternative most often mentioned is synthetic gas from coal, which in the US now has a price equivalent to \$4.14-\$6.30 for LNG.

In line with this feeling, some exporters are pressing for changes in the complex price structures used to determine fob rates. In particular, they are calling for alterations to the current indexation schemes linking LNG price increases to those of the lower-priced oil products, and for the inflation provisions in the contracts to be amended so that only the *devaluation* of the dollar (not its fluctuation) is taken into account.

The current price structures have already incorporated several changes over the years. The standard Sonatrach contract provides for escalation linked to various mixtures of gas oil and fuel oil prices, with a \$1.30 base, whereas El Paso I and the UK operations originally had a floor price with indexation linked to wage and commodity price rises. The French and Spanish contracts now have prices pegged to domestic oil prices and to a basket

of currencies, while the three approved Algeria-US contracts allow for 50% indexation to No 2 and No 6 fuel oils imported into the US and 50% to the value of US dollar against a group of other currencies. In Japan, Indonesian LNG is linked 90% to Indonesian crude and 10% to an assumed annual inflation rate of 3%, while imports from Brunei are now coupled to the price of Indonesian low-sulphur crude. Abu Dhabi sales will have full crude parity by next year, though Alaskan LNG exports still run on the old formula of a flat rate plus negotiated escalations.

The biggest change in price structures that could take place, however, would be a standardisation of prices which some OPEC producers — notably Libya and Abu Dhabi — are now demanding. An eight-nation OPEC committee which met in Vienna this September has been studying the question of standardisation of gas export prices for over four years, and is now said to have completed its report, which will be aired at the full OPEC meeting in Caracas this month.

Already several pitfalls in gas price standardisation have been pointed out. As with crude oil, the quality of LNG can vary considerably between countries, though there is a far greater problem in relating a "marker" price to the various export streams because of the great variation in transport costs — say between Algeria and Spain and Algeria and the US.

There is also the question of determination of the marker itself. Should it be linked to the price of syngas, LPG, electricity, domestic heating oil, residual fuel oil, kerosene, or other products? The answer clearly depends on the products for which LNG is a substitute in the importing country. In Japan there is no commercial or residential usage of natural gas, for example, though in the EEC these sectors account for 39% of consumption and in the US 41%. Although the Algerians' own contracts — with their standard floor prices and indexation provisions — have shown there is some room for uniformity in LNG pricing, the differences between the consumers' energy needs would seem to rule out OPEC posted prices for LNG and natural gas, at least in the short term. ■

## Texaco sells Colombian interest

Texaco has sold all of its interests in the Putumayo oil producing region, including its stake in the Trans-Andean pipeline, to Ecopetrol, the state oil company and Texaco's 50/50 partner in the area since the withdrawal of Gulf Oil in 1973. The transaction was announced 16 years after the Texaco/Gulf venture discovered the Ortio field, generating high hopes for future oil production and leading to construction of the 192-mile pipeline over some of the world's most inhospitable mountain terrain.

In the event, the Orito field and others discovered in the area never lived up to expectations. Throughput in the pipeline reached 80 000 b/d soon after it was brought on stream in mid-March 1969, but by 1973 it had dropped to 50 000 b/d and this year was handling only about 22 500 b/d. The capacity of the line is thought to be 75 000 b/d, expandable to 150 000 b/d. At one time there were plans to build a 75 000 b/d refinery at Tumaco, the Pacific Ocean terminus of the pipeline, but these were

dropped in 1977, by which time it had become evident that the Putumayo region was not going to reach its once hoped-for potential.

Texaco's reasons for selling its 50% stake in the Putumayo area probably represent a combination of two main considerations: the low price paid by the Colombian government for domestic oil production and the company's assessment that the region held no encouraging longer-term prospects. As recently as mid-1979 Texaco was receiving only \$1.70/b for the crude oil it produced — and this represented a premium on a base price of \$1.50. At such unrealistically low prices, the company's reserves in the region amounted only to about 15 million barrels.

However, even in the unlikely event of an increase to world prices, the reserves attributable to the company probably would not have exceeded 60-70 million barrels. Beyond this, Texaco had formed a view that there was insufficient potential, including secondary recovery, to justify further development. The price paid by Ecopetrol for Texaco's interest in the area was not disclosed, but it leaves the state company as the main operator in the region. ■

July 23, 1980

Mr. Diacco,

I've enclosed a Jan 18, 1980 letter to Phillips - Marathon from CBPR/FERC and Phillips' March 7, 1980 response. Also enclosed are several letters to the FERC advising that the price of LNB has gone up and the 10th Amendatory Agreement. I do not have copies of any other "Amendatory Agreements", only the letters advising the FERC when the price would go up and by how much. Any information that you (ERA) get from Phillips-Marathon, and any action that you take ~~in~~ in this matter should be sent to me. Thank

you for your help and if you  
need further information that  
I might have feel free to  
call me.

Ron Bailey  
OPPR  
357-8944



Department of Energy  
Washington, D.C. 20461

JUL 2 8 1980

MEMO FOR LYNNE H. CHURCH

FROM: LAWRENCE DIRICCO

SUBJECT: PRICE REVISIONS OF U.S. LNG EXPORTED BY PHILLIPS  
PETROLEUM AND MARATHON OIL TO JAPAN

Background

In recent discussions between DOE officials and Algerian representatives on LNG pricing, the Algerians have cited the price charged by Phillips Petroleum Company (Phillips) and Marathon Oil Company (Marathon) for LNG exported from Alaska to Japan as support for their proposed pricing scheme.

Finn Neilsen on June 4, 1980, requested that both Phillips and Marathon provide a history of export prices charged and that ERA be apprised of any price revision under negotiation. In response, Phillips cited filings with the FERC and data from the FPC/EIA Form 14, and indicated that in their opinion, the Section 3 authority delegated to the ERA did not include continuing oversight of previously granted export authorizations. Marathon's response was similar but did not specifically dispute ERA's jurisdiction.

On July 10, 1980, both Phillips and Marathon submitted copies of the Eleventh Amendatory Agreement dated December 13, 1979, establishing a C.I.F. export price of \$3.36 per MMBtu between January 1, 1980 and March 31, 1980, and on April 1, 1980, elimination of a fixed contract price and substitution of a pricing formula based on crude prices in Japan. Export prices after April 1, 1980, will be determined as follows:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, shall be the weighted average price (expressed in United States cents per million BTU) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports -- Commodity by Country" published monthly by the Japan Tariff Association."



Thus, after April 1, 1980, U.S. LNG exports (on a C.I.F. basis) will be priced on the Btu-equivalent average cost of crude oil sold to Japan. Since receiving their initial export authorization from the FPC on April 19, 1967 (FPC Docket CI-1226), Phillips and Marathon have amended the contract price eleven times. From available documentation (the FERC records in the docket are not complete), I have compiled the following price data:

<u>C.I.F. Price/MMBtu</u>	<u>From</u>	<u>To</u>
52.0¢	04/19/67	04/27/72*
57.0¢	04/28/72*	03/17/74*
68.4¢	03/12/74*	09/30/74
99.9¢	10/01/74	03/31/75
\$1.40	04/01/75	03/31/76
\$1.70	04/01/76	12/31/76
\$1.95	01/01/77	12/31/77
\$2.15	01/01/78	03/31/79
\$2.36	04/01/80 <sup>74</sup>	12/31/79
\$3.36	01/01/80	03/31/80
To Be Determined on a per shipload basis	04/01/80	To Date

(\*Exact effective date is unknown, date shown is approximate.)

As explained in the memorandum from Ron Bailey to Dave Lathom (see attached), none of the price increases were subjected to formal administrative review or proceedings. As a consequence, there is no information, other than that contained in the perfunctory filings by Phillips and Marathon, as to the necessity, validity, or appropriateness of past price revisions and the recently adopted crude oil parity pricing formula. This situation raises the following issues and questions:

- ° Does ERA have the jurisdiction to maintain oversight over exports and imports not initially authorized by ERA?
- ° If ERA has jurisdiction, should ERA reopen the docket to review and possibly amend the existing export authorization?
- ° Were price revisions without further regulatory review permitted by the original FPC authorization? If not, what further actions should be taken and what potential remedies are available, i.e., refunds, fines, etc.
- ° What would be the impact of any reconsideration of the export authorization on the Japanese purchasers? Would Phillips and Marathon cease exporting if the pricing mechanism were to be revised significantly?

- ° Could or should ERA require a cost-based price or pricing mechanism?
- ° If ERA were to reopen the proceeding, should it look only at the April 1, 1980 price formula amendment (the amendment does not merely revise a contract price, but literally permits export at an undetermined price since the price is calculated at the time of delivery)?

### Discussion

In response to the Finn Nielsen inquiry, Phillips indicated that their practice of filing amendatory agreements with FERC "is consistent with our understanding of the Delegation Orders issued by the Secretary following the organization of the Department of Energy which did not deal with continuing oversight under Section 3 of the Natural Gas Act of previously granted authorizations." The Secretary through DOE Delegation Orders 0204-4 and 0204-54, clearly assigns Section 3 authority over exports to the Administrator except with respect to facilities or areas in which ERA does not exercise its authority. Delegation 0204-54 specifically authorizes ERA to consider "the price proposed to be charged at the point of importation or exportation." Delegation Order 0204-4, while not addressing the retroactivity of jurisdiction, does authorize the Administrator to "take such other actions as may be necessary and appropriate to administer the following functions:

The exportation and importation of natural gas ...  
except with respect to those pending cases assigned  
by rule to FERC."

I believe that we or OGC would certainly be able to counter Phillips position without difficulty. In my opinion, ERA's jurisdiction over on-going gas exports is sufficient to get our "nose in the tent."

The fundamental question is what do we do after we enter the "tent." If we were to eventually reopen the proceeding, could we really accept being in the position of advocating a lower export price for "a scarce domestic resource" particularly in light of growing U.S. sentiment in favor of restricting imports from Japan. Similarly, because we have discarded a cost-based approach for gas imports, it would be difficult to apply such a standard to exports. It seems to me that if we were to reject the crude oil parity pricing formula now in effect, then the only viable alternative other than maintaining the status quo, would be to use the Canadian border price as the C.I.F. price, although the rationale for such a decision would be weak.

On the other hand, failure to take some public action could weaken our efforts to refuse LNG imports priced on a parity with oil. A possible compromise could be to order more substantive reporting with respect to prices charged Japan for U.S. LNG and hold a hearing if the price exceeds what we are paying for LNG or pipeline gas imports. A more active role by ERA at this time may prevent the loss of regulatory oversight as occurred in the past, especially in view of the fact that the entire LNG contract will be open to renegotiation and renewal in 1984. As an initial step, I recommend that we set the record straight about our role in gas exports, including the need for timely filing of contract amendments and reject Phillips' contention about lack of jurisdiction. It might also be used to repudiate the previous FPC position on the necessity for authorization to raise the export price. We should also coordinate our efforts with FERC, which is already reviewing various safety aspects of the LNG liquefaction facility in Alaska (see attached correspondence).

Attachments

From : Ron Bailey  
TO : [redacted]  
Date : July 9, 1969  
Subject: Background on Past Commission Action With Regard to  
Phillips-Marathon LNG Export Price Increases.

Discussion:

Phillips and Marathon presently jointly operate liquefaction and related facilities to export natural gas from the Cook Inlet area of Alaska to Japan. This project was originally authorized by an Order issued April 19, 1967, in Docket Nos. CI67-1226 et al., pursuant to Section 3 of the Natural Gas Act. In the original Order, Phillips and Marathon were authorized to export 50,570,000 MMBtu's per year to Japan and the initial f.o.b. price of the LNG was 52.0 cents per MMBtu.

Ordering Paragraph (C) of the April 19, 1967, Order required compliance with section 153.8 of the Commission's Regulations before initiating the proposed exports to Japan. Section 153.8 of the Commission's Regulations requires, among other things, that "persons authorized to export natural gas from the United States to a foreign country...shall file two full and complete copies of every contract and the amendments thereto, presently or hereafter effective, for such export...." By letter dated October 20, 1969, Marathon submitted to the Commission two copies of the Liquefied Natural Gas Sales Agreement dated March 6, 1967, in

compliance with Ordering Paragraph (c) and the Commission's Regulation Section 143.8. 1/ On December 1, 1969, the Secretary of the Commission sent a letter to Marathon and Phillips advising them that the LNG Sales Agreement had been accepted as constituting satisfactory compliance with Ordering Paragraph (c) of the original order.

On July 21, 1972, Marathon and Phillips filed 2 copies of an Amendatory Agreement with the Commission wherein the Basic Agreement price was changed from 52.0¢/MMBtu to 57¢/MMBtu. 2/ This was the only change made in the Contract. On August 21, 1972, the Secretary of the Commission sent a letter acknowledging receipt of the amendatory agreement. The letter further stated that "in order to receive Commission consideration of this agreement, it is necessary for you to submit an application to amend the authorization granted on April 19, 1967, in Docket No. CI67-1226 et al., pursuant to Section 3 of the Natural Gas Act." Also Phillips' and Marathon's attention was directed to finding Clause (D) and Ordering Paragraph (C) of the above order as authority for requesting Phillips and Marathon to file an amendment application. 3/

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1/ This LNG Sales Agreement was also filed in the original application in CI67-1226 et al.

2/ See attached provision of original Contract.

3/ See attached April 19, 1967 Order.

Phillips responded to the Secretary's letter by letter dated November 21, 1972. Therein Phillips stated that the LNG Sales Agreement

"was filed by Phillips and Marathon with their application which was approved pursuant to the Commission's Order of April 19, 1967. The change represented by the Amendatory Agreement of April 21, 1972, is merely a change in the price paid by the purchaser in Japan for the LNG being exported under such authorization and is not a change in the "operations" authorized by the Order of April 19, 1967." 4/

In reply, the Secretary sent a letter, dated March 6, 1973, to Phillips and Marathon stating that the Amendatory Agreement had been accepted as being in satisfactory compliance with the Order issued in Docket No. CI67-1226 on April 19, 1967. 5/ By so doing, the Commission implicitly accepted Phillips' and Marathon's contention that a change in the price of the exported LNG could be effected without the need to file an amendment application with the Commission.

On May 24, 1974 Phillips and Marathon filed a Second Amendatory Agreement wherein the price of the exported LNG was changed from 57¢/MBtu to 68.4¢/MBtu. On July 8, 1974, the Secretary once

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4/ See attached November 21, 1972 letter from Phillips.

5/ See attached March 6, 1973 letter from the Commission.

again sent out a letter requesting that the companies justify the increased export price. 6/ Marathon, by letter dated November 4, 1974, and Phillips, by letter dated November 20, 1974, both replied that they would continue to assert their "rights to price increases as the basic Contract so provides." They also pointed out that the Commission had previously accepted their First Amendatory Agreement without having required them to file an application. 7/

Subsequent to this exchange of letters no further Commission action seems to have been taken. Phillips and Marathon have continued to file Amendatory Agreements (eleven to date) with the Commission to increase the export price of the LNG. The most recent such filing, dated January 4, 1980, states that,

"Effective April 1, 1980, the price will be equated to the weighted average price of crude oil imported into Japan during the third month previous to the month of LNG delivery."

One final note, the history of Phillips' and Marathon's price increases and past Commission response to them is all that is detailed herein. For a discussion of Commission jurisdiction over

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6/ See attached July 8, 1974 letter from the Commission

7/ See attached November 4, 1974, and November 20, 1974, letters from Marathon and Phillips

operational and safety matter connected with the Niskiski facility  
see David Heard's OGC memorandum of April 23, 1990.

Ronald Bailey  
Ronald Bailey  
Special Cases Branch



tests upon request of Sellers or Buyers shall be borne equally by Sellers and Buyers. The fees and charges of the independent surveyor for measurement, sampling and analyses shall be borne equally by Sellers and Buyers.

## ARTICLE NINE

### PRICE

Section 9.1 (a) Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, a price of United States fifty-two cents (52¢) per million Btu's delivered.

(b) If in the future another Liquefied Natural Gas project is placed into operation to supply Japan with natural gas from foreign gas sources, such as Alaska, Canada, Australia, Brunei and the Middle East under similar conditions such as volume, distance, liquefaction and ocean transportation techniques, contract term and so forth, Sellers will hold a discussion with Buyers concerning the price as herein set forth, and shall endeavor to find a solution satisfactory to all parties concerned.

## ARTICLE TEN

### TAXES AND DUTIES

Section 10.1 With respect to LNG sold and delivered hereunder, Sellers shall pay all taxes and duties imposed by governmental bodies outside Japan, and Buyers shall pay all taxes and duties imposed by Japanese governmental bodies; provided, however, that Sellers shall bear all port and harbor duties, fees and assessments imposed by Japanese governmental bodies on Sellers' LNG tankers.

**BEST**

**COPY**

**POSSIBLE**



During this application a question was raised by the Department of State as to whether the facilities in question are of the type contemplated by the Executive Order, though both the Secretary of State and the Secretary of Defense agreed that authorization of the proposed export was consistent with the public interest of the United States. Consequently, the Commission presented the issue to the Office of the Legal Counsel of the Department of Justice, which, upon consideration of the documents pertaining to the application, concurred in the conclusion of the Department of State that the Executive Order does not apply, because there will not be facilities at the border involving any physical connection between this country and a foreign country. In view of these conclusions by the relevant agencies of the Executive Branch of the Government (with which, we are informed, the Department of Defense does not take issue), and in the absence of any basis for our independently reaching a contrary position, we shall dismiss the permit application in Docket No. C167-1227. We shall, however, in future cases of this nature continue to secure the views of the Departments of State and Defense before taking action under Section 3 of the Natural Gas Act.

After due notice, no petitions to intervene, notices of intervention or requests to the granting of the application in Docket No. C167-1226 have been received.

**The Commission finds:**

(1) The exportation of liquefied natural gas by Applicants, Phillips Petroleum Company and Marathon Oil Company, from the United States to Japan as hereinabove described and as set forth in the application in Docket No. C167-1226, will not be inconsistent with the public interest within the meaning of Section 3 of the Natural Gas Act, provided that said exportation be on the terms and conditions hereinafter set forth:

(a) Applicants shall file statements or reports with the Commission at the time to time under oath and in such details as the Commission may require with respect to the whole or any part of the instant export operation.

(b) The authorization granted herein is not transferable or assignable and shall remain in full force and effect only so long as Applicants continue to act or operations herein authorized in accordance with the terms and conditions herein set forth.

(c) The authorization granted herein shall automatically terminate on May 31, 1964. If the five-year renewal option of the agreement between Applicants and buyers is exercised, Applicants must comply with Section 12.1 of the Regulations under the Natural Gas Act.

(d) Applicants shall not, during the terms of the authorization granted by this order, materially change or alter their export operations without first obtaining the permission and approval of the Commission.

(e) In the event that Applicants should abandon or permanently cease for any reason whatsoever all or any part of the instant export operation prior to the termination date described in (c) hereof, Applicants shall forthwith notify the Commission of said fact and the reason therefor.

(f) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited should not exceed the following:

March 1, 1969, to May 31, 1970: 35,295,000,000 Btu's.

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000 Btu's.

(g) Applicants should comply with the Commission's Regulations under the Natural Gas Act proposed exports to Japan.

(2) Applicants do not propose to construct facilities at the border of the United States for which a permit is required to be issued under the Natural Gas Act of 1938.

**The Commission orders:**

(A) Authorization is granted to Applicants from the United States to Japan, as herein set forth in the application in Docket No. C167-1226 and subject to the provisions of the Commission's Regulations issued thereunder.

(B) The maximum annual Btu's of liquefied natural gas for sale to The Tokyo Electric Power Company Limited shall not exceed the following:

March 1, 1969, to May 31, 1970: 35,295,000,000 Btu's.

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000 Btu's.

