CANADA

National Energy Board

Reasons for Decision

Dome Petroleum Limited

GH-6-88

December 1988

Gas Exports

National Energy Board

Reasons for Decision

In the Matter of

Dome Petroleum Limited

Application Pursuant to Part VI of the *National Energy Board Act* for a Licence to Export Gas

GH-6-88

December 1988

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Recital and Appearances

IN THE MATTER OF the *National Energy Board Act*, and the Regulations made thereunder; and

IN THE MATTER OF an Application by Dome Petroleum Limited pursuant to Part VI of the *National Energy Board Act* for a licence authorizing the export of natural gas.

HEARD at Calgary, Alberta on 12 October 1988.

BEFORE:

R.B. Horner,Q.C.	Presiding Member
J.-G. Fredette	Member
A.B. Gilmour	Member

APPEARANCES:

F.M. Saville, Q.C.	Dome Petroleum Limited
M. Putnam, Q.C.	Alberta and Southern Gas Co. Ltd.
G. Dann	The Consumers' Gas Company Ltd.
J. Lutes	Foothills Pipe Lines (Yukon) Ltd.
B. Woods D. Bews	Mobil Oil Canada
K.L. Meyer	Pan-Alberta Gas Ltd.
S. Miller	Petro-Canada Inc.
R.B. Brander	Poco Petroleums Ltd.
K. MacDonald N. Boutillier	ProGas Limited
S. Koskie	TransCanada PipeLines Limited
J.B. Jolley, Q.C.	Union Gas Limited
P. McCunn-Miller	Alberta Petroleum Marketing Commission
J. Minor	Minister of Energy for Ontario
D. Tremblay-Lamer	National Energy Board

Chapter 1
The Application

By its application dated 28 July 1988, Dome Petroleum Limited (Dome) sought Board approval of a licence to export natural gas at Emerson, Manitoba. Dome intends to sell the gas to Dome Petroleum Corporation (Dome Corp.), a subsidiary of Dome. Dome Corp. would in turn sell the gas to Northern States Power Company (NSP) for its system supply requirements in the Grand Forks and Fargo areas of North Dakota. Dome currently sells gas to NSP under short-term export orders.

The gas proposed for export would be produced in Alberta and Saskatchewan and would be transported to interconnections with TransCanada PipeLines Limited (TransCanada) via NOVA Corporation of Alberta (NOVA) and TransGas Limited respectively. TransCanada would transport the volumes to Emerson, Manitoba for delivery to Midwestern Gas Transmission Company (Midwestern) in the United States. Midwestern would transport to NSP.

Dome applied for a licence to include the following terms and conditions:

Term	- 1 November 1988 to 31 October 2001 (13 years)
Point of Export	- Emerson, Manitoba
Maximum Daily Quantity	- 422.5 thousand cubic metres (15 MMcf)
Maximum Annual Quantity	- 154 million cubic metres (5.4 Bcf)
Maximum Term Quantity	- 1.5 billion cubic metres (53.1 Bcf)

Chapter 2
Reasons for Decision

2.1 Market-Based Procedure

The Board's July 1987 Reasons for Decision In the Matter of *Review of Natural Gas Surplus Determination Procedures* established the use of a market-based procedure in order to ensure that gas proposed to be exported was surplus to reasonably foreseeable Canadian requirements. In the public hearing process the Board considers the following: complaints, if any, under the complaints procedure; an export impact assessment filed by the applicant; and other factors relating to the public interest including, *inter alia*, gas reserves, productive capacity, pipeline facilities, markets and net benefits to Canada.

2.1.1 Complaints Procedure

The complaints procedure can be used by Canadian gas users to determine whether Canadians are able to purchase gas on terms and conditions similar to those available to an export customer. In this regard the Board assumes that, in the absence of a valid complaint, Canadian gas users do not object to a proposed export on the grounds that they are unable to obtain additional gas supplies under contract on terms and conditions, including price, similar to those in the export proposal.

During these proceedings no party filed a complaint or an objection to Dome's proposed export.