(C) Applicants shall comply with the Commission's Regulations under the Natural Gas Act proposed exports to Japan and for any other purpose for which a permit is required to be issued under the exercise of the option for renewal.

(D) The application for a permit filed in Docket No. C167-1226 is hereby approved.

Before Commissioners: Lee C. Whitely, Chairman, Charles R. Ross and Carl E. Bagge.

CHRISTIE, MITCHELL & MITCHELL  
6-2001, R161-123, R163-23, R163-39-40  
& ASSOCIATES, INC., AGENT FOR APPLICANTS  
NO. R164-251

ORDER GRANTING MOTION FOR RELEASE

(Issued August 19, 1968)

By order issued July 19, 1968, 38 F.P.C. 100, the Commission authorized the interest of Mitchell & Mitchell Gas & Oil Company, Inc. in the gas contracts deposited in escrow agreements with the City of New York City. In lieu of retaining such an interest, the Commission authorized Mitchell & Mitchell Gas & Oil Company, Inc. to collect the increased rates involved in the gas contracts and to make the agreement and undertaking and a statement of the total amount reported by Mitchell & Mitchell Gas & Oil Company, Inc. in excess of the last firm agreement in excess of the applicable increased rate.

Mitchell by letter filed on March 20, 1968, requested that the Commission amount attributable to its interest in the gas contracts.

The July 19, 1968 order authorized the Commission to determine the amount applicable to Mitchell's interest in the gas contracts.

is raised by the Department of State are of the type contemplated by the Secretary of State and the Secretary of the proposed export was consistent with the interest of the United States. Consequently, the Commission and the Legal Counsel of the Department of Justice have documents pertaining to the application of the Department of State that the Executive Order there will not be facilities at the border between this country and a foreign country. The relevant agencies of the Executive Branch are we are informed, the Department of Defense in the absence of any basis for our independent judgment we shall dismiss, the permit application will, however, in future cases of this nature the Departments of State and Defense be of the Natural Gas Act.

in order to intervene, notices of intervention or participation in application in Docket No. C167-1226 have been

liquefied natural gas by Applicants, Phillips Petroleum Company, from the United States to Japan as set forth in the application in Docket No. C167-1226 is consistent with the public interest within the meaning of the Natural Gas Act, provided that said exportation be as hereinafter set forth:

(1) All reports with the Commission from Applicants shall contain such details as the Commission may require for the safe and efficient operation of any part of the instant export operation. The authorization granted herein is not transferable or assignable and shall have effect only so long as Applicants continue to be authorized in accordance with the terms and conditions set forth herein.

(2) The authorization granted herein shall automatically terminate if Applicants fail to exercise their renewal option of the agreement between Applicants and the Commission. If Applicants must comply with Section 153.8 of the Natural Gas Act.

(3) During the terms of the authorization granted by the Commission, Applicants shall not alter their export operations without the prior approval of the Commission.

(4) Applicants should abandon or permanently cease for any part of the instant export operation prescribed in (c) hereof, Applicants shall forthwith advise the Commission of the fact and the reason therefor.

(5) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited shall not exceed the following:  
 March 1, 1969, to May 31, 1970: 35,295,000,000,000 Btu's,  
 June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

(6) Applicants should comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan.

(7) Applicants do not propose to construct, operate or maintain any facilities at the border of the United States within the contemplation of and for which a permit is required to be issued pursuant to Executive Order No. 10453.

**The Commission orders:**

(A) Authorization is granted to Applicants to export liquefied natural gas from the United States to Japan, as hereinabove described and as set forth in the application in Docket No. C167-1226, upon the conditions herein set forth and subject to the provisions of the Natural Gas Act and the Commission's Regulations issued thereunder.

(B) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited shall not exceed the following:

March 1, 1969, to May 31, 1970: 35,295,000,000,000 Btu's,  
 June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

(C) Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan and for any other contractual changes including the exercise of the option for renewal.

(D) The application for a permit filed in Docket No. C167-1227 is dismissed.

Before Commissioners: Lee C. White, Chairman; L. J. O'Connor, Jr., Charles R. Ross and Carl E. Bagge.

CHRISTIE, MITCHELL & MITCHELL COMPANY, ET AL., DOCKET NOS. G-20001, R161-123, R163-23, R163-393 AND R163-440; GEORGE MITCHELL & ASSOCIATES, INC., AGENT FOR B. V. CHRISTIE, ET AL., DOCKET NO. R164-231

**ORDER GRANTING MOTION FOR RELEASE OF ADDITIONAL ESCROWED FUNDS**

(Issued April 20, 1967)

By order issued July 19, 1966, 36 FPC 130, in the above-entitled proceedings, the Commission authorized the release of amounts attributable to the interest of Mitchell & Mitchell Gas & Oil Corporation (Mitchell) previously deposited in escrow agreements with The Chase Manhattan Bank of New York City. In lieu of retaining such amounts in escrow, Mitchell was permitted to collect the increased rates involved here, subject to refund, under an agreement and undertaking and a surety bond in the amount of \$48,218.89, the total amount reported by Mitchell to have been collected in the escrow agreements in excess of the last firm rate approved by the Commission or in excess of the applicable increased rate ceiling.<sup>1</sup>

Mitchell by letter filed on March 20, 1967, states that the previously reported amounts attributable to its interest in the escrow agreements in Docket Nos.

<sup>1</sup>The July 19, 1966 order authorized the release of \$91,549.47, the total reported amount applicable to Mitchell's interest then deposited under escrow agreements.



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 336-6600

GAS AND GAS LIQUIDS DEPARTMENT

November 21, 1972

Mr. Kenneth F. Flumb, Secretary  
Federal Power Commission  
412 13th Street, N. W.  
Washington, D. C. 20426

Re: ENG - AC/PA  
Docket No. CI67-1226  
Phillips Petroleum Company  
Marathon Oil Company

Dear Sir:

In your letter concerning the captioned docket and the submittal therein by Phillips and Marathon of two copies of an Amendatory Agreement dated April 28, 1972, you stated that it would be necessary for Phillips and Marathon to submit an application to amend the authorization granted on April 19, 1967, in such docket pursuant to Section 3 of the Natural Gas Act. In so stating you directed our attention to Finding Clause (d) and Ordering Clause (C) of the Order of April 19, 1967.

In connection with Finding Clause (d), Phillips and Marathon have not by the Amendatory Agreement of April 28, 1972, materially changed or altered the export operations as authorized by the Commission's Order of April 19, 1967. Section 9.1(b) of the basic agreement dated March 6, 1967, provides for price changes. This agreement was filed by Phillips and Marathon with their application which was approved pursuant to the Commission's Order of April 19, 1967. The change represented by the Amendatory Agreement of April 28, 1972, is merely a change in the price paid by the purchaser in Japan for the LNG being exported under such authorization and is not a change in the "operations" authorized by the Order of April 19, 1967. Furthermore, it was for the purposes of specific compliance with Ordering Clause (C) of the Order of April 19, 1967, that Phillips and Marathon filed with the Commission the two copies of the Amendatory Agreement dated April 28, 1972, such filing being required by Section 153.8 of the Commission's Regulations under the Natural Gas Act.

Phillips and Marathon therefore submit the export operations have not been materially changed or altered and Phillips and Marathon are therefore in

Mr. Kenneth F. Plumb, Secretary  
Federal Power Commission

Page 2  
11/21/72

compliance with Finding Paragraph (d) of said Order. Ordering Clause (C) of said Order has heretofore been complied with by the filing of the two copies of said Amendatory Agreement dated April 28, 1972.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

By *L. J. Culbertson*  
L. J. Culbertson  
Vice President

MARATHON OIL COMPANY

By *W. E. Eney II*  
W. E. Eney II  
Manager  
Natural Gas Division

NIC:MBE:rt

100-111-105

U.S. DEPARTMENT OF COMMERCE  
BUREAU OF OIL RESOURCES  
WASHINGTON, D.C. 20540

Phillips Petroleum Company  
3000 Phillips Building  
Oklahoma 74004

APR 20 1973

Attention: Lenoy Culbertson, Vice President

Gentlemen:

The regulatory agreement dated April 20, 1973, is hereby accepted as being in satisfactory compliance with the order issued in Docket No. OIG-1220 on April 19, 1973, wherein Phillips Petroleum Company and Marathon Oil Company were issued a certificate to export liquefied natural gas to Japan from Alaska.

Very truly yours,

JFH  
3-6-73

ROBERT E. PHILLIPS  
Secretary

cc: Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45140  
Attention: W. L. Smith, II, Manager  
Natural Gas Division

100-111-105  
3/15/73

DHS  
Simpson, R. Smith  
3-1-73

3/1/73

EMM/2/24 3/1/73



FEDERAL POWER COMMISSION  
WASHINGTON 20425

Reference to:  
Order No. 1000  
Phillips Petroleum Company  
and  
Indianton Oil Company

Phillips Petroleum Company  
1000  
C 1000 7400

Attention: Kenneth Brady, Area Manager

Condition:

Additional information is required in order to more fully evaluate the Second Amended Agreement dated March 12, 1974, between Phillips Petroleum Company and Indianton Oil Company as Sellers, and Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited as Buyers, which you filed with the Commission on May 24, 1974.

In order of April 18, 1974, the Commission authorized Phillips Petroleum Company to export Alaskan natural gas from Alaska to Seattle, Washington, under the Natural Gas Act. That authorization is conditional as follows:

Applicants shall file statements or reports with the Commission from time to time under oath and in such details as the Commission may require with respect to the whole or any part of the instant export operation.

Inasmuch as the Second Amended Agreement increases the rate for the export of liquefied natural gas from 57.0¢ to 65.0¢ per million, please provide the Commission, under oath, any and all available information together with any statements you may wish to provide in justification of the increased export price.

Millions of dollars - 2-

The Commission will take such action as may be required following analysis of the information supplied.

Very truly yours,

Secretary

cc: Marathon Oil Company  
539 South Main Street  
Pittsburg, Ohio 45640  
Attention: V. L. Perry, III  
Regional Division Manager

MARATHON OIL COMPANY FINDLAY OHIO 45840

WED A SACKMANN  
ATTORNEY

November 4, 1974

CERTIFIED MAIL

Mr. Kenneth F. Plumb, Secretary  
Federal Power Commission  
825 North Capitol Street  
Washington, D.C. 20426

Re: BNG-AC/RA  
Docket No. CI67-1226  
Phillips Petroleum Company  
Marathon Oil Company

OFFICIAL FILE COPY

To	File No.	Date
CI	CI	11-11

CENTRAL FILES

Dear Sir:

Pursuant to your request dated July 8, 1974, in the above Docket, Marathon Oil Company (Marathon) sets forth herein, information relating to the increase in price from 57.0¢ to 68.4¢ per MMBtu, which is equally applicable to the price increase to 99.9¢ per MMBtu effective October 1, 1974, and filed with the FPC on October 31, 1974, for the LNG delivered to the two Japanese customers:

1. Why the price increase.

In view of the changing world energy situation and the forthcoming introduction of additional LNG projects to Japan from foreign gas sources, Marathon's representative has met with the officials of the two Japanese companies (The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Limited) at various times to indicate to the Japanese companies the necessity for a price increase. As the Commission is aware, the Liquefied Natural Gas Sales Agreement dated March 6, 1967 (Basic Contract), with the Japanese companies contains a provision allowing for such review of the contract price as follows:

"Section 9.1(b) If in the future another Liquefied Natural Gas project is placed into operation to supply Japan with natural gas

Mr. Kenneth F. Plumb, Secretary  
November 4, 1974  
Page 2

"from foreign gas sources, such as Alaska, Canada, Australia, Brunei and the Middle East under similar conditions such as volume, distance, liquefaction and ocean transportation techniques, contract term and so forth, Sellers will hold a discussion with Buyers concerning the price as herein set forth, and shall endeavor to find a solution satisfactory to all parties concerned."

As the Commission is aware from what has been happening insofar as LNG projects for imports into the United States, the price for LNG has been rising drastically; in fact, much more than Marathon's representative was able to obtain at the time of these particular price negotiating sessions. A project for supply of LNG from Brunei to Japan has commenced, and other projects are progressing rapidly, which allows Marathon to insist on negotiations as to price on a periodic basis.

2. Change in price.

The change in price from 57.0¢ to 68.4¢ per MMBtu, and subsequently 68.4¢ to 99.9¢ per MMBtu, was finally agreed upon by the Japanese companies, and as is true of almost all price negotiations, was a compromise of Marathon's position and that of the Japanese companies. Further negotiations will undoubtedly take place in the future to consider and agree upon further price changes, because of the volatility of the LNG market and the overall energy situation, especially as it pertains to Japan.

The Basic Contract has this rather broad re-opening clause quoted in 1 above, and since this in no way affects the United States, except in a beneficial way, especially as to balance of payments, Marathon will continue to assert its rights to price increases as the Basic Contract so provides.

Since the Second Amendatory Agreement is exactly the same, except for an increase in price, as the Amendatory Agreement, dated April 28, 1972, which was filed by Phillips and Marathon with their letter of July 17, 1972, supplemented by their letter dated November 21, 1972, and accepted

Mr. Kenneth F. Flunt, Secretary  
November 4, 1974  
Page 3

by the Commission by your letter dated March 6, 1973, we assume that the above explanation suffices. We fail to discern any difference between the situation in the filing of the Amendatory Agreement and the present situation and we respectfully submit that the filing of the Second Amendatory Agreement places us in full compliance with the Order of April 19, 1967, insofar as the price increase to 68.4¢ is concerned.

Further, our notice dated October 24, 1974, and duly filed with the FPC on October 31, 1974, showing an increase from 68.4¢ to 99.9¢ per MMBtu for LNG delivered to the two Japanese customers after October 1, 1974, when supplemented by the filing of the formal agreement pursuant to Section 153.8 of the Commission's regulations in our view will also constitute full compliance with its Order of April 19, 1967.

Respectfully submitted,

By W. A. Sackmann  
William A. Sackmann  
Attorney for Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

VERIFICATION

COUNTY OF HANCOCK )  
STATE OF OHIO ) SS.

The undersigned, William A. Sackmann, having been duly sworn, deposes and says that he is Counsel for Marathon Oil Company; that he has executed the within statements of Marathon Oil Company; and that he is familiar with said statements and the contents thereof; and that to the best of his knowledge, information and belief, the facts set forth in said statements are true.

  
William A. Sackmann  
William A. Sackmann

Sworn to and subscribed before me this 4th day of November, 1974.

Betty Clark  
Notary Public  
BETTY CLARK, Notary Public  
HANCOCK COUNTY, OHIO  
Commission Expires November 29, 1977



**PHILLIPS PETROLEUM COMPANY**  
 Bartlesville Oklahoma 74004 918 336 6600

LEGAL DEPARTMENT

November 20, 1974

Mr. Kenneth F. Plumb, Secretary  
 Federal Power Commission  
 825 North Capitol Street, N.E.  
 Washington, D. C. 20426

Re: B&G-AC/RA, Docket No. CI67-1226, Phillips  
 Petroleum Company, Marathon Oil Company

OFFICIAL FILE

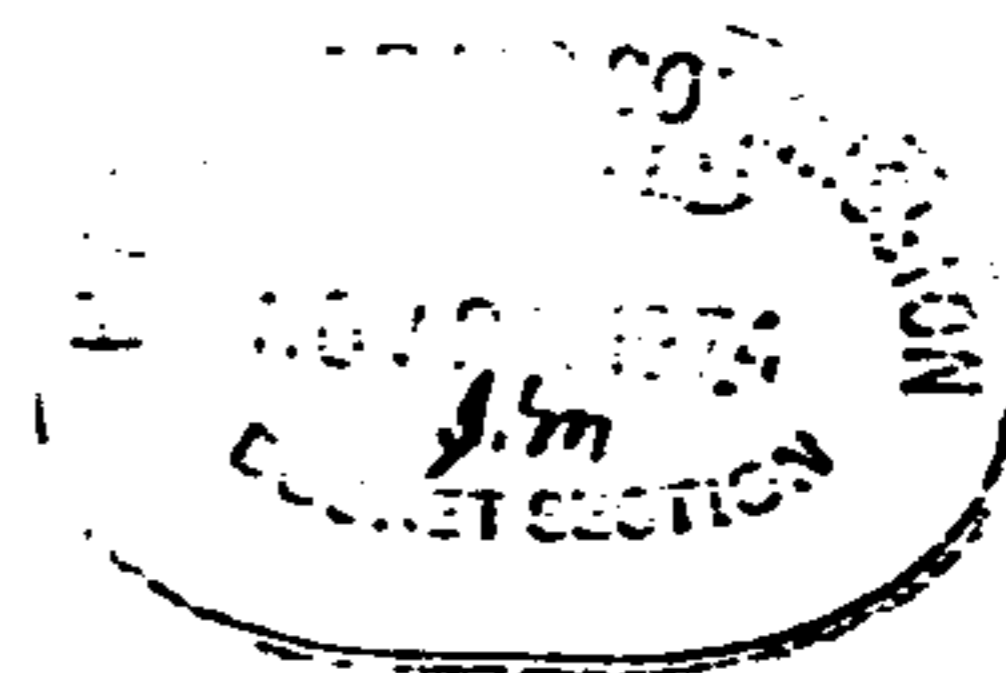
TO	DATE	FILE

CENTRAL FILES

Dear Mr. Plumb:

By your letter of July 8, 1974, you requested Phillips provide the Commission with information relating to the increase in rate from 57.0¢ to 68.4¢/MMBtu for liquefied natural gas delivered to Tokyo Electric Power Co. Inc. and Tokyo Gas Company, Limited. As you are aware, Phillips on October 31, 1974, filed notice with the Commission of an additional increase effective October 1, 1974, to 99.99¢/MMBtu (a copy of the agreement providing this latter increase will be filed with the Commission when received from Japan). The explanation and information provided herein is applicable both to the Second Amendatory Agreement dated March 12, 1974, and to the most recent agreement by which the price was increased to 99.99¢/MMBtu.

The change in price resulted from negotiations with the buyers pursuant to Section 9.1(b) of the Liquefied Natural Gas Sales Agreement dated March 6, 1967. The increases in price reflect in part the dynamic expanding world energy market and the introduction into Japan of LNG from additional international sources. These increases reflect the efforts of Phillips to place the exports of LNG from the United States to Japan on a parity with the current world LNG market. In the view of Phillips the most recent increase to 99.99¢/MMBtu, while not equating to the world market value of LNG, represents an improvement in the price accorded this LNG supply vis-a-vis the price



Mr. Kenneth F. Plumb, Secretary

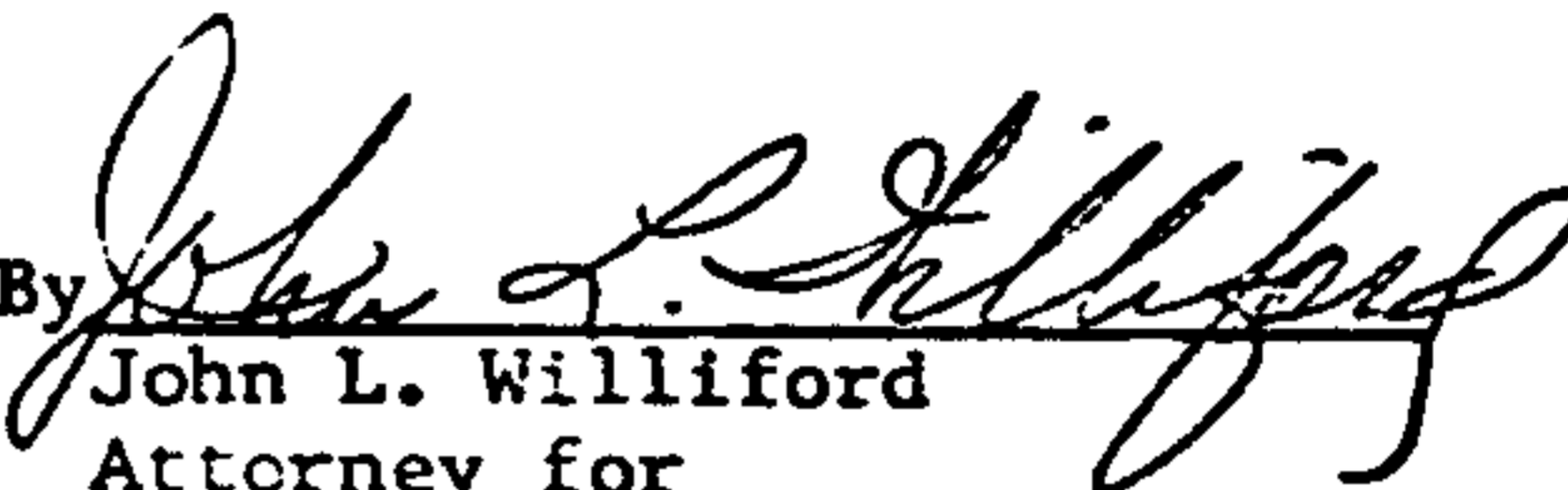
Page Two

November 20, 1974

of LNG available to Japan from other world markets. Parity with other world markets is, we submit, in the public interest of the United States.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

By    
 John L. Williford

Attorney for

Phillips Petroleum Company  
583 Frank Phillips Building  
Bartlesville, Oklahoma 74004



VERIFICATION

STATE OF OKLAHOMA     )  
                                  )  
COUNTY OF WASHINGTON )

JOHN L. WILLIFORD being duly sworn, deposes and says that he is an attorney for Phillips Petroleum Company, that he is authorized to verify and file this letter, that he has examined the statements contained therein, and that all such statements are true and correct to the best of his knowledge, information, and belief.

*John L. Williford*  
John L. Williford

RECEIVED  
NOV 25 1974

Sworn to and subscribed before me this 20th day of November, 1974.

*Patricia R. Ralston*  
Notary Public  
Washington County, Oklahoma

My commission expires:  
April 26, 1975

7-29-80

U.S. DEPARTMENT OF ENERGY  
**memorandum**

DATE July 29, 1980

REPLY TO  
ATTN OF Joseph J. Solters *JJS*

SUBJECT Follow-up Memorandum to June 16, 1980 Memorandum Concerning  
Phillips-Marathon Alaskan LNG Export Volumes

TO Kenneth A. Williams

This memorandum responds to your question "Do we have any basis for the apparent excess deliveries" by Phillips-Marathon to Japan under its Section 3 LNG export license (see attached June 16 memorandum).

Utilizing the figures contained in the table previously presented, the annual overrun amounts in the years 1975, 1977 and 1979 were 5.8%, 3.1% and 2.4% respectively.

Possible explanations for overruns in these magnitudes are Mcf to MMBTU conversions and measurement errors. Analysis tends to rule out both as explanations in this case. We reviewed the BTU data and the conversion calculations for the Form 14 information and can find no errors. LNG measurement presents some unique problems, but we have been advised that errors in the range of .01 to .6% are considered normal. The subject overruns are well above this range.

Finally summing the annual totals since 1972 shows that Phillips-Marathon has come within one-hundredth of one percent (.01%) of the annual limitation on an average basis in the eight year period through 1979. Thus it appears that deliveries may have been made so as to maintain an authorized average delivery quantity. The certificate order is silent on authority to makeup underages in subsequent years. In this regard importing pipeline companies have uniformly filed amendments with the Commission to make up past underages in import licenses.

The export authorization issued April 19, 1967, is attached.

In sum, I do not believe any meaningful public interest purpose would be served by making an issue of these relatively small volume over-deliveries.

AUG 30 1980

REC'D DOE/ERA

U.S. DEPARTMENT OF ENERGY  
**MEMORANDUM**

DATE: June 16, 1980

REPLY TO ATTN OF: Joseph J. Solters *W. J. Solters* ←

SUBJECT: Phillips-Marathon Alaskan LNG Export Volumes

TO: Kenneth Williams, Director OPR

*Do we have  
any basis for  
the apparent  
excess deliveries?*

*KW*

This memorandum responds to your request for a comparison of authorized volumes and actual volumes of LNG exported by Phillips-Marathon from Alaska to Japan. The Commission's April 19, 1967, order in Docket Nos. CI67-1226 and CI67-1227 contained the following annual limitation on the amount of LNG which could be exported by Phillips-Marathon: "June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btus." The attached table shows that the authorized amount was exceeded by approximately 3,900,000 MMBtu in 1975, 1,600,000 MMBtu in 1977, and 1,200,000 MMBtu in 1979.

Phillips-Marathon Exports of LNG  
to Japan 1/

	Annual Average Price ¢/MBtu <u>2/</u>	Quantity MMBtu's
1967 authorized	52.00	50,570,000
1972	55.00	48,407,316
1973	57.00	49,070,003
1974	73.40	50,559,586
<u>1975</u>	136.70	53,505,487
1976	166.00	50,252,353
<u>1977</u>	194.30	52,137,596
1978	215.00	48,886,576
<u>1979</u>	230.00	51,776,182

1/ Source: Form 14

2/ prices rounded

ing unnecessary disturbances, disobedience of the state, etc." reference to "race, creed, color, or national origin" reference to discrimination, which will cover a ground of discriminatory exclusion. Posting, not members of the community who have indicated that they were not welcome to use the right to do so. We are altering the regulation. It will require posting of notice that the public without discrimination regarding compliance with license and state or local laws is sufficiently sufficient of §8.2(a) which directs the posting of such other regulations regarding such use". and local laws are applicable is, therefore, to raise problems of interpretation where old regulations are still on the books. The amendment originally proposed results from the Notice of Proposed Rulemaking herein. A substantial change in the original proposal is necessary. The title of Part 8 has been accomplished by 36 FPC 1030, issued December 12, 1966, 36 FPC 1030, thereon is necessary.

regulations, herein prescribed, are necessary for the enforcement of the Federal Power Act.

amendment originally proposed results from the Notice of Proposed Rulemaking herein. A substantial change in the original proposal is necessary. The title of Part 8 has been accomplished by 36 FPC 1030, issued December 12, 1966, 36 FPC 1030, thereon is necessary.

provisions of the Federal Power Act, sections 10(a) and 309 thereof (41 Stat. 1161), orders:

Chapter I of Title 18 of the Code of Federal Regulations is revised by adding a new sentence. As follows:

is necessary to recreational use and availability of

an amendment of a license, the licensee shall maintain public access which are required by the license as are specially designated for this purpose at such other points as are subsequently designated by the licensee on its own motion or upon the recommendation of the agency operating in the area in which the project is being given the name of the project and the location thereof is licensed by the Commission. The Commission shall also advise the licensee of the areas of the project which are open to the public, the times and activities, and the use, and advising that further information of the licensee in the vicinity of the project shall post at such locations conspicuous notices are open to all members of the public.

2. A new §8.2 is added, as follows:

(a) Discrimination prohibited.

Every licensee maintaining recreation facilities for the use of the public at a licensed project, or at the land or permitting any other person to maintain such facilities, shall permit, or require such other person to permit, equal and nondiscriminatory use of such facilities to all members of the public without regard to race, color, religion, creed or national origin.

(S. 10(a), 41 Stat. 1161; 49 Stat. 551; 16 U.S.C. 802, 825(b))

(b) The caption of this provision is amended to read as set out above. This amendment shall be effective May 22, 1967.

(c) The Secretary shall cause prompt publication of this order to be made in the Federal Register.

Before Commissioners: Lee C. White, Chairman; L. J. O'Connor, Jr., Charles R. Ross, Carl E. Bagge and John A. Carver, Jr.

PHILLIPS PETROLEUM COMPANY, DOCKET NO. C167-1226 AND  
MARATHON OIL COMPANY, DOCKET NO. C167-1227

ORDER AUTHORIZING EXPORTATION OF LIQUEFIED NATURAL GAS AND  
DISMISSING APPLICATION FOR PERMIT

(Issued April 19, 1967)

On March 8, 1967, Phillips Petroleum Company and Marathon Oil Company (Applicants) filed in Docket No. C167-1226 an application pursuant to Section 3 of the Natural Gas Act for authorization to export liquefied natural gas from the United States to Japan, all as more fully set forth in the application.

Applicants propose to export liquefied natural gas from Alaska for sale and delivery in Yokohama, Japan to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited. Applicants agree to sell and buyers agree to purchase the following annual Btu's of liquefied natural gas during a 13 1/2 year period ending May 31, 1981:

March 1, 1968, to May 31, 1970: 25,200,000,000,000 Btu's.

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

The agreement contains an option for a five-year renewal.

The application states that the gas will be sold at a rate of 52.0 cents per million Btu's delivered.

Applicants will construct facilities in the Cook Inlet Basin area, Alaska, for the liquefaction of natural gas, the storage of liquefied natural gas, and the loading of such onto ships for export and delivery to Japan to the aforementioned buyers.

Concurrently with the subject application, Applicants filed in Docket No. C167-1227 an application pursuant to Executive Order No. 12157 for a permit authorizing the construction, operation and maintenance of facilities at the border of the United States in the State of Alaska for the exportation of natural gas. Said Order designates and empowers the Commission to issue such a permit upon finding that the issuance would be consistent with the public interest and after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense. During the course of proc-

essing this application, a question was raised by the Department of State as to whether the facilities in question are of the type contemplated by the Executive Order, though both the Secretary of State and the Secretary of Defense agreed that authorization of the proposed export was consistent with the public interest of the United States. Consequently, the Commission presented the issue to the Office of the Legal Counsel of the Department of Justice which, upon consideration of the documents pertaining to the application, has concurred in the conclusion of the Department of State that the Executive Order does not apply, because there will not be facilities at the border involving any physical connection between this country and a foreign country. In view of these conclusions by the relevant agencies of the Executive Branch of the Government (with which, we are informed, the Department of Defense does not take issue), and in the absence of any basis for our independently reaching a contrary position, we shall dismiss the permit application in Docket No. C167-1227. We shall, however, in future cases of this nature continue to secure the views of the Departments of State and Defense before taking action under Section 3 of the Natural Gas Act.

After due notice, no petitions to intervene, notices of intervention or protests to the granting of the application in Docket No. C167-1226 have been received.

*The Commission finds:*

(1) The exportation of liquefied natural gas by Applicants, Phillips Petroleum Company and Marathon Oil Company, from the United States to Japan, as heretofore described and as set forth in the application in Docket No. C167-1226, will not be inconsistent with the public interest within the meaning of Section 3 of the Natural Gas Act, provided that said exportation be on the terms and conditions hereinafter set forth:

(a) Applicants shall file statements or reports with the Commission from time to time under oath and in such details as the Commission may require with respect to the whole or any part of the instant export operation.

(b) The authorization granted herein is not transferable or assignable and shall remain in full force and effect only so long as Applicants continue the acts or operations herein authorized in accordance with the terms and conditions herein set forth.

(c) The authorization granted herein shall automatically terminate on May 31, 1981. If the five-year renewal option of the agreement between Applicants and buyers is exercised, Applicants must comply with Section 173.5 of the Regulations under the Natural Gas Act.

(d) Applicants shall not, during the terms of the authorization granted by this order, materially change or alter their export operations without first obtaining the permission and approval of the Commission.

(e) In the event that Applicants should abandon or permanently cease for any reason whatsoever all or any part of the instant export operation prior to the termination date described in (c) hereof, Applicants shall forthwith notify the Commission of said fact and the reason therefor.

(f) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc. and The Tokyo Gas Company Limited shall not exceed the following:

- March 1, 1970, to May 31, 1970: 35,205,000,000,000 Btu's.
- June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

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... notices of intervention or pro- ... Docket No. C167-1226 have been

... gas by Applicants, Phillips Petro- ... from the United States to Japan, ... in the application in Docket No. ... public interest within the mean- ... it said exportation be on

... ports with the Commission from ... as the Commission may require ... instant export operation, ... not transferable or assignable and ... long as Applicants continue the ... accordance with the terms and con-

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... of the authorization granted by ... export operations without first ... Commission.

... abandon or permanently cease for ... instant export operation prior ... of. Applicants shall forthwith ... thereon.

... natural gas to be exported for ... and The Tokyo Gas Company

... of the subsequent thirteen years:

(1) Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan.

(2) Applicants do not propose to construct, operate or maintain any facilities at the border of the United States within the contemplation of and for which a permit is required to be issued pursuant to Executive Order No. 10485.

*The Commission orders:*

(A) Authorization is granted to Applicants to export liquefied natural gas from the United States to Japan, as hereinabove described and as set forth in the application in Docket No. C167-1226, upon the conditions herein set forth and subject to the provisions of the Natural Gas Act and the Commission's Regulations issued thereunder.

(B) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited shall not exceed the following:

- March 1, 1966, to May 31, 1970: 37,205,000,000 Btu's.
- June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000 Btu's.

(C) Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan and for any other contractual changes including the exercise of the option for renewal.

(D) The application for a permit filed in Docket No. C167-1227 is dismissed.

Before Commissioners: Lee C. White, Chairman; L. J. O'Connell, Jr., Charles R. Ross and Carl E. Bagge.

CHRISTIE, MITCHELL & MITCHELL COMPANY, ET AL., DOCKET NOS. G 2064, R161-123, R163-23, R163-38 AND R163-410; GEORGE MITCHELL & ASSOCIATES, INC., AGENT FOR B. V. CHRISTIE, ET AL., DOCKET NO. R161-251

ORDER GRANTING MOTION FOR RELEASE OF ADDITIONAL ESCROWED FUNDS

(Issued April 20, 1967)

By order issued July 19, 1966, 36 FPC 130, in the above-entitled proceedings, the Commission authorized the release of amounts attributable to the interest of Mitchell & Mitchell Gas & Oil Corporation (Mitchell) previously deposited in escrow agreements with The Chase Manhattan Bank of New York City. In lieu of returning such amounts in escrow, Mitchell was permitted to collect the increased rate involved here, subject to refund, under an agreement and undertaking and a surety bond in the amount of \$18,213,000, the total amount reported by Mitchell to have been collected in the escrow agreements in excess of the last firm rate approved by the Commission or in excess of the applicable increased rate ceiling.<sup>1</sup>

Mitchell by letter filed on March 20, 1967, states that the previously reported amounts attributable to its interest in the escrow agreements in Docket Nos.

<sup>1</sup>The July 19, 1966 order authorized the release of \$91,549.47, the total reported amount applicable to Mitchell's interest then deposited under escrow agreements.

7-29-80

U.S. DEPARTMENT OF ENERGY  
**memorandum**

DATE July 29, 1980

REPLY TO  
ATTN OF

Joseph J. Solters *JJS*

SUBJECT Follow-up Memorandum to June 16, 1980 Memorandum Concerning  
Phillips-Marathon Alaskan LNG Export Volumes

TO Kenneth A. Williams

This memorandum responds to your question "Do we have any basis for the apparent excess deliveries" by Phillips-Marathon to Japan under its Section 3 LNG export license (see attached June 16 memorandum).

Utilizing the figures contained in the table previously presented, the annual overrun amounts in the years 1975, 1977 and 1979 were 5.8%, 3.1% and 2.4% respectively.

Possible explanations for overruns in these magnitudes are Mcf to MMBTU conversions and measurement errors. Analysis tends to rule out both as explanations in this case. We reviewed the BTU data and the conversion calculations for the Form 14 information and can find no errors. LNG measurement presents some unique problems, but we have been advised that errors in the range of .01 to .6% are considered normal. The subject overruns are well above this range.

Finally summing the annual totals since 1972 shows that Phillips-Marathon has come within one-hundredth of one percent (.01%) of the annual limitation on an average basis in the eight year period through 1979. Thus it appears that deliveries may have been made so as to maintain an authorized average delivery quantity. The certificate order is silent on authority to makeup underages in subsequent years. In this regard importing pipeline companies have uniformly filed amendments with the Commission to make up past underages in import licenses.

The export authorization issued April 19, 1967, is attached.

In sum, I do not believe any meaningful public interest purpose would be served by making an issue of these relatively small volume over-deliveries.

AUG 30 3:15

REC'D DOE/ERA



U.S. DEPARTMENT OF ENERGY  
**MEMORANDUM**

DATE: June 16, 1980

REPLY TO  
ATTN OF:

Joseph J. Solters *WJS* ←

SUBJECT: Phillips-Marathon Alaskan LNG Export Volumes

TO: Kenneth Williams, Director OPR

*Do we have  
any basis for  
the apparent  
excess deliveries?*

*WJS*

This memorandum responds to your request for a comparison of authorized volumes and actual volumes of LNG exported by Phillips-Marathon from Alaska to Japan. The Commission's April 19, 1967, order in Docket Nos. CI67-1226 and CI67-1227 contained the following annual limitation on the amount of LNG which could be exported by Phillips-Marathon: "June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btus." The attached table shows that the authorized amount was exceeded by approximately 3,900,000 MMBtu in 1975, 1,600,000 MMBtu in 1977, and 1,200,000 MMBtu in 1979.

Phillips-Marathon Exports of LNG  
to Japan 1/

	Annual Average Price ¢/MBtu <u>2/</u>	Quantity MMBtu's
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<u>1975</u>	136.70	53,505,487
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<u>1977</u>	194.30	52,137,596
1978	215.00	48,886,576
<u>1979</u>	230.00	51,776,182

1/ Source: Form 14

2/ prices rounded

7-10-80  
11:40 AM

S. C. Sandusky  
Manager, Natural Gas Division  
Production, U.S. & Canada

RECEIVED  
UNITED STATES  
DEPT. OF INTERIOR

1980 JUL 15 AM 10:52  
Findlay, Ohio 45840  
Telephone 419-222-2121



OIL IMPORT  
ADMINISTRATION

July 10, 1980

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.W.  
Washington, D.C. 20426

Dear Mr. Plumb:

Re: Docket No. CI67-1226  
Marathon Oil Company  
Phillips Petroleum Company  
Eleventh Amendatory Agreement

In accordance with my letter to you dated January 4, 1980, please find attached two copies of the Eleventh Amendatory Agreement between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd., as Buyers, and Marathon Oil Company and Phillips Petroleum Company, as Sellers, of LNG.

This Amendatory Agreement is filed pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket.

Since ERA has indicated a desire to receive copies of contract amendments relating to this docket, a copy is being sent to them.

Respectfully submitted,

MARATHON OIL COMPANY

S. C. Sandusky, Manager  
Natural Gas Division

SCS:blc  
Attachments (2)

cc w/att: Mr. Finn K. Nielsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, NW  
Washington, D.C. 20461

cc w/o att: Mr. W. B. Gaul (Phillips)

ELEVENTH AMENDATORY AGREEMENT

THIS ELEVENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers",

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 2nd day of March, 1979) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective January 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended by deleting the words and figure "two hundred and thirty-six cents (236¢)" and substituting the words and figure "three hundred and thirty-six cents (336¢)" therefor.

2. Effective April 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, shall be the weighted average price (expressed in United States cents per million BTU) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports - Commodity by Country" published monthly by the Japan Tariff Association."

3. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 13th day of December, 1979.

BUYER:

SELLER:

THE TOKYO ELECTRIC  
POWER COMPANY, INC.

MARATHON OIL COMPANY

BY: Taishi Hiraoka  
President

BY: [Signature]  
President

TOKYO GAS COMPANY, LTD.

PHILLIPS PETROLEUM COMPANY

BY: Takeo Murakami  
President

BY: [Signature]  
President



PHILLIPS PETROLEUM COMPANY  
BARTLESVILLE, OKLAHOMA 74004 913 661-6600

NATURAL RESOURCES GROUP  
Gas and Gas Liquids Division

16 JUL 80 9 11

REC'D DOE/ERA

5/11/80  
7-12-80

July 10, 1980

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, NE  
Washington, DC 20426

Re: Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226  
Eleventh Amendatory Agreement

Dear Sir:

In accordance with my letter of January 3, 1980, and pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket, there are enclosed two copies of the Eleventh Amendatory Agreement dated December 13, 1979, between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited, as Buyers, and Phillips Petroleum Company and Marathon Oil Company, as Sellers, covering the purchase and sale of Kenai LNG.

A copy of this amendment is being furnished the Economic Regulatory Administration, Attention: Mr. Finn K. Neilsen, Director, Import/Export Division, Office of Petroleum Operations, pursuant to Mr. Neilsen's letter dated June 4, 1980.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

By

  
W. B. Gaul

WBG:jn  
Enclosures - 2

cc: Mr. Finn K. Neilsen ← **COPY FOR** →  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, NW  
Washington, DC 20461

Marathon Oil Company  
Mr. S. C. Sandusky, Manager  
Natural Gas Division  
539 South Main Street  
Findlay, Ohio 45840

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THIS ELEVENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers",

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 2nd day of March, 1979) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective January 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended by deleting the words and figure "two hundred and thirty-six cents (236¢)" and substituting the words and figure "three hundred and thirty-six cents (336¢)" therefor.

2. Effective April 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, shall be the weighted average price (expressed in United States cents per million BTU) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports - Commodity by Country" published monthly by the Japan Tariff Association."

3. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 13th day of December, 1979.

BUYER:

THE TOKYO ELECTRIC  
POWER COMPANY, INC.

BY: Taischi Idzumiwa  
President

TOKYO GAS COMPANY, LTD.

BY: Takeshi Murakami  
President

SELLER:

MARATHON OIL COMPANY

BY: [Signature]  
President

PHILLIPS PETROLEUM COMPANY

BY: [Signature]  
President



From : Ron P. Haly  
TO : [REDACTED]  
Date : July 2, 1980  
Subject: [REDACTED] on Past Commission Action With Regard to  
Phillips-Marathon LNG Export Price Increases.

Discussion:

Phillips and Marathon presently jointly operate liquefaction and related facilities to export natural gas from the Cook Inlet area of Alaska to Japan. This project was originally authorized by an Order issued April 19, 1967, in Docket Nos. CI67-1226 et al., pursuant to Section 3 of the Natural Gas Act. In the original Order, Phillips and Marathon were authorized to export 50,570,000 MMBtu's per year to Japan and the initial f.o.b. price of the LNG was 52.0 cents per MMBtu.

Ordering Paragraph (C) of the April 19, 1967, Order required compliance with section 153.8 of the Commission's Regulations before initiating the proposed exports to Japan. Section 153.8 of the Commission's Regulations requires, among other things, that "persons authorized to export natural gas from the United States to a foreign country...shall file two full and complete copies of every contract and the amendments thereto, presently or hereafter effective, for such export...." By letter dated October 20, 1969, Marathon submitted to the Commission two copies of the Liquefied Natural Gas Sales Agreement dated March 6, 1967, in

Phillips' and Marathon's ( ) and the Commission's  
order in Docket No. 17. On December 1, 1971, the Secretary  
sent a letter to Phillips and Marathon stating  
that that the LNG Sales Agreement had been accepted as  
constituting satisfactory compliance with Ordering Paragraph (c)  
of the original order.

On July 21, 1972, Marathon and Phillips filed 2 copies of an  
Amendatory Agreement with the Commission wherein the Basic  
Agreement price was changed from 52.0c/MMBtu to 57c/MMBtu. 2/  
This was the only change made in the Contract. On August 21, 1972,  
the Secretary of the Commission sent a letter acknowledging  
receipt of the amendatory agreement. The letter further stated  
that "in order to receive Commission consideration of this agree-  
ment, it is necessary for you to submit an application to amend  
the authorization granted on April 19, 1967, in Docket No. CI67-  
1226 et al., pursuant to Section 3 of the Natural Gas Act." Also  
Phillips' and Marathon's attention was directed to Finding Clause  
(D) and Ordering Paragraph (C) of the above order as authority for  
requesting Phillips and Marathon to file an amendment application. 3/

---

1/ This LNG Sales Agreement was also filed in the original  
application in CI67-1226 et al.

2/ See attached provision of original Contract.

3/ See attached April 19, 1967 Order.



... that the companies justify the increase in export price. (6) Marathon, in a letter dated November 4, 1974, and Phillips, in a letter dated November 17, 1974, both of which are attached hereto, asserted their "rights to price increases as the basic contract so provides." They also pointed out that the Commission had previously accepted their First Amendatory Agreement without having required them to file an application. 7/

Subsequent to this exchange of letters no further Commission action seems to have been taken. Phillips and Marathon have continued to file Amendatory Agreements (eleven to date) with the Commission to increase the export price of the LNG. The most recent such filing, dated January 4, 1980, states that,

"Effective April 1, 1980, the price will be equated to the weighted average price of crude oil imported into Japan during the third month previous to the month of LNG delivery."

One final note, the history of Phillips' and Marathon's price increases and past Commission response to them is all that is detailed herein. For a discussion of Commission jurisdiction over

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6/ See attached July 8, 1974 letter from the Commission

7/ See attached November 4, 1974, and November 20, 1974, letters from Marathon and Phillips

Operational and Administrative Guidelines with the National Security  
Council's Office Memorandum of 10/11/92, 1992

Ronald Bailey

Ronald Bailey

Special Cases Branch

tests upon request of Sellers or Buyers shall be borne equally by Sellers and Buyers. The fees and charges of the independent surveyor for measurement, sampling and analyses shall be borne equally by Sellers and Buyers.

## ARTICLE NINE

### PRICE

Section 9.1 (a) Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, a price of United States fifty-two cents (52¢) per million Btu's delivered.

(b) If in the future another Liquefied Natural Gas project is placed into operation to supply Japan with natural gas from foreign gas sources, such as Alaska, Canada, Australia, Brunei and the Middle East under similar conditions such as volume, distance, liquefaction and ocean transportation techniques, contract term and so forth, Sellers will hold a discussion with Buyers concerning the price as herein set forth, and shall endeavor to find a solution satisfactory to all parties concerned.

## ARTICLE TEN

### TAXES AND DUTIES

Section 10.1 With respect to LNG sold and delivered hereunder, Sellers shall pay all taxes and duties imposed by governmental bodies outside Japan, and Buyers shall pay all taxes and duties imposed by Japanese governmental bodies; provided, however, that Sellers shall bear all port and harbor duties, fees and assessments imposed by Japanese governmental bodies on Sellers' LNG tankers.

...creating unnecessary disturbances, disobey-  
 the state, etc."  
 to "race, creed, color, or national origin"  
 rence to discrimination, which will cover  
 round of discriminatory exclusion. Posting  
 members of the community who have in  
 that they were not welcome to use the  
 right to do so. We are altering the regula-  
 will require posting of notice that the  
 all members of the public without dis-  
 e respondent regarding compliance with  
 ee and state or local laws is sufficiently  
 §8.2(a) which directs the posting of  
 other regulations regarding such use".  
 local laws are applicable is, therefore,  
 the problems of interpretation where old  
 still on the books.  
 title of Part 8 has been accomplished by  
 issued December 12, 1966, 86 FPC 1030.  
 eon is necessary.

ations, herein prescribed, are necessary  
 on of the Federal Power Act.  
 nt originally proposed results from  
 e of Proposed Rulemaking herein  
 al change in the original proposal  
 ons subject to the regulation, no further  
 y.  
 o the provisions of the Federal Power  
 tions 10(a) and 309 thereof (41 Stat.  
 orders:  
 er I of Title 18 of the Code of Federal  
 evised by adding a new sentence. As  
 s to recreational use and availability of  
 emendment of a license, the licensee shall  
 s of public access which are required by  
 ts as are specifically designated for this  
 such other points as are subsequently  
 s own motion or upon the recommenda-  
 y operating in the area in which the  
 gn giving the name of the project and  
 nt that it is licensed by the Commission  
 to the areas of the project which are  
 , permissible times and activities, and  
 ee, and advising that further informa-  
 s of the licensee in the vicinity of the  
 all post at such locations conspicuous  
 are open to all members of the public

*Barley*

2. A new §8.3 is added, as follows:  
 §8.3 Discrimination prohibited.  
 Every licensee maintaining recreation facilities for the use of the public at a licensed project, or employing or permitting any other person to maintain such facilities, shall permit, or require such other person to permit, equal and unobstructed use of such facilities to all members of the public without regard to race, color, religious creed or national origin.  
 (Secs. 10(a), 309; 41 Stat. 1068, 49 Stat. 858; 16 U.S.C. 803, 825h)  
 (B) The caption of this proceeding is amended to read as set out above. These amendments shall be effective May 22, 1967.  
 (C) The Secretary shall cause prompt publication of this order to be made in the Federal Register.

Before Commissioners: Lee C. White, Chairman; L. J. O'Connor, Jr., Charles R. Ross, Carl E. Bagge and John A. Carver, Jr.

PHILLIPS PETROLEUM COMPANY, DOCKET NO. C167-1226 AND  
 MARATHON OIL COMPANY, DOCKET NO. C167-1227

ORDER AUTHORIZING EXPORTATION OF LIQUEFIED NATURAL GAS AND  
 DISMISSING APPLICATION FOR PERMIT

(Issued April 19, 1967)

On March 8, 1967, Phillips Petroleum Company and Marathon Oil Company (Applicants) filed in Docket No. C167-1226 an application pursuant to section 3 of the Natural Gas Act for authorization to export liquefied natural gas from the United States to Japan, all as more fully set forth in the application.

Applicants propose to export liquefied natural gas from Alaska for sale and delivery in Yokohama, Japan to The Tokyo Electric Power Company, Inc. and The Tokyo Gas Company Limited. Applicants agree to sell and buyers agree to purchase the following annual Btu's of liquefied natural gas during a fifteen-year period ending May 31, 1984:

- March 1, 1969, to May 31, 1970: 25,295,000,000,000 Btu's,
- June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

The agreement contains an option for a five-year renewal. The application states that the gas will be sold at a rate of 52.0 cents per million Btu's delivered.

Applicants will construct facilities in the Cook Inlet Basin area, Alaska, for the liquefaction of natural gas, the storage of liquefied natural gas, and the loading of such onto ships for export and delivery to Japan to the aforementioned buyers.

Concurrently with the subject application, Applicants filed in Docket No. C167-1227 an application pursuant to Executive Order No. 10483 for a permit authorizing the construction, operation and maintenance of facilities at the border of the United States in the State of Alaska for the exportation of natural gas. Said Order designates and empowers the Commission to issue such a permit upon finding that the issuance would be consistent with the public interest and after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense. During the course of proc-

essing this application a question was raised by the Department of State to whether the facilities in question are of the type contemplated by Executive Order, though both the Secretary of State and the Secretary of Defense agreed that authorization of the proposed export was consistent with the public interest of the United States. Consequently, the Commission presented the issue to the Office of the Legal Counsel of the Department of Justice, which, upon consideration of the documents pertaining to the application, concurred in the conclusion of the Department of State that the Executive Order does not apply, because there will not be facilities at the border involving any physical connection between this country and a foreign country. In view of these conclusions by the relevant agencies of the Executive Branch of the Government (with which, we are informed, the Department of Defense does not take issue), and in the absence of any basis for our independently reaching a contrary position, we shall dismiss the permit application in Docket No. CI67-1227. We shall, however, in future cases of this nature continue to secure the views of the Departments of State and Defense before taking action under Section 3 of the Natural Gas Act.

After due notice, no petitions to intervene, notices of intervention or protests to the granting of the application in Docket No. CI67-1226 have been received.

**The Commission finds:**

(1) The exportation of liquefied natural gas by Applicants, Phillips Petroleum Company and Marathon Oil Company, from the United States to Japan, as hereinabove described and as set forth in the application in Docket No. CI67-1226, will not be inconsistent with the public interest within the meaning of Section 3 of the Natural Gas Act, provided that said exportation be on the terms and conditions hereinafter set forth:

(a) Applicants shall file statements or reports with the Commission ~~at the time to time under oath and in such details as the Commission may require~~ with respect to the whole or any part of the instant export operation.

(b) The authorization granted herein is not transferable or assignable and shall remain in full force and effect only so long as Applicants continue to act or operations herein authorized in accordance with the terms and conditions herein set forth.

(c) The authorization granted herein shall automatically terminate on May 31, 1964. If the five-year renewal option of the agreement between Applicants and buyers is exercised, Applicants must comply with Section 23 of the Regulations under the Natural Gas Act.

(d) Applicants shall not, during the terms of the authorization granted by this order, materially change or alter their export operations without first obtaining the permission and approval of the Commission.

(e) In the event that Applicants should abandon or permanently cease for any reason whatsoever all or any part of the instant export operation prior to the termination date described in (c) hereof, Applicants shall forthwith notify the Commission of said fact and the reason therefor.

(f) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited should not exceed the following:

March 1, 1969, to May 31, 1970: 35,295,000,000,000 Btu's.

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years 50,570,000,000,000 Btu's.

(g) Applicants should comply with the Commission's Regulations under the Natural Gas Act for proposed exports to Japan.

(2) Applicants do not propose to construct facilities at the border of the United States for which a permit is required to be issued under Section 3 of the Natural Gas Act.

**The Commission orders:**

(A) Authorization is granted to Applicants from the United States to Japan, as herein set forth in the application in Docket No. CI67-1226, subject to the provisions of the Commission's Regulations issued thereunder.

(B) The maximum annual Btu's of liquefied natural gas for sale to The Tokyo Electric Power Company Limited shall not exceed the following:

March 1, 1969, to May 31, 1970: 35,295,000,000,000 Btu's.

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years 50,570,000,000,000 Btu's.

(C) Applicants shall comply with the Commission's Regulations under the Natural Gas Act for proposed exports to Japan and for any exercise of the option for renewal.

(D) The application for a permit filed in Docket No. CI67-1226 is hereby approved.

Before Commissioners: Lee C. Whitely, Chairman, Charles R. Ross and Carl E. Bagge.

CHRISTIE, MITCHELL & MITCHELL  
G-20001, RI61-123, RI63-23, RI63-31  
& ASSOCIATES, INC., AGENT FOR APPLICANTS  
NO. RI64-251

ORDER GRANTING MOTION FOR RELEASE

(Issued April 19, 1968)

By order issued July 19, 1968, 36 days ago, the Commission authorized the interest of Mitchell & Mitchell Gas & Oil Company, Inc. deposited in escrow agreements with the City of New York City. In lieu of retaining such amount to collect the increased rates involved in the agreement and undertaking and a statement of the total amount reported by Mitchell & Mitchell Gas & Oil Company, Inc. in excess of the last firm agreement in excess of the applicable increased rate, Mitchell & Mitchell Gas & Oil Company, Inc. is authorized to pay the amount attributable to its interest in the escrow agreements.

<sup>1</sup>The July 19, 1968 order authorized the amount applicable to Mitchell's interest in the escrow agreements.



tion was raised by the Department of State question are of the type contemplated by the Secretary of State and the Secretary of the proposed export was consistent with the United States. Consequently, the Commission of the Legal Counsel of the Department of Justice the documents pertaining to the application of the Department of State that the Executive there will not be facilities at the border between this country and a foreign country. The relevant agencies of the Executive Branch, we are informed, the Department of Defense the absence of any basis for our independent. we shall dismiss, the permit application shall, however, in future cases of this nature of the Departments of State and Defense of the Natural Gas Act.

ions to intervene, notices of intervention or application in Docket No. CI67-1226 have been

liquefied natural gas by Applicants, Phillips Petroleum Oil Company, from the United States to Japan as set forth in the application in Docket No. CI67-1226, consistent with the public interest within the meaning of the Act, provided that said exportation be as set forth:

statements or reports with the Commission free in such details as the Commission may require any part of the instant export operation authorized herein is not transferable or assignable and effect only so long as Applicants continue to be authorized in accordance with the terms and conditions

authorized herein shall automatically terminate at the expiration of the agreement between Applicants and the Commission. If Applicants desire a renewal option of the agreement between Applicants and the Commission, Applicants must comply with Section 153.8 of the Natural Gas Act.

during the terms of the authorization granted by the Commission, Applicants shall not increase or alter their export operations without the prior approval of the Commission.

Applicants should abandon or permanently cease for any part of the instant export operation previously authorized herein as set forth in (c) hereof, Applicants shall forthwith advise the Commission in writing of the fact and the reason therefor.

Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited shall not exceed the following:

March 1, 1970: 85,295,000,000,000 Btu's,  
June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

(g) Applicants should comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan.

(2) Applicants do not propose to construct, operate or maintain any facilities at the border of the United States within the contemplation of and for which a permit is required to be issued pursuant to Executive Order No. 10485.

*The Commission orders:*

(A) Authorization is granted to Applicants to export liquefied natural gas from the United States to Japan, as hereinabove described and as set forth in the application in Docket No. CI67-1226, upon the conditions herein set forth and subject to the provisions of the Natural Gas Act and the Commission's Regulations issued thereunder.

(B) The maximum annual Btu's of liquefied natural gas to be exported for sale to The Tokyo Electric Power Company, Inc., and The Tokyo Gas Company Limited shall not exceed the following:

March 1, 1969, to May 31, 1970: 85,295,000,000,000 Btu's,

June 1, 1970, to May 31, 1971, and each of the subsequent thirteen years: 50,570,000,000,000 Btu's.

(C) Applicants shall comply with the requirements of Section 153.8 of the Commission's Regulations under the Natural Gas Act before initiating the proposed exports to Japan and for any other contractual changes including the exercise of the option for renewal.

(D) The application for a permit filed in Docket No. CI67-1227 is dismissed.

Before Commissioners: Lee C. White, Chairman; L. J. O'Connor, Jr., Charles R. Ross and Carl E. Bagge.

CHRISTIE, MITCHELL & MITCHELL COMPANY, ET AL., DOCKET NOS. G-20001, RI61-123, RI63-23, RI63-398 AND RI63-440; GEORGE MITCHELL & ASSOCIATES, INC., AGENT FOR B. V. CHRISTIE, ET AL., DOCKET NO. RI64-231

ORDER GRANTING MOTION FOR RELEASE OF ADDITIONAL ESCROWED FUNDS

(Issued April 20, 1967)

By order issued July 19, 1966, 86 FPC 130, in the above-entitled proceedings, the Commission authorized the release of amounts attributable to the interest of Mitchell & Mitchell Gas & Oil Corporation (Mitchell) previously deposited in escrow agreements with The Chase Manhattan Bank of New York City. In lieu of retaining such amounts in escrow, Mitchell was permitted to collect the increased rates involved here, subject to refund, under an agreement and undertaking and a surety bond in the amount of \$48,213.39, the total amount reported by Mitchell to have been collected in the escrow agreements in excess of the last firm rate approved by the Commission or in excess of the applicable increased rate ceiling.<sup>1</sup>

Mitchell by letter filed on March 20, 1967, states that the previously reported amounts attributable to its interest in the escrow agreements in Docket Nos.

<sup>1</sup>The July 19, 1966 order authorized the release of \$91,549.47, the total reported amount applicable to Mitchell's interest then deposited under escrow agreements.

Gas Commission

Bailey



**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE OKLAHOMA 74004 918 336-6600

GAS AND GAS LIQUIDS DEPARTMENT

November 21, 1972

Mr. Kenneth F. Plumb, Secretary  
Federal Power Commission  
441 13<sup>th</sup> Street, N. W.  
Washington, D. C. 20426

Re: LNG - AC/RA  
Docket No. CI67-1226  
Phillips Petroleum Company  
Marathon Oil Company

Dear Sir:

In your letter concerning the captioned docket and the submittal therein by Phillips and Marathon of two copies of an Amendatory Agreement dated April 28, 1972, you stated that it would be necessary for Phillips and Marathon to submit an application to amend the authorization granted on April 19, 1967, in such docket pursuant to Section 3 of the Natural Gas Act. In so stating you directed our attention to Finding Clause (d) and Ordering Clause (C) of the Order of April 19, 1967.

In connection with Finding Clause (d), Phillips and Marathon have not by the Amendatory Agreement of April 28, 1972, materially changed or altered the export operations as authorized by the Commission's Order of April 19, 1967. Section 9.1(b) of the basic agreement dated March 6, 1967, provides for price changes. This agreement was filed by Phillips and Marathon with their application which was approved pursuant to the Commission's Order of April 19, 1967. The change represented by the Amendatory Agreement of April 28, 1972, is merely a change in the price paid by the purchaser in Japan for the LNG being exported under such authorization and is not a change in the "operations" authorized by the Order of April 19, 1967. Furthermore, it was for the purposes of specific compliance with Ordering Clause (C) of the Order of April 19, 1967, that Phillips and Marathon filed with the Commission the two copies of the Amendatory Agreement dated April 28, 1972, such filing being required by Section 153.8 of the Commission's Regulations under the Natural Gas Act.

Phillips and Marathon therefore submit the export operations have not been materially changed or altered and Phillips and Marathon are therefore in

Mr. Kenneth F. Plumb, Secretary  
Federal Power Commission

Page 2  
11/21/72

compliance with Finding Paragraph (d) of said Order. Ordering Clause (C) of said Order has heretofore been complied with by the filing of the two copies of said Amendatory Agreement dated April 28, 1972.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

By *LeRoy Culbertson*  
LeRoy Culbertson  
Vice President

MARATHON OIL COMPANY

By *W. B. Emery II*  
W. B. Emery II  
Manager  
Natural Gas Division

WIC:WBE:rt

PHILIP  
7/4

Attention: Harry G. ... President

Gentlemen:

The ... of April 20, 1973, is hereby  
... with the order issued  
in ... of April 19, 1973. ...  
Company and ... were issued a certificate to  
export ... Alaska.

Very truly yours,

778  
3-6-73

SECRETARY

... Oil Company  
533 South Main Street  
...  
... Division

10.12  
3/15/73

Simon, R. Smith  
3-2-73

EM 1/22 3/73

3/1/73

FEDERAL POWER COMMISSION  
WASHINGTON, D. C.

Director  
Federal Power Commission  
Washington, D. C.

Philip H. ...  
74000

C

Attention: Mr. ...

Gentlemen:

O

All additional information is required in order to more fully evaluate the Second Amendment Agreement to date of March 11, 1954, between Phillips Petroleum Company and Northern Oil Company as Seller and Idaho Electric Power Company, Inc. and Idaho Gas Company Limited as Buyers, which you filed with the Commission on July 24, 1954.

P

In order to comply with the Commission's demand of P-1114, you are to conduct a thorough natural gas survey in Alaska and submit a report to the Federal Commission. This report should be completed as follows:

Y

1. Submit all field file statements or reports with the Commission as they come under oath and in such details as the Commission may require with respect to the work or any part of the natural gas survey.

2. Submit to the Federal Commission by August 1, 1954, the report of the Commission's findings on the natural gas survey in Alaska, together with any other information you may have in justification of the increased export price.

III

require a full analysis of the information supplied.

Very truly yours,

Secretary

cc: Marathon Oil Company  
New State Building  
Haley, Okla. 4540  
Attention: W. L. Perry, III  
Regional Division Manager



Mr. Kenneth F. Fluck, Secretary  
November 4, 1974  
Page 2

"from foreign gas sources, such as Alaska, Canada, Australia, Iran and the Middle East under similar conditions such as volume, distance, liquefaction and ocean transportation techniques, contract term and so forth, Sellers will hold a discussion with Buyers concerning the price as herein set forth, and shall endeavor to find a solution satisfactory to all parties concerned."

As the Commission is aware from what has been happening insofar as LNG projects for imports into the United States, the price for LNG has been rising drastically; in fact, much more than Marathon's representative was able to obtain at the time of these particular price negotiating sessions. A project for supply of LNG from Brunei to Japan has commenced, and other projects are progressing rapidly, which allows Marathon to insist on negotiations as to price on a periodic basis.

2. Change in price.

The change in price from 57.0¢ to 68.4¢ per MMBtu, and subsequently 68.4¢ to 99.9¢ per MMBtu, was finally agreed upon by the Japanese companies, and as is true of almost all price negotiations, was a compromise of Marathon's position and that of the Japanese companies. Further negotiations will undoubtedly take place in the future to consider and agree upon further price changes, because of the volatility of the LNG market and the overall energy situation, especially as it pertains to Japan.

The Basic Contract has this rather broad re-opening clause quoted in 1 above, and since this in no way affects the United States, except in a beneficial way, especially as to balance of payments, Marathon will continue to assert its rights to price increases as the Basic Contract so provides.

Since the Second Amendatory Agreement is exactly the same, except for an increase in price, as the Amendatory Agreement, dated April 28, 1972, which was filed by Phillips and Marathon with their letter of July 17, 1972, supplemented by their letter dated November 21, 1972, and accepted



Mr. Kenneth F. Flunk, Secretary  
November 4, 1974  
Page 2

by the Commission by your letter dated March 6, 1973, we assume that the above explanation suffices. We fail to discern any difference between the situation in the filing of the Amendatory Agreement and the present situation and we respectfully submit that the filing of the Second Amendatory Agreement places us in full compliance with the Order of April 19, 1967, insofar as the price increase to 68.4¢ is concerned.

Further, our notice dated October 24, 1974, and duly filed with the FPC on October 31, 1974, showing an increase from 68.4¢ to 99.9¢ per MMBtu for LNG delivered to the two Japanese customers after October 1, 1974, when supplemented by the filing of the formal agreement pursuant to Section 153.8 of the Commission's regulations in our view will also constitute full compliance with its Order of April 19, 1967.

Respectfully submitted,

By W. A. Sackmann  
William A. Sackmann  
Attorney for Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840

VERIFICATION

COUNTY OF HANCOCK )  
STATE OF OHIO ) ss.

The undersigned, William A. Sackmann, having been duly sworn, deposes and says that he is Counsel for Marathon Oil Company; that he has executed the within statements of Marathon Oil Company; and that he is familiar with said statements and the contents thereof; and that to the best of his knowledge, information and belief, the facts set forth in said statements are true.

W. A. Sackmann  
William A. Sackmann

Sworn to and subscribed before me this 4th day of November, 1974.

Betty Clark  
Notary Public  
BETTY CLARK, Notary Public  
HANCOCK COUNTY, OHIO  
The Commission Expires November 29, 1977



**PHILLIPS PETROLEUM COMPANY**

6000 LEBANON AVENUE, PITTSBURGH, PENNSYLVANIA 15206

November 20, 1974

Mr. Kenneth F. Plumb, Secretary  
Federal Power Commission  
825 North Capitol Street, N.E.  
Washington, D. C. 20426

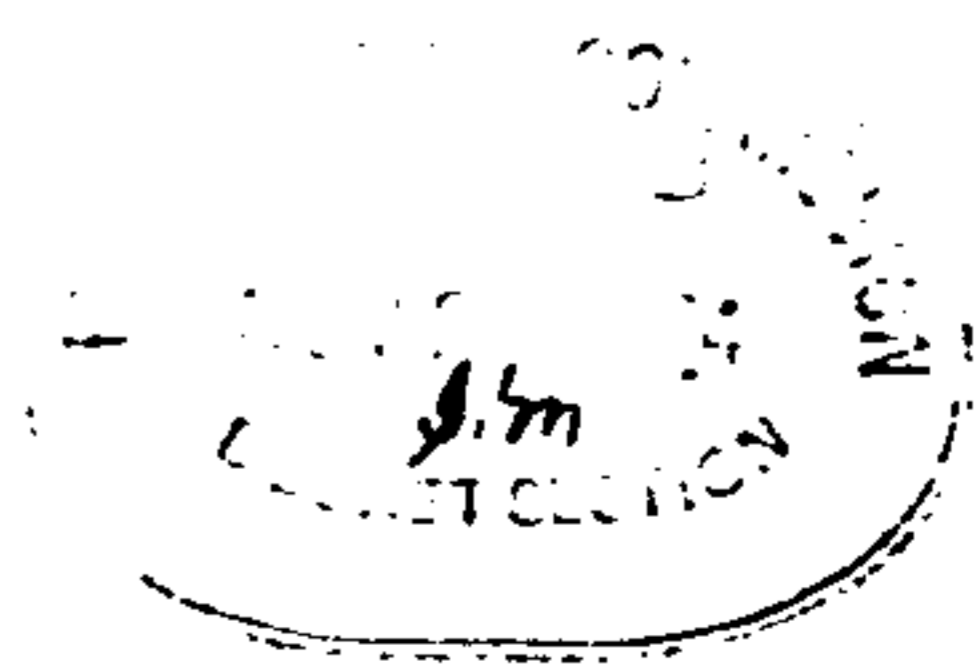
Re: B&G-AC/RA, Docket No. CI67-1226, Phillips  
Petroleum Company, Marathon Oil Company

OFFICIAL FILE		
SEARCHED	INDEXED	SERIALIZED
FILED		
CENTRAL FILES		

Dear Mr. Plumb:

By your letter of July 8, 1974, you requested Phillips provide the Commission with information relating to the increase in rate from 57.0¢ to 68.4¢/MMBtu for liquefied natural gas delivered to Tokyo Electric Power Co. Inc. and Tokyo Gas Company, Limited. As you are aware, Phillips on October 31, 1974, filed notice with the Commission of an additional increase effective October 1, 1974, to 99.99¢/MMBtu (a copy of the agreement providing this latter increase will be filed with the Commission when received from Japan). The explanation and information provided herein is applicable both to the Second Amendatory Agreement dated March 12, 1974, and to the most recent agreement by which the price was increased to 99.99¢/MMBtu.

The change in price resulted from negotiations with the buyers pursuant to Section 9.1(b) of the Liquefied Natural Gas Sales Agreement dated March 6, 1967. The increases in price reflect in part the dynamic expanding world energy market and the introduction into Japan of LNG from additional international sources. These increases reflect the efforts of Phillips to place the exports of LNG from the United States to Japan on a parity with the current world LNG market. In the view of Phillips the most recent increase to 99.99¢/MMBtu, while not equating to the world market value of LNG, represents an improvement in the price accorded this LNG supply vis-a-vis the price



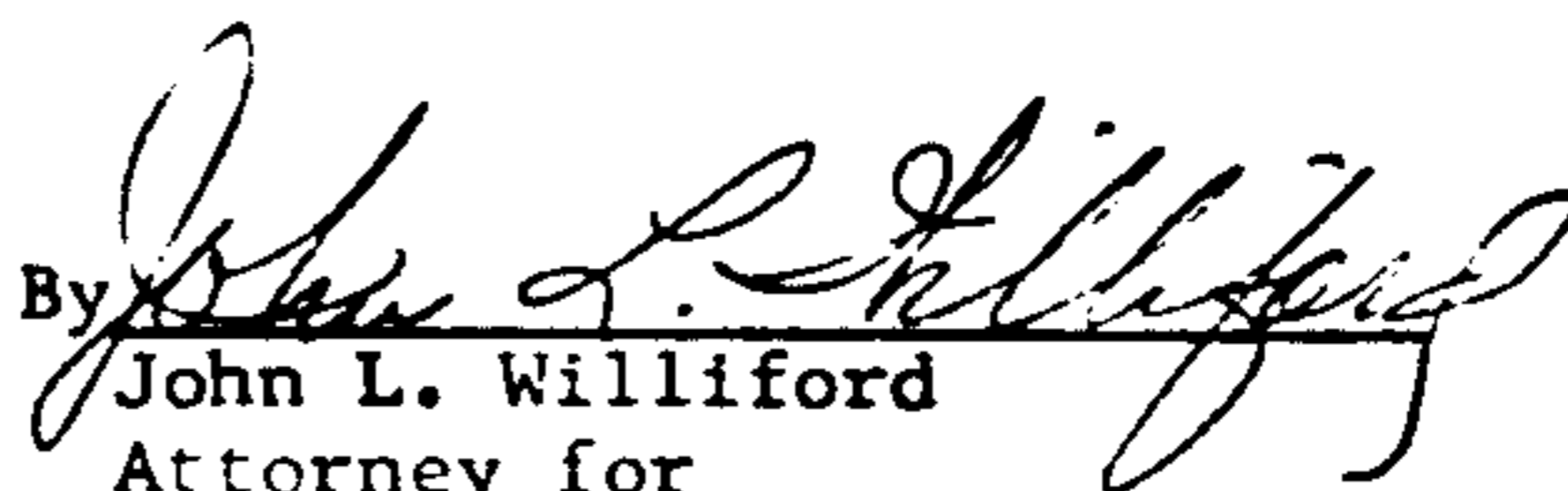
Mr. Kenneth I. Hull, Secretary  
Page Two  
November 20, 1974

of LNG available to Japan from other world markets. Parity with other world markets is, we submit, in the public interest of the United States.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

By



John L. Williford

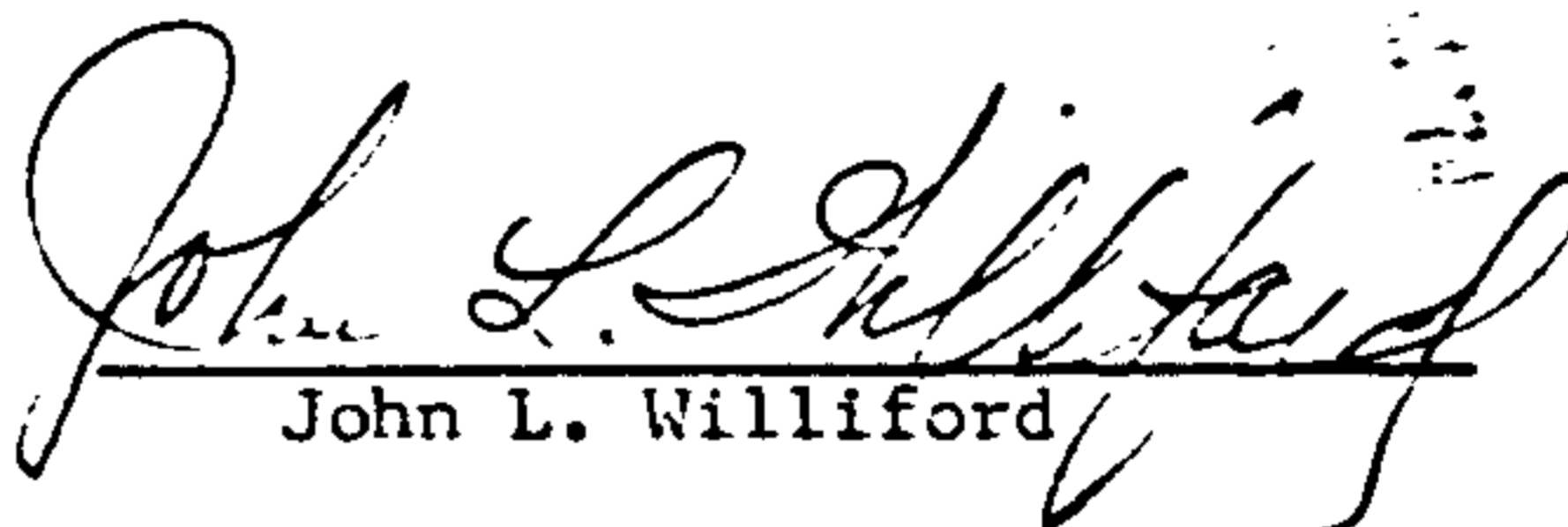
Attorney for

Phillips Petroleum Company  
583 Frank Phillips Building  
Bartlesville, Oklahoma 74004

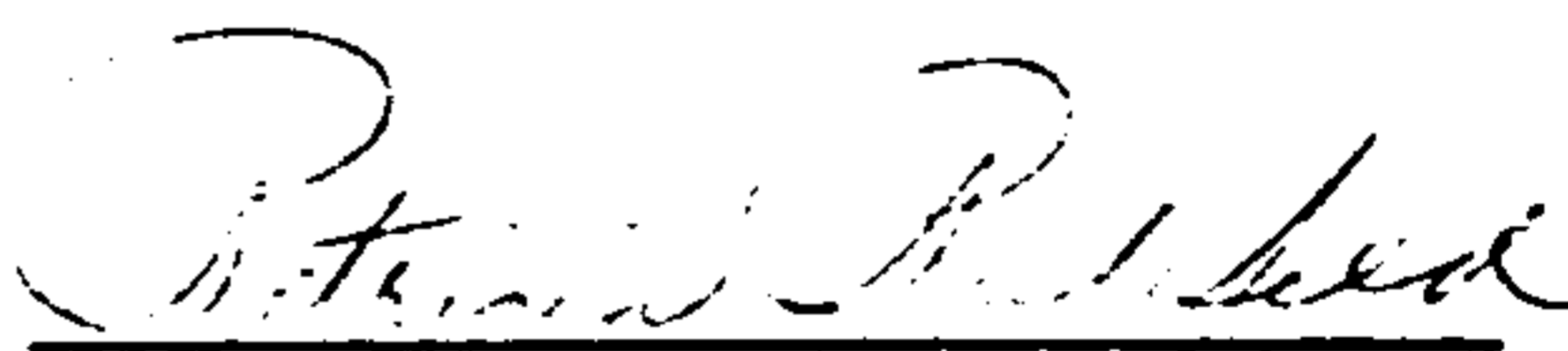
VERIFICATION

STATE OF OKLAHOMA     )  
                                  )  
COUNTY OF WASHINGTON )

JOHN L. WILLIFORD being duly sworn, deposes and says that he is an attorney for Phillips Petroleum Company, that he is authorized to verify and file this letter, that he has examined the statements contained therein, and that all such statements are true and correct to the best of his knowledge, information, and belief.

  
John L. Williford

Sworn to and subscribed before me this 20th day  
of November, 1974.

  
Notary Public  
Washington County, Oklahoma

My commission expires:

April 26, 1975

JUL 7 1980

Ms. Donna L. Wood, CPA  
Revenue Field Auditor II  
State of Alaska, Dept. of Revenue  
Division of Petroleum Revenue  
201 East 9th Avenue  
Anchorage, Alaska 99501

Dear Ms. Wood:

This letter is in response to your June 12, 1980, letter to the attention of Mr. David J. Bardin concerning the Phillips-Marathon Alaskan LNG exports to Japan.

We are enclosing copies of three items of correspondence between Phillips, Marathon, and the Economic Regulatory Administration (ERA). These include (1) a June 4, 1980 letter from Finn K. Neilsen, formerly Director of the Import/Export Division, to Messrs. Gilstrap and Sandusky of Phillips and Marathon, respectively; (2) a June 12, 1980 response letter from W. B. Gaul of Phillips to Mr. Neilsen; and (3) a June 13, 1980 response letter from Mr. Sandusky of Marathon to Mr. Neilsen. These documents are being released pursuant to authorities contained in Section 14(A) of the Natural Gas Act and the Freedom of Information Act.

Sincerely,

SIGNED

Lynne H. Church  
Director, Division of Natural Gas

# STATE OF ALASKA

## DEPARTMENT OF REVENUE

DIVISION OF PETROLEUM REVENUE

6-12-80  
JAY S. HAMMOND, GOVERNOR

201 E. 9th AVENUE  
ANCHORAGE, ALASKA 99501  
PHONE: (907) 276-1363  
(907) 277-5627

June 12, 1980

Economic Regulatory Commission  
2000 M Street  
Washington, D.C. 20461  
Attention: Mr. David J. Bardin  
Administrator

Dear Mr. Bardin:

In the May 19, 1980 issue of "Inside F.E.R.C." there was an article pertaining to the ERA scrutinization of the Phillips-Marathon method of pricing LNG exports. This happens to have a direct bearing on the State of Alaska and this Division in particular. I would like to request that you provide any materials provided to ERA by Phillips and any letters in response to Phillips by ERA. It would also be greatly advantageous for us to receive an advance copy of the letter to be sent to Phillips referenced in the "Inside F.E.R.C." article.

Your prompt assistance in this matter would be greatly appreciated as we are in the midst of current litigation.

Sincerely,

*Donna L. Wood*

Donna L. Wood, CPA  
Revenue Field Auditor II

17 JUN 80 12 42

ADV - ERA -

DLW/hws

enclosure

JUN 80 8:14

04-07LH

*NGP/6-24/80*

States are moving in the direction of a lot flatter rates structure. In the past, there was a more widespread tendency to pay more for his first blocks of usage and less for additional usage.

Five of the 45 states responding told Natic that in their new pure volumetric rates, which are flat among all customer classes, they adopted "commodity" rates for residential users in their last rate case. Four had gone to inverted rates, in which the last block of usage is charged at a higher rate than the first. Designs in other customer classes broke down like this:

— Commercial: 18 states adopted commodity rates, 22 declining block, 5 inverted.

— Industrial: 17 commodity, 19 declining block, 2 inverted.

— Agricultural: 7 commodity, 6 declining block, none inverted. Agricultural rates at all.

— Interruptible: 27 commodity, 10 declining block, none inverted.

— Other: 15 commodity, 5 declining block, one inverted.

Only two states said they had adopted lifeline rates, in which the first block of usage is considered essential to human needs and sold at a low rate. Five states said they had adopted the concept in their last rate case and 31 said they had not even considered it. Personal rates — which are higher during the winter peak than in the rest of the year — 32 said they had not.

Twenty-three states said they had raised their rates to meet the cost of power from flowing out of state under the federal program while 14 said they had not.

In addition, several states said they consider the price of oil in their rates for large interruptible customers. Eleven said they consider the price of oil, 10 consider the price of low-sulfur No. 6, six others consider high-sulfur oil, and 10 consider other fuels. Sixteen states said alternative fuel prices played a role in their rates.

## CONCERN OVER COAL CONVERSION IMPACT UNDER

Increased demands for construction-work-in-progress rate relief by a large-scale conversion of oil-fired electric powerplants to coal-fired plants has led FERC to review its policy on CWIP, a staffer said last week. The inquiry began last week when considering a Carter Administration proposal to spend \$10-billion to convert oil-fired plants to coal-fired. A utility could possibly get both a partial government subsidy and a CWIP allowance.

Commissioner Matthew Holden initiated the review last week to see whether the four-year-old policy (order 555) is still adequate for determining the cost of CWIP in their rate bases. Presently, CWIP is allowed for pollution control and "severe financial difficulty."

The high cost of financing plant conversions — including power purchase agreements for 50% to 70% of the cost — will send many utilities to FERC with requests for CWIP. "Whether or not they obtain CWIP could determine how quickly they switch to coal," he added. "The utilities see this as the whole coal conversion thing."

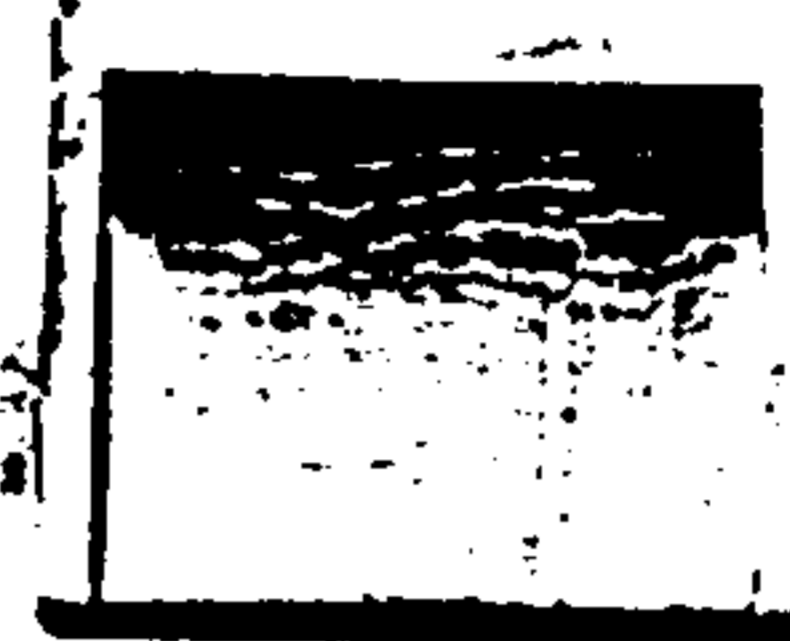
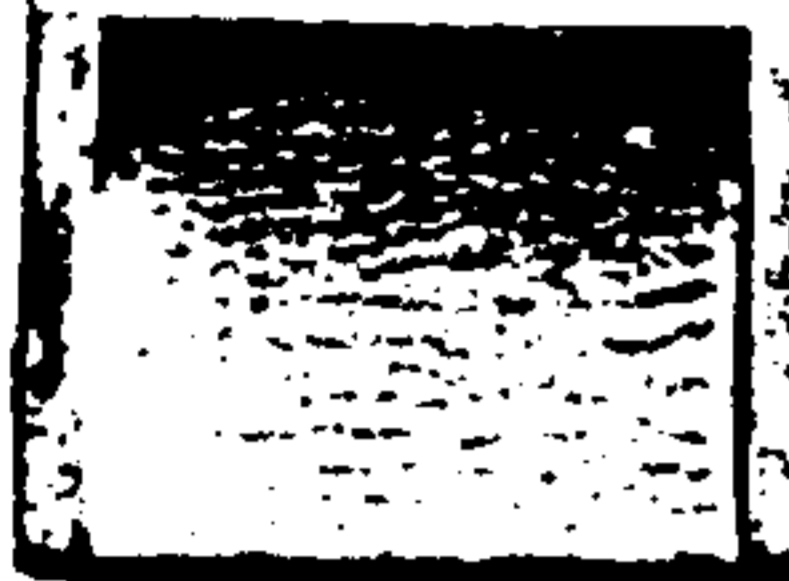
## ERA INTENDS TO SCRUTINIZE THE PRICING OF LNG EXPORTS

Problems the company's pricing policy has recently caused in the sale of liquefied natural gas, a DOE source said last week. The source said that the DOE has had jurisdiction over the LNG exports for over 10 years but "there was no reason to exercise it — now there is." Another official said that the DOE has jurisdiction over the fact that Phillips sells LNG to Japan at a higher price than it sells to the U.S.

A letter will go out from ERA to Phillips within a few weeks for at least a year, the official said. ERA will ask that Phillips sell Alaskan LNG to Japan. The contract was given a "presidential exemption" and has been subject to no further regulation since the price in Japan, a price which includes transportation but not other expenses are comparable to U.S. costs, \$4.97 translates into over \$52/MMBtu.

The current contract expires in mid-1984, the DOE official said. He explained that under the same jurisdiction over gas exports as it does over imports.





---

**ALASKA DEPT. OF REVENUE**  
Petroleum Revenue Division  
201 E. 9th Avenue  
Anchorage, AK 99501

Economic Regulatory Commission  
2000 M Street  
Washington, D.C. 20461  
Attention: Mr. David J. Bardin  
Administrator

NA L.

ORIG. DATE: 06/12/80  
REC'D DATE: 06/19/80  
DUE DATE: 06/19/80  
COMP DATE: 07/03/80  
ROUTE SYM: REP

ACTIVITY: A CONTROL NO.: RG/4152  
SOURCE DOC.: LTR SOURCE CODE: PM  
FILE CODE:  
BY WHOM:  
SPEC. INT:

REVENUE OF ALASKA, DEPT. OF  
ERA SCRUTINIZATION OF THE  
PHILLIPS-MARATHON METHOD  
PRICING LNG EXPORTS

ENCLOSURES:

TYPE OF ACTION:  
FOR SIGNATURE OF:

BUSH

REMARKS: LYNN CHURCH TO COORDINATE  
WITH FOI OFFICE

REFERRED TO:

- (1) BUSH
- (2)
- (3)
- (4)
- (5)
- (6)
- (7)
- (8)
- (9)
- LAST

REF. DATE: FOR  
06/19/80 ACTN

*L. Church*  
6/19/80

DOE FORM CR-84  
(4-78)

U.S. DEPARTMENT OF ENERGY  
PENDING ACTION CONTROL

6-13-80

S. C. Sandusky  
Manager, Natural Gas Division  
Production, U.S. & Canada

*Handwritten notes:*  
6/14/80  
P. 11/21



Findlay, Ohio 45840  
Telephone 419/422-2121

June 13, 1980

Mr. Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, N.W.  
Washington, DC 20461

Re: FERC Docket No. CI67-1226

Dear Mr. Neilsen:

Reference is made to your letter of June 4, 1980, pertaining to the export of LNG to Japan. The last price revision made pursuant to the provisions of the LNG contract between Marathon/Phillips and Tokyo Electric Power Company and Tokyo Gas Company Limited was effective January 1, 1980. A report of this adjustment was made to the Federal Energy Regulatory Commission on January 4, 1980. At the present time we do not anticipate any further agreements on price adjustments for the year 1980.

You also request a history of the prices charged and volumes exported. All price adjustments are on file with the FERC in the above-captioned docket. These filings were made by Marathon in accordance with the order of the FPC authorizing exportation, Section 3 of the Natural Gas Act, the regulations of the Federal Energy Regulatory Commission which have been adopted by the Economic Regulatory Administration, and various delegation orders.

With regard to the volumes exported since the issuance of the order authorizing exportation, Marathon has filed FPC Form No. 14, Annual Report for Importers and Exporters of Natural Gas, each year since the adoption of said form in 1973. Through 1978 the Reports were filed with FPC or FERC. Form 14 for 1979 was filed with EIA which we understand is now responsible for collecting this information.

Yours very truly,

A handwritten signature in cursive script, appearing to read 'S. C. Sandusky'.

SCS:jjw

**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE, OKLAHOMA 74004 918 661-6600

NATURAL RESOURCES GROUP  
Gas and Gas Liquids Division

June 12, 1980

Mr. Finn K. Neilsen, Director,  
Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
Washington, D. C. 20461

Re: FERC Docket No. CI67-1226

Dear Sir:

Receipt is acknowledged of your letter of June 4, 1980, regarding the captioned matter. Your letter inquires whether Phillips and Marathon "might be negotiating" any price revision in the contract for sale of LNG to Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited, and requests information on prices and volumes since the export authorization was granted.

Phillips is presently conducting no negotiations with the Japanese purchasers of LNG on price revisions or any other portion of the contract.

Pursuant to 18 CFR Section 153.8 each amendment to the contract has been filed with the Federal Power Commission or its successor, the Federal Energy Regulatory Commission (in the case of the last amendment, notice of the substance thereof was filed and upon receipt of the formalized instrument from Japan same will be filed). This practice is consistent with our understanding of the Delegation Orders issued by the Secretary following the organization of the Department of Energy which did not deal with continuing oversight under Section 3 of the Natural Gas Act of previously granted authorizations.

The history of the export prices charged is set forth in the contract and amendments as filed in the subject docket.

Information on the volumes exported has been reported annually since 1972 on FPC Form 14 to the Federal Power Commission or its successor, the Federal Energy Regulatory Commission, with the exception of the report for the year 1979, which was filed with the Energy Information Administration on March 26, 1980 pursuant to EIA's letter dated February 14, 1980.

S. C. Sandusky  
Manager, Natural Gas Division  
Production, U.S. & Canada



Findlay, Ohio 45840  
Telephone 419. 422-2121

June 13, 1980

Mr. Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, N.W.  
Washington, DC 20461

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Yours very truly,

A handwritten signature in cursive script, appearing to read 'S. C. Sandusky'.

SCS:jjw

Mr. Finn K. Neilsen, Director

June 12, 1980

Page 2

These export volumes should be readily available at those agencies. If you are unable to locate or cannot obtain same, Phillips will, of course, be willing to cooperate by supplying you duplicate copies of the information heretofore filed.

The reporting of such data on volumes was not required nor provided for by the FPC prior to the calendar year 1972. However, should the requested volumes be deemed necessary for the period prior to the calendar year 1972 and retroactive to November, 1969, the date of initial export, we will attempt to retrieve such information from our stored records upon further notification from you.

We trust the foregoing will be of assistance to you. If you have any further questions, please direct them to:

W. B. Gaul, Manager  
Laws & Regulations Branch  
Gas & Gas Liquids Group  
Phillips Petroleum Company  
5 C4 Phillips Building  
Bartlesville, Oklahoma 74004

Yours very truly,



W. B. Gaul

WBG:jn

cc: S. C. Sandusky  
Marathon Oil Company

**ROUTING AND TRANSMITTAL SLIP**

Date

7/2/80

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Doug Robinson		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

**REMARKS**

Attached are copies of the recent correspondence between ERA and Phillips-Marathon concerning the export of Alaskan LNG to Japan. My apologies for sending you the wrong information earlier.



*note - Note the sentence I underscored in the Phillips letter. Is that correct? Has any Sec. 3 export authority been delegated? What do you recommend we do next? How about discussing w/ IA an action memo to the Sec. on whether or not we should bring these export prices under control?*

<b>FROM: (Name, org. symbol, Agency/Post)</b>  Gary Barch	Room No.—Bldg. 7108-2000 M  Phone No. 653-3220
---	--

5041-102

OPTIONAL FORM 41 (Rev. 7-76)  
 Prescribed by GSA  
 FPMR (41 CFR) 101-11.206



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004 918 661 6600

NATURAL RESOURCES GROUP  
Gas and Gas Liquids Division

June 12, 1980

Mr. Finn K. Neilsen, Director,  
Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
Washington, D. C. 20461

Re: FERC Docket No. CI67-1226

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Pursuant to 18 CFR Section 153.8 each amendment to the contract has been filed with the Federal Power Commission or its successor, the Federal Energy Regulatory Commission (in the case of the last amendment, notice of the substance thereof was filed and upon receipt of the formalized instrument from Japan same will be filed). This practice is consistent with our understanding of the Delegation Orders issued by the Secretary following the organization of the Department of Energy which did not deal with continuing oversight under Section 3 of the Natural Gas Act of previously granted authorizations.

The history of the export prices charged is set forth in the contract and amendments as filed in the subject docket.

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Mr. Finn K. Neilsen, Director

June 12, 1980  
Page 2

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We trust the foregoing will be of assistance to you. If you have any further questions, please direct them to:

W. B. Gaul, Manager  
Laws & Regulations Branch  
Gas & Gas Liquids Group  
Phillips Petroleum Company  
504 Phillips Building  
Bartlesville, Oklahoma 74004

Yours very truly,

  
W. B. Gaul

WBG:jn

cc: S. C. Sandusky  
Marathon Oil Company

4 JUN 1980

Mr. M. D. Gilstrap  
Natural Gas Resources Group  
Phillips Petroleum Company  
Bartlesville, Oklahoma 74004

Mr. S. C. Sandusky  
Manager, Natural Gas Division  
Production, U.S. & Canada  
Marathon Oil Company  
Findlay, Ohio 45840

RE: FERC Docket No. CI67-1226

Gentlemen:

The Import/Export Division of the Office of Petroleum Operations, Economic Regulatory Administration, Department of Energy, requests that it be apprised of any price revision Marathon Oil Company and Phillips Petroleum Company might be negotiating in their contract for the sale of liquefied natural gas (LNG) to the Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited. We also request a history of export prices charged, and volumes exported on a daily or annual basis since the issuance of the export authorization in the captioned docket, issued April 19, 1967, 37 FPC 777.

Pursuant to section 301 and section 402(f) of the Department of Energy Organization Act, jurisdiction over the imports and exports of natural gas, including liquefied natural gas, previously vested in the Federal Power Commission is now vested in the Secretary of Energy. The Secretary has delegated to the Administrator of the Economic Regulatory Administration, in Delegation Order No. 0204-4, 1/ authority to regulate the "exportation and importation of natural gas pursuant to the provisions of section 3 of the Natural Gas Act. . . ."

Section 3 of the Natural Gas Act provides that no person shall import or export natural gas including LNG from a foreign country without first having secured an order from the Department of Energy authorizing it to do so.

1/ 42 FR 50726, November 29, 1977.

CONCURRENCES		
RTG. SYMBOL	.....	.....
INITIALS/SIG.	.....	.....
DATE	.....	.....
RTG. SYMBOL	.....	.....
INITIALS/SIG.	.....	.....
DATE	.....	.....
RTG. SYMBOL	.....	.....
INITIALS/SIG.	.....	.....
DATE	.....	.....
RTG. SYMBOL	.....	.....
INITIALS/SIG.	.....	.....
DATE	.....	.....
RTG. SYMBOL	.....	.....
INITIALS/SIG.	.....	.....
DATE	.....	.....
RTG. SYMBOL	.....	.....
INITIALS/SIG.	.....	.....
DATE	.....	.....

Under a subsequent delegation, DOE Delegation Order No. 0204-54, 2/ the Administrator is delegated the authority to determine whether a proposed import or export of natural gas is not inconsistent with the public interest within the meaning of section 3 of the Natural Gas Act, based on certain considerations including, inter alia, the price proposed to be charged at the point of importation or exportation, and national and regional needs for the natural gas to be imported or exported.

New contracts or amendments to existing agreements must be filed with the Economic Regulatory Administration of the Department of Energy for review pursuant to section 3 of the Natural Gas Act, 18 CFR Sections 1.7 and 153.1 and Delegation Order No. 0204-54.

Thank you for your cooperation.

Sincerely,

SIGNED

Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration



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Thank you for your cooperation.

Sincerely,

Finn K. Neilsen  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration

2/ 44 FR 56735, October 2, 1979.



Department of Energy  
Washington, D.C. 20585

03 20 1980  
PHILLIPS MARATHON

3-19-80

March 19, 1980

MEMORANDUM FOR FINN NEILSEN, ERA

FROM: MARTIN S. KAUFMAN *MSK*  
DEPUTY ASSISTANT GENERAL COUNSEL  
INTERNATIONAL TRADE AND EMERGENCY  
PREPAREDNESS

SUBJECT: PHILLIPS AND MARATHON

I am returning to you with substantial revisions your letter to Phillips and Marathon regarding export of LNG from Alaska to Japan.

Please return it to me for concurrence when you have revised it.

ANNUAL REPORT FOR 3-24-80  
IMPORTERS AND EXPORTERS OF NATURAL GAS

Phillips  
1979

GENERAL INSTRUCTIONS:

1. The completed original and 3 conformed copies of this report shall be filed with the Federal Power Commission, Washington D. C., 20426 on or before March 31, of each year, for the preceding calendar year.
2. The report will be filed by each person having authorization to import or export natural gas.
3. Use a separate schedule for each authorization (Docket Number). If one authorization involves more than one import or export point, a separate schedule must be filed for each point.
4. All volumes reported in Mcf will be at 14.73 Psia and 60°F.
5. Where transactions are based primarily on volumetric measurement, weighted average B.t.u. data should be used to estimate total monthly B.t.u.'s.
6. Amounts paid or received and cost or receipts shall be reported in U. S. Dollars.
7. **DEFINITIONS:** - Transporter- the party or parties, other than buyer or seller, owning the facilities by which gas or LNG is physically transferred between buyer and seller; Costs- all expenses incurred by importer up to the U. S. point of delivery for the reported quantity imported; Receipts- all revenues received by exporter for the reported quantity exported.

Name of Respondent Phillips Petroleum Company	Address of Respondent Bartlesville, Oklahoma 74004	Year End December 1979
--	---	------------------------------

SCHEDULE I - Gas Phase Natural Gas

NOTE: If authorization granted is increased, decreased, or extended under a succession of docket numbers and all net gas moved through the same border facilities and authorized expansions thereof, moved to or from the same purchaser/supplier, and was subject to the same rate, such transaction shall be combined for reporting purposes and appropriate Docket Numbers shown.

Report for (check one) <input type="checkbox"/> Import <input type="checkbox"/> Export	Foreign Seller or Foreign Buyer
---	---------------------------------

U.S. Entry or Exit Point	Transporter	Docket Number's
--------------------------	-------------	-----------------

Line No.	Month	QUANTITY RECEIVED OR SHIPPED AT THE ENTRY OR EXIT POINT				Amount Paid Received at Entry or Exit Point (e)
		Peak Day		Mcf (g)	MM B.t.u. (e)	
		Date (b)	Mcf (c)			
1	January					
2	February					
3	March					
4	April					
5	May					
6	June					
7	July					
8	August					
9	September					
10	October					
11	November					
12	December					
13		TOTAL				

ANNUAL WEIGHTED AVERAGE BTU PER CUBIC FOOT (Line 13; Column (e) ÷ Column (d) x 1000)	ANNUAL WEIGHTED AVERAGE PRICE IN CENTS PER MM BTU (Line 13; Column (f) ÷ Column (e) x 100)
---	---

**SCHEDULE II - Liquefied Natural Gas**

Report for (check one)  Import  Export Foreign Seller and Origin or Foreign Buyer and Destination  
 Tokyo Gas Co., Ltd & The Tokyo Electric Power Co., Inc., Japan

U. S. Receiving or Loading Point  
 Port Nikiski, Alaska Docket Number  
 CI67-1226

Transporter  
 Polar LNG Shipping Corp. & Arctic LNG Transportation Co. Mode of Transport  
 LNG Tanker (Ship)

Line No.	Month (a)	QUANTITY RECEIVED OR SHIPPED AT THE U.S. RECEIVING OR LOADING POINT*			Cost or Receipt (e)
		Barrels (42 U.S. Gallons) (b)	Mcf Equivalent (c)	MM B.t.u. (d)	
1	January	1,173,477	4,101,427	4,140,391	8,901,840.21
2	February	877,576	3,070,575	3,099,745	6,664,451.53
3	March	865,091	3,023,387	3,052,109	6,562,034.25
4	April	886,109	3,096,970	3,126,392	7,378,282.90
5	May	898,871	3,140,980	3,170,819	7,483,131.28
6	June	879,316	3,073,336	3,102,533	7,321,976.59
7	July	1,184,316	4,139,509	4,178,834	9,862,048.67
8	August	889,669	3,109,590	3,139,132	7,408,352.04
9	September	888,943	3,109,593	3,139,134	7,408,356.58
10	October	575,158	2,011,303	2,030,411	4,791,768.79
11	November	555,087	1,940,100	1,958,531	4,622,133.01
12	December	616,769	2,155,476	2,175,954	5,135,252.57
13	TOTAL	10,290,382	35,972,246	36,313,985	83,539,628.42

ANNUAL WEIGHTED AVERAGE BTU PER CUBIC FOOT (Line 13: Column (d) ÷ Column (c) x 1000) **1009.5** ANNUAL WEIGHTED AVERAGE PRICE IN CENTS PER MM BTU (Line 13: Column (e) ÷ Column (d) x 100) **\$2.30**

**CERTIFICATION**

I, the undersigned, an officer of the reporting company, certify that I have read the foregoing Annual Report and know the contents thereof; and that all facts set forth therein are true to the best of my knowledge, information and belief.

Signature (Certifier) Paul W. Tucker Date 24 Mar. 1980  
 Name of Certifier (type or print) Paul W. Tucker Title Vice President, Gas & Gas Liquids Division

**OFFICER OR OTHER PERSON TO BE CONTACTED CONCERNING THIS REPORT**

Name W. B. Gaul Title Manager, Laws & Regulations Branch  
 Business address Phillips Petroleum Company, 5 C4 Phillips Bldg., Bartlesville Telephone No. (Area code) 918-661-4355  
Oklahoma 74004

\*Quantities and values at point of sale and delivery in Japan.



10-11-12

3-21-80

Nov-14-1979

FEDERAL POWER COMMISSION  
Washington D. C., 20426

# ANNUAL REPORT FOR IMPORTERS AND EXPORTERS OF NATURAL GAS

Form Approved  
OMB No. 38-20308

### GENERAL INSTRUCTIONS

- The completed original and 3 unperfected copies of this report shall be filed with the Federal Power Commission, Washington D. C., 20426 on or before March 31, of each year, for the preceding calendar year.
- The report will be filed by each person having authorization to import or export natural gas.
- Use a separate schedule for each authorization (Docket Number). If one authorization involves more than one import or export point, a separate schedule must be filed for each point.
- All volumes reported in Mcf will be at 14.73 Psc and 60°F.
- Where transactions are based primarily on volumetric measurement, weighted average B.t.u. data should be used to estimate total monthly B.t.u.'s.
- Amounts paid or received and cost or receipts shall be reported in U. S. Dollars.
- DEFINITIONS:** - Transporter- the party or parties, other than buyer or seller, owning the facilities by which gas or LNG is physically transferred between buyer and seller; Costs- all expenses incurred by importer up to the U. S. point of delivery for the reported quantity imported; Receipts- all revenues received by exporter for the reported quantity exported.

Name of Respondent <b>MARATHON OIL COMPANY</b>	Address of Respondent <b>539 S. Main St., Findlay, Ohio 45840</b>	Year Ending December 31, <b>1979</b>
---	--	--

### SCHEDULE I - Gaseous Phase Natural Gas

**NOTE:** If authorization granted is increased, decreased, or extended under a succession of docket numbers and all related gas moved through the same border facilities and authorized expansions thereof, moved to or from the same purchaser or supplier, and was subject to the same rate, such transaction shall be combined for reporting purposes and appropriate Docket Numbers shown.

Report for (check one) <input type="checkbox"/> Import <input type="checkbox"/> Export	Foreign Seller or Foreign Buyer
---	---------------------------------

U.S. Entry or Exit Point	Transporter	Docket Number(s)
--------------------------	-------------	------------------

Line No.	Month (a)	QUANTITY RECEIVED OR SHIPPED AT THE ENTRY OR EXIT POINT				M B.t.u. (e)	Amount Paid or Received at Entry or Exit Point (f)
		Peak Day		Mcf (d)	Mcf (c)		
		Date (b)	Mcf (g)				
1	January						
2	February						
3	March						
4	April						
5	May						
6	June						
7	July						
8	August						
9	September						
10	October						
11	November						
12	December						
13		<b>TOTAL</b>					

ANNUAL WEIGHTED AVERAGE BTU PER CUBIC FOOT (Line 13; Column (e) ÷ Column (c) x 1000)	ANNUAL WEIGHTED AVERAGE PRICE IN CENTS PER MB BTU (Line 13; Column (f) ÷ Column (e) x 100)
---	---

**SCHEDULE II - Liquefied Natural Gas**

Report for (check one) <input type="checkbox"/> Import <input checked="" type="checkbox"/> Export	Foreign Seller and Origin or Foreign Buyer and Destination <b>Tokyo Gas Co., Ltd. &amp; The Tokyo Electric Power Co., Inc. - Yokohama</b>
U. S. Receiving or Loading Point <b>Port Nikiski, Alaska</b>	Bucket Number <b>C167-1226</b>

Transporter <b>Polar LNG Shipping Corp. &amp; Arctic LNG Transportation Co.</b>	Mode of Transport <b>LNG Tanker (Ship)</b>
--	---

Line No.	Month (a)	Q. AMTITY RECEIVED OR SHIPPED AT THE U.S. RECEIVING OR LOADING POINT *			Cost or Receipts (e)
		Barrels (42 U.S. Gallons) (b)	Bcf Equivalent (c)	MM B.t.u. (d)	
1	January	502,918	1,757,754	1,774,453	\$ 3,815,074.39
2	February	376,104	1,315,960	1,328,462	2,856,193.52
3	March	391,211	1,367,226	1,380,215	2,967,462.35
4	April	371,143	1,297,157	1,309,480	3,090,372.66
5	May	359,779	1,257,170	1,269,113	2,995,108.24
6	June	374,442	1,308,677	1,321,109	3,117,818.53
7	July	491,797	1,718,932	1,735,262	4,095,217.89
8	August	370,341	1,294,410	1,306,707	3,083,828.00
9	September	373,865	1,307,800	1,320,224	3,115,728.30
10	October	263,576	921,740	930,497	2,195,974.09
11	November	283,578	991,265	1,000,682	2,361,609.67
12	December	222,811	778,596	785,993	1,854,942.35
13	<b>TOTAL</b>	<b>4,381,565</b>	<b>15,316,687</b>	<b>15,462,197</b>	<b>35,549,329.99</b>

ANNUAL WEIGHTED AVERAGE BTU PER CUBIC FOOT (Line 13; Column (d) ÷ Column (c) x 1000) <b>1009.5</b>	ANNUAL WEIGHTED AVERAGE PRICE IN CENTS PER MM BTU (Line 13; Column (e) ÷ Column (d) x 100) <b>229.9¢</b>
---	---

**CERTIFICATION**

I, the undersigned, an officer of the reporting company, certify that I have read the foregoing Annual Report and know the contents thereof; and that all facts set forth therein are true to the best of my knowledge, information and belief.

Signature (Certifier) <i>R.R. Burke</i>	Date <b>March 21, 1980</b>
Name of Certifier (type or print) <b>R. R. Burke</b>	Title <b>Vice President, Production Exploration United States</b>

**OFFICER OR OTHER PERSON TO BE CONTACTED CONCERNING THIS REPORT** & Canada

Name <b>S. C. Sandusky</b>	Title <b>Manager, Natural Gas Division</b>
Home address <b> Marathon Oil Company, 539 S. Main St., Findlay, Ohio 45840</b>	Telephone No. (Area code) <b>(419) 422-2121</b>

\*Quantities and values at the point of sale and delivery in Yokohama, Japan.

*Lynn Church*

Hazel Rollins 7-15-80  
Room 6001  
M Street

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D. C. 20426

In Reply Refer to:

OPPR-DPC/EEB  
Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226

William C. Douce, President  
Phillips Petroleum Company  
1255 Adams Building  
Bartlesville, Oklahoma 74004

JUL 15 1980

Dear Mr. Douce:

We are in receipt of your letter dated March 7, 1980, declining to furnish information to the staff concerning the Kenai, Alaska, LNG plant operated by Phillips and Marathon. The information requested is in the nature of continuing review by the staff of operating LNG facilities covered by an authorization pursuant to Section 3 of the Natural Gas Act (15 U.S.C. §717(b)). The information is necessary to enable the staff to carry out the Commission's statutorily mandated responsibilities for public safety and continuity of service of such facilities.

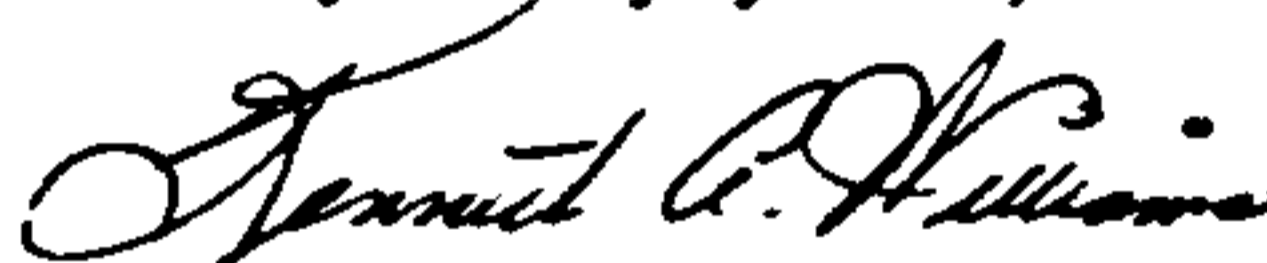
Your letter of March 7, 1980, indicates your belief that the facilities are not within the Commission's jurisdiction and indirectly that the staff has no relevant or material reason for requesting the information. That belief is in error.

Pursuant to the Commission's order of April 19, 1967 (37 FPC 777), Phillips and Marathon are under a duty to file statements or reports, "from time to time under oath, and in such detail as the Commission may require with respect to the whole or any part of the instant export operation." (Id. at 778) The liquefaction plant, which serves an LNG export operation and without which no export would be possible, is clearly an integral part of the export operation.

Secondly, your understanding of the Commission's jurisdiction apparently is based on a misunderstanding of the nature of permitting authority under Executive Order 10485, in contrast to the Commission's authority under Section 3. Pursuant to Delegation Order No. 0204-55, the Commission has been delegated "all functions under Section 3 of the Natural Gas Act to approve or disapprove the construction and operation of particular facilities and the site at which they would be located." (44 F.R. 56735) This authority under Section 3 has been interpreted by the courts to include the flexibility to subject an import or export project "to the entire panoply of Section 7's requirements." Distrigas Corporation v. FPC, 495 F.2d 1057, 1064 (D.C. Cir. 1974), cert denied 417 U.S. 834 (1974).

Should you persist in refusing to furnish the requested information, the staff will seek an appropriate order from the Commission.

Very truly yours,



Kenneth A. Williams, Director  
Office of Pipeline and Producer  
Regulation

cc: Hazel Rollins, Administrator  
Economic Regulatory Administration

Room 6001  
M Street

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D. C. 20426

In Reply Refer to:

OPPR-DPC/EEB  
Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226

William C. Douce, President  
Phillips Petroleum Company  
1255 Adams Building  
Bartlesville, Oklahoma 74004

JUL 15 1980

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Very truly yours,



Kenneth A. Williams, Director  
Office of Pipeline and Producer  
Regulation

cc: Hazel Rollins, Administrator  
Economic Regulatory Administration



**PHILLIPS PETROLEUM COMPANY**  
 BARTLESVILLE OKLAHOMA 74004 918 661 6600

LEGAL

March 7, 1980

RECEIVED  
 MAR 10 2 27 PM '80  
 OFFICE OF THE  
 DIRECTOR  
 OPPER

Mr. Kenneth A. Williams, Director  
 Office of Pipeline and Producer Regulation  
 Federal Energy Regulatory Commission  
 815 N. Capitol Street, N.E.  
 Washington, D.C. 20426

RECEIVED BY

Re: OPPER-DPC/EEB  
 Phillips Petroleum Company  
 Marathon Oil Co.  
 Docket No. CI66-1227

M. J. S.

Dear Mr. Williams:

We have received your recent request to furnish certain information on the Kenai LNG Plant to Mr. Alan F. Schmidt of Boulder, Colorado. After thorough consideration of your request, we must respectfully decline to undertake to furnish this information.

Presumably the reference to Docket No. "CI66-1227" was meant to refer to Docket No. CI67-1227 which was the docket assigned to the application by Phillips and Marathon for a "Presidential Permit for Construction, Maintenance and Operation at the Borders of the United States of Facilities for the Exportation of Liquefied Natural Gas to Japan". That application was filed on March 8, 1967, and was dismissed by ordering paragraph (D) of the Commission's order issued April 19, 1967, in Dockets Numbered CI67-1226 and 67-1227. The Commission dismissed the application on the basis that the facilities proposed by Phillips and Marathon did not require issuance of a permit under Executive Order 10485. The application in Docket No. CI67-1226 dealt only with the authority to make an export sale of LNG to Japan pursuant to Section 3 of the Natural Gas Act and Part 153 of the Commission's Regulations. The only mention of facilities in that application was in paragraph G which referred to the facilities "downstream from the liquefaction plant". The Commission's order of April 19, 1967, which granted the authority for the export sale, made no mention of facilities other than in connection with the dismissal referred to above.



Mr. Kenneth A. Williams

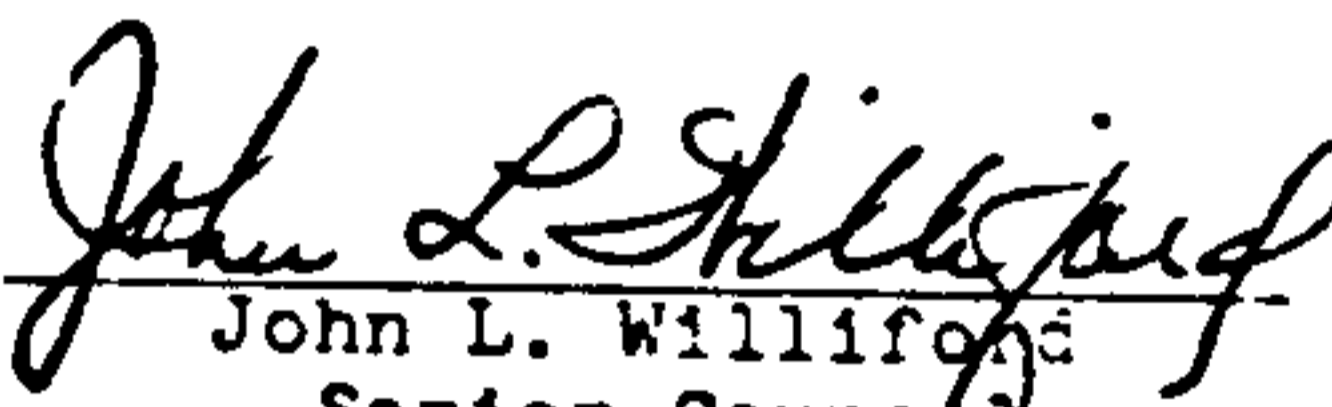
-2-

March 7, 1980

Phillips and Marathon have on past occasions allowed visits to the facility by the Commission Staff, and Phillips recently provided the Staff with an informational copy of its response to the Department of Transportation's action letter following the Cove Point incident. However, unlike LNG receiving facilities which have been certificated in various proceedings, the Kenai LNG liquefaction plant is not a certificated facility.

Yours very truly,

PHILLIPS PETROLEUM COMPANY

By   
John L. Williford  
Senior Counsel

cc: Marathon Oil Company





**PHILLIPS PETROLEUM COMPANY**

BARTLESVILLE OKLAHOMA 74004 918 661-6600

LEGAL

March 7, 1980

*Williford  
918-661-3760*

RECEIVED  
OPPR  
OFFICE OF THE  
DIRECTOR  
MAR 10 2 27 PM '80

Mr. Kenneth A. Williams, Director  
Office of Pipeline and Producer Regulation  
Federal Energy Regulatory Commission  
815 N. Capitol Street, N.E.  
Washington, D.C. 20426

RECEIVED BY

Re: OPR-DPC/EEB  
Phillips Petroleum Company  
Marathon Oil Co.  
Docket No. CI66-1227

RECEIVED BY

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Mr. Kenneth A. Williams

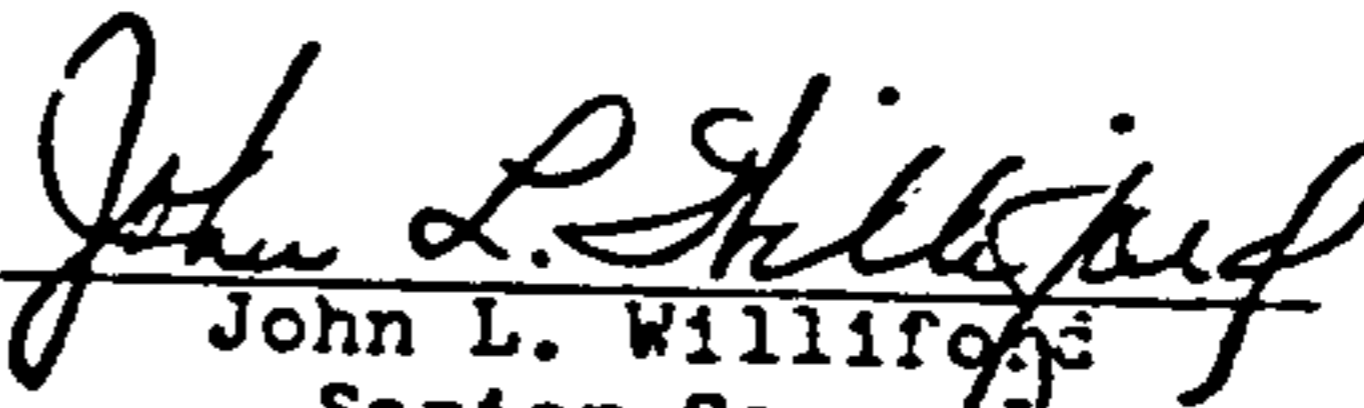
-2-

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Yours very truly,

PHILLIPS PETROLEUM COMPANY

By   
John L. Williford  
Senior Counsel

cc: Marathon Oil Company

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D. C. 20426

In Reply Refer to:

OPPR-DPC/EEB  
Phillips Petroleum Co.  
Marathon Oil Co.  
Docket No. CI66-1227

William C. Douce, President  
Phillips Petroleum Company  
1255 Adams Bldg.  
Bartlesville, Oklahoma 74004

JAN 18 1980

Dear Mr. Douce:

The staff is conducting a continuing post-certification review of LNG plant construction and operations, and your cooperation in this effort is requested. Please provide the information on the Kenai, Alaska LNG plant listed in the enclosure.

Provide four sets (copies) of the material. If portions of the requested information are contained in documents already filed with the Commission, reference to the appropriate documents and page numbers will suffice. One full set of the material should be sent to:

Mr. Alan F. Schmidt  
Cryogenic Engineering  
1850 Folsom Blvd. #506  
Boulder, Colorado 80302

The requested information should be filed within 30 days from the date of this letter. If certain information cannot be provided within this period, indicate the items that will be delayed and the estimated date of their availability.

The material will be used by the staff and its cryogenic consultants in Boulder, Colorado, to update the FERC staff on plant maintenance and operation at the Kenai LNG plant. In addition, we expect to visit the site in July 1980.

For further information concerning the requested material or transmittal of the material, contact Mr. Robert Arvedlund of my staff at (202) 357-8219.

Very truly yours,

*Kenneth A. Williams*

Kenneth A. Williams, Director  
Office of Pipeline and Producer  
Regulation

Enclosure

cc: Mr. W. B. Gaul  
Phillips Petroleum Company  
1255 Adams Bldg.  
Bartlesville, Oklahoma 74004

ENCLOSURE

INFORMATION REQUESTED ON THE KENAI LNG PLANT

1. A detailed layout of the plant showing the location of all major components installed within the plant site, such as facilities for compression, purification, dehydration, liquefaction, storage, vaporization, and truck loading; vents, pumps; and any auxiliary or appurtenant service facilities.
2. A detailed layout of the fire protection system for the plant showing the location of all pumps, piping, hose reels, fixed-nozzle dry chemical systems, and any auxiliary or appurtenant service facilities.
3. A detailed layout of the natural gas fuel system for the plant showing all interconnection with the piping in the liquefaction trains, boil-off collection systems, purification systems, and refrigeration systems.
4. Copies of all company, engineering firm or consultant studies of a conceptual nature that show the engineering planning or design approach to the construction of the plant, and all safety provisions incorporated in the plant design.
5. Detailed engineering specifications and construction drawings for all of the components included in items (1), (2), and (3) above.
6. Detailed specifications and drawings of manufacturer's equipment and materials utilized in the manufacture of individual major components included in items (1), (2), and (3) above; i.e., pressure vessels, heat transfer equipment, insulation, cryogenic piping, valves and fittings, storage tanks, etc.
7. Identification of all codes and standards under which the plant and marine terminal were designed and any special consideration of safety provisions that were applied to the design of all components.
8. A list of all permits or approvals from local, state, Federal, or Indian agencies required for design and safety prior to and during the construction of the plant, together with a description of data records

required for submission to such agencies for their consideration and transcripts of any public hearings by such agencies. Also, copies of any correspondence relating to the actions by all, or any, of these agencies regarding all required approvals.

9. A copy of the plant's operation manual and training manuals.
10. Identify all design and operating conditions which have been imposed by Federal (other than FPC/FERC), state, and local agencies or specific recommendations by these agencies to improve or enhance the operational safety of the LNG facilities. Indicate which were requirements with the force of law and which were recommendations. Identify how the company has complied with each.
11. Describe any abnormal operating experiences or behavior at the facility and corrective actions taken since the commencement of operation. Abnormalities shall include but not be limited to: rollover, geysering, cold spots on the storage tank, storage tank vibrations and/or vibrations in associated cryogenic plumbing, storage tank settlement, significant equipment or instrumentation malfunctions or failures, nonscheduled maintenance or repair (and reasons therefor), relative movement of the inner vessel, vapor or liquid releases, fires involving natural gas and/or from other sources, negative pressures (vacuum) within the storage tanks, and higher than predicted boil-off rates.
12. Provide a history of activities since operations began.
13. Identify changes in the facility design, process equipment, process plumbing, control/instrumentation systems, hazard detection and control systems, operations, or operating philosophy which have been made since operations began. For each such change, describe in detail the original design, the present design, and the rationale for the change.
14. Provide an up-to-date detailed plot plan and piping and instrumentation diagrams for the facility reflecting all modifications and changes that have been made. Also, provide an overall schematic diagram of the entire process flow system.

1-4-80

S. C. Sandusky  
Manager, Natural Gas Division  
Production, U.S. & Canada



Findlay, Ohio 45840  
Tel. OFFICE FILE COPY

January 4, 1980

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

Dear Sir:

Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

This is to advise that agreement has been reached concerning price increases for the sale of LNG to The Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd. by Marathon Oil Company and Phillips Petroleum Company as follows:

- 1) Effective January 1, 1980, the price will be \$3.36 per MMBtu; and
- 2) Effective April 1, 1980, the price will be equated to the weighted average price of crude oil imported into Japan during the third month previous to the month of LNG delivery.

Payment for LNG delivered after January 1, 1980, will be made at the increased price. The document evidencing this agreement is in the process of being executed. Copies of the agreement will be filed pursuant to Section 153.8 of the Commission's regulations after execution.

Yours very truly,

A handwritten signature in cursive script, appearing to read 'S. C. Sandusky'.

SCS:blc

Phillips-Marathon Imports of LNG  
to Japan 1/

	Annual Average Price ¢/MBtu <u>2/</u>	Quantity MMBtu's
1967 authorized	52.00	50,570,000
1972	55.00	48,407,316
1973	57.00	49,070,003
1974	73.40	50,559,586
1975	136.70	53,505,487
1976	166.00	50,252,353
1977	194.30	52,137,596
1978	215.00	48,886,576
1979	230.00	51,776,182

1/ Source: Form 14

2/ prices rounded



Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, NE  
Washington, DC 20426

1/80

Re: Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226  
Eleventh Amendatory Agreement

Dear Sir:

In accordance with my letter of January 3, 1980, and pursuant to Section 153.8 of the Commission's Regulations and Ordering Paragraph (C) of the Order authorizing exportation in the above docket, there are enclosed two copies of the Eleventh Amendatory Agreement dated December 13, 1979, between The Tokyo Electric Power Company, Inc. and Tokyo Gas Company Limited, as Buyers, and Phillips Petroleum Company and Marathon Oil Company, as Sellers, covering the purchase and sale of Kenai LNG.

A copy of this amendment is being furnished the Economic Regulatory Administration, Attention: Mr. Finn K. Neilsen, Director, Import/Export Division, Office of Petroleum Operations, pursuant to Mr. Neilsen's letter dated June 4, 1980.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

By

  
W. B. Gaul

WBG:ja  
Enclosures - 2

cc: Mr. Finn K. Neilsen ← **COPY FOR** →  
Director, Import/Export Division  
Office of Petroleum Operations  
Economic Regulatory Administration  
Department of Energy  
2000 M Street, NW  
Washington, DC 20461

Marathon Oil Company  
Mr. S. C. Sandusky, Manager  
Natural Gas Division  
539 South Main Street  
Findlay, Ohio 45840

ELEVENTH AMENDATORY AGREEMENT

THIS ELEVENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers",

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 2nd day of March, 1979) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective January 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended by deleting the words and figure "two hundred and thirty-six cents (236¢)" and substituting the words and figure "three hundred and thirty-six cents (336¢)" therefor.

2. Effective April 1, 1980, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be deleted in its entirety and the following substituted therefor:

"Section 9.1(a) The price Buyers shall pay Sellers for all LNG delivered to Buyers hereunder prior to June 1, 1984, shall be the weighted average price (expressed in United States cents per million BTU) of all crude oil imported into Japan in the third month prior to the month in which the delivery of LNG is made, which shall be developed from data in "Japan Exports and Imports - Commodity by Country" published monthly by the Japan Tariff Association."

3. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 13th day of December, 1979.

BUYER:

THE TOKYO ELECTRIC  
POWER COMPANY, INC.

BY: Saichi Iwasawa  
President

TOKYO GAS COMPANY, LTD.

BY: Takao Murakami  
President

SELLER:

MARATHON OIL COMPANY

BY: [Signature]  
President

PHILLIPS PETROLEUM COMPANY

BY: [Signature]  
President

3-9-79



PHILLIPS PETROLEUM COMPANY

1000  
6000

March 9, 1979

Mr. Kenneth F. Frank, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, NE  
Washington, DC 20426

Re: Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226

Dear Sir:

This is to advise that an agreement has been reached for a price increase to \$2.36 per million Btu effective April 1, 1979, for the sale of LNG to The Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited by Phillips Petroleum Company and Marathon Oil Company. Payment for LNG delivered on or after April 1, 1979 will be made at the increased price. The document evidencing this agreement is in the process of being executed and copies thereof will be filed with the FERC pursuant to Section 153.8 of the Commission's Regulations after execution.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

By

*M. D. Calbra*

M. D. Calbra

MS:gb

cc: Marathon Oil Company  
539 South Main Street  
Findley, OH 45826

Attn: Mr. W. A. Sackmann

TENTH AMENDATORY AGREEMENT

FILED  
OFFICE OF THE SECRETARY  
1979 JUN 12 AM 11:02  
FEDERAL ENERGY  
REGULATORY COMMISSION

THIS TENTH AMENDATORY AGREEMENT, made by and between THE TOKYO ELECTRIC POWER COMPANY, INC. (Tokyo Electric) and TOKYO GAS COMPANY, LTD. (Tokyo Gas), corporations organized and existing under the laws of Japan, hereinafter collectively referred to as "Buyers", and MARATHON OIL COMPANY (Marathon) and PHILLIPS PETROLEUM COMPANY (Phillips), corporations organized and existing under the laws of various states of the United States of America, hereinafter collectively referred to as "Sellers".

WITNESSETH:

WHEREAS, on the 6th day of March, 1967, Buyers and Sellers entered into a certain Liquefied Natural Gas Sales Agreement (Basic Agreement - as partially amended as of the 22nd day of December, 1977) providing for the purchase by Buyers from Sellers of LNG produced from natural gas reserves located in the State of Alaska, United States of America.

NOW, THEREFORE, in consideration of the mutual and dependent promises herein contained, the parties hereto agree, for the purpose of further amending a part of the Basic Agreement, as follows:

1. Effective April 1, 1979, Article Nine Sub-Section 9.1(a) of the Basic Agreement shall be amended by deleting the words and figure "two hundred and fifteen cents (215¢)" and substituting the words and figure "two hundred and thirty-six cents (236¢)" therefor.

2. Except as herein specifically amended all other terms and conditions of the Basic Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in good faith, by their respective duly authorized officers, as of the 2nd day of March, 1979.

BUYER:

SELLER:

THE TOKYO ELECTRIC  
POWER COMPANY, INC.

MARATHON OIL COMPANY

BY:

*Shinji Ueno*  
President

BY:

*H. D. Hoffman*  
President

TOKYO GAS COMPANY, LTD.

PHILLIPS PETROLEUM COMPANY

BY:

*T. Murakami*  
President

BY:

*W. R. Stone*  
President





**Marathon  
Oil Company**

RECEIVED  
JAN 9 11 50 AM '78  
FEDERAL POWER  
COMMISSION

**S. C. Sandusky**  
Manager, Natural Gas Division  
Production, U.S. & Canada

*Mr. Brubaker*  
1-4-78  
*Sm 7112*

Findlay, Ohio 45840  
Telephone 419/422-2121

*(give to Ken)  
Plumb*  
*James Key*

January 4, 1978

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

Dear Sir:

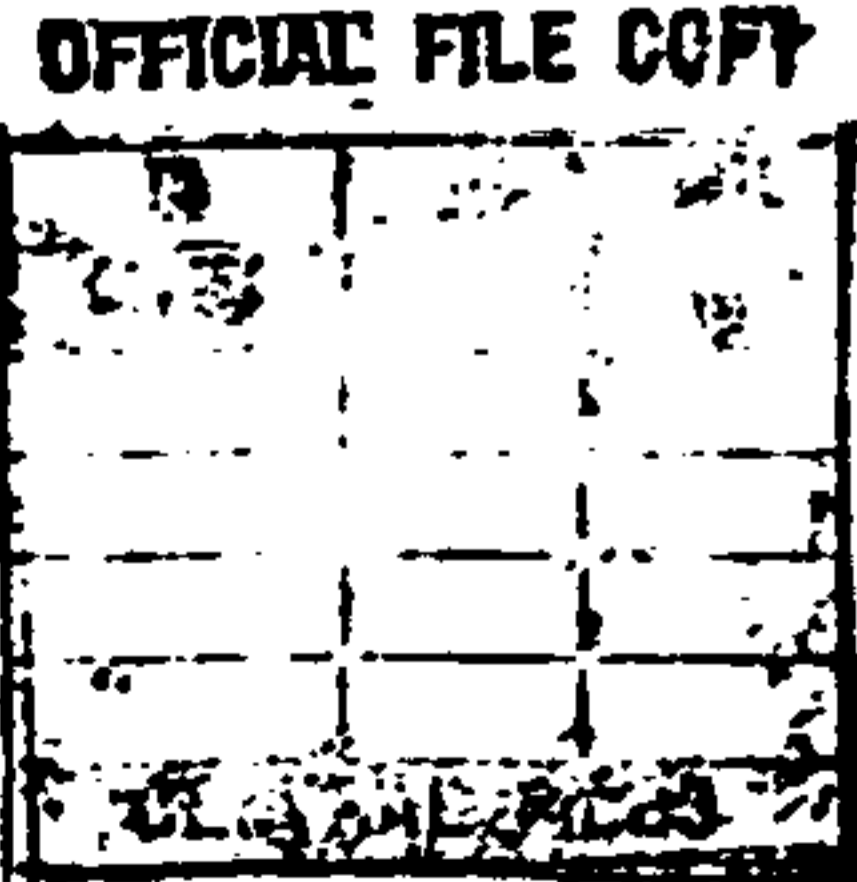
Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

This is to advise that an agreement has been reached for a price increase to \$2.15 per million Btu effective January 1, 1978, for the sale of LNG to The Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited by Marathon Oil Company and Phillips Petroleum Company. Payment for LNG delivered after January 1, 1978, will be made at the increased price. The document evidencing this agreement is in the process of being executed. Copies of the agreement will be filed pursuant to Section 153.8 of the Commission's regulations after execution.

Yours very truly,

SCS:blc

cc: Mr. Sam Jennings - Phillips Petroleum Company



-ADM. - ERA.

1 FEB 78 11:13

*25*

78-001 LNG

12-29-77

~~12-29-77~~  
*[Handwritten signature]*



**PHILLIPS PETROLEUM COMPANY**  
BARTLESVILLE, OKLAHOMA 74004 918 661-6600

NATURAL RESOURCES GROUP  
Gas and Gas Liquids Division

FILED  
OFFICE OF THE  
SECRETARY

JAN 4 11 30 AM 1978

FEDERAL POWER  
COMMISSION

December 29, 1977

**FINA**  
*[Handwritten signature]*

OPERATIONS RP

17 OCT 78 ▲: Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N. E.  
Washington, D. C. 20426

Re: Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226

Dear Sir:

This is to advise that an agreement has been reached for a price increase to \$2.15 per million Btu effective January 1, 1978, for the sale of LNG to The Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited by Phillips Petroleum Company and Marathon Oil Company. Payment for LNG delivered on or after January 1, 1978, will be made at the increased price. The document evidencing this agreement is in the process of being executed and copies thereof will be filed with the FERC pursuant to Section 153.8 of the Commission's Regulations after execution.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

By *M. D. Gilstrap*  
M. D. Gilstrap

MDG:ss

cc: Marathon Oil Company  
539 South Main Street  
Findlay, Ohio 45840  
Attn.: Mr. W. A. Sackmann

JUDITH -  
FOR MOBIL/PHILLIPS  
LNG EXPORT FILE.  
*[Handwritten mark]*



12-20-76

PHILLIPS PETROLEUM COMPANY  
6000 EAST 11TH AVENUE  
DENVER, COLORADO 80231  
GENERAL REGULARS GROUP  
Gas Leases Division

December 20,

Gas Co.

Mr. Bennett  
205 West  
1st Street

Mr. Bennett,  
Secretary  
Department  
of Energy, N. E.  
Washington, D. C.  
20540

Re: Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226

To advise that an agreement has been reached for a price increase  
of ten million Btu effective January 1, 1977, for the sale of LNG  
to Electric Power Company, Inc., and Tokyo Gas Company Limited  
Phillips Petroleum Company and Marathon Oil Company. Payment for LNG  
or after January 1, 1977, will be made at the increased price.  
In executing this agreement, it is in the process of being executed  
and will be subject to the FPC pursuant to Section 151.7  
of the Regulations after execution.

Sincerely yours,  
PHILLIPS PETROLEUM COMPANY

By [Signature]  
[Title]

Marathon Oil Co.  
100 Main St.  
Denver, CO 80202  
U.S.A.

PHILLIPS PETROLEUM COMPANY

May 1, 1976

Mr. Kenneth F. Flumb, Secretary  
Federal Power Commission  
505 North Capitol Street, N. E.  
Washington, D. C. 20426

Re: Phillips Petroleum Company  
Marathon Oil Company  
Docket No. CI67-1226

Dear Sir:

This is to advise that an agreement has been reached for a price increase to \$1.70 per million Btu effective April 1, 1976, for the sale of LNG to The Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited by Phillips Petroleum Company and Marathon Oil Company. Payment for LNG delivered on or after April 1, 1976, will be made at the increased price. The document evidencing this agreement is in the process of being executed and copies thereof will be filed with the FPC pursuant to Section 153.8 of the Commission's Regulations after execution.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

By Paul Gilstrap  
Paul D. Gilstrap

REG:rt

cc: Marathon Oil Company  
520 South Main Street  
Findlay, Ohio 45940  
Attn.: Mr. W. A. Sackmann

W B Emery II  
Manager Natural Gas Division  
Production US & Canada

3-27-75



Findlay Ohio 45840  
Telephone 419.422.2121

March 27, 1975

Mr. Kenneth F. Plumb, Secretary  
Federal Power Commission  
825 North Capitol Street, N.E.  
Washington, D. C. 20426

Dear Sir:

Re: Marathon Oil Company  
Phillips Petroleum Company  
Docket No. CI67-1226

This is to advise that an agreement has been reached for a price increase to \$1.40 per million Btu's effective April 1, 1975, for the sale of LNG to The Tokyo Electric Power Company, Inc., and Tokyo Gas Company Limited by Marathon Oil Company and Phillips Petroleum Company. Payment for LNG delivered after April 1, 1975, will be made at the increased price. The document evidencing this agreement is in the process of being executed. Copies of the agreement will be filed with the FPC pursuant to Section 153.8 of the Commission's regulations after execution.

Very truly yours,

MARATHON OIL COMPANY

*W. B. Emery II*  
W. B. Emery II

WEEII:afn

cc: Mr. Sam Jennings - Phillips Petroleum Company