2.1.2 Export Impact Assessment

The export impact assessment (EIA) helps the Board to determine whether a proposed export is likely to cause Canadians difficulty in meeting their future energy requirements at fair market prices. The Applicant is required to assess the ability of Canadian natural gas producers to meet Canadian and export requirements for gas; the impact of the proposed export on domestic natural gas prices; and the ability of Canadian consumers to adjust, if necessary, their energy consumption patterns without substantial difficulty.

The onus is on the Applicant to demonstrate to the Board that the proposed export will not likely lead to any major difficulty for domestic consumers in meeting their energy requirements at prevailing market prices.

In these proceedings the Applicant argued that its cumulative exports were equivalent to less than 0.15 percent of expected total Canadian domestic demand and production over the period of the applied-for licence, and thus would have little or no impact on the factors of concern in the EIA. The Board agrees that volumes of this magnitude should have little impact on Canadian production, consumption and prices of natural gas.

2.1.3 Public Interest Determination

The determination of the Canadian public interest under the market-based procedure requires that the Board examine a number of other relevant factors.

2.1.3.1 Gas Supply

Dome intends to supply the proposed export with approximately 800 million cubic metres (28.2 Bcf) of gas from Saskatchewan and 700 million cubic metres (24.7 Bcf) of gas from Alberta.

Dome provided estimates of its established reserves in Saskatchewan. The Board has analyzed the Applicant's Saskatchewan gas supply and has prepared its own estimate of the remaining reserves available to supply the proposed export. The comparison of these estimates is shown in Table 1.

Table 1

Comparison of Estimates of Dome's Remaining Marketable Gas Reserves in Saskatchewan at 31 December 1987

	($10^6 m^3$)	(Bcf)
DOME	937	33
NEB	874	31

The Board's estimate of reserves is slightly lower than the Applicant's estimate because of differences in the interpretation of pool size, porosity and net pay.

After analyzing the productive capacity[1] from Dome's Saskatchewan pools, the Board concurs with Dome's assessment that productive capacity will be adequate to meet its requirements throughout the term of the proposed export. However, Dome stated that in the event of a shortfall in productive capacity from its Saskatchewan reserves, it could develop additional reserves from lands in Saskatchewan and Alberta in which it currently has interests.

With respect to its Alberta gas reserves, Dome claims that it has a general supply of 22 120 million cubic metres (781 Bcf) from which it can supply the Alberta portion of the export. In order to demonstrate Alberta volumes available for export, Dome provided the Board with its estimate of reserves for the Wembley Halfway 'B' Gas Unit in which it has an approximate 25 percent working interest. Recent discussions with the Alberta Energy Resources Conservation Board (AERCB) have led Dome to dedicate 702 million cubic metres (24.8 Bcf) of gas reserves in the Wembley Halfway

[1] *Productive capacity* is defined as the estimated rate at which natural gas can be produced from a well, pool, or other entity, unrestricted by demand, having regard to reservoir characteristics, economic considerations, regulatory limitations, the feasibility of infill drilling and/or additional production facilities, the existence of gathering, processing and transmission facilities and potential losses due to mechanical breakdown.

’B’ Gas Unit to its removal permit on the understanding that it will have the flexibility to supply the gas from any other properties in its general supply.

The Board’s own estimate of these reserves is compared with Dome’s estimate in Table 2.

The Board is satisfied that Dome has adequate reserves and productive capacity in both Saskatchewan and Alberta to meet the requirements of the proposed export.

Table 2

Comparison of Reserves Estimates for Dome’s Interest in the Wembley Halfway ’B’ Gas Unit at 31 December 1987

	(10^6m^3)	(Bcf)
DOME	2 206	77.9
NEB	2 644	93.3

2.1.3.2 Energy Removal Permits

Since the NSP sale will be supplied from both Saskatchewan and Alberta supply sources, energy removal permits from both provinces are required. Dome indicated that it had received removal permits from the Saskatchewan Energy and Mines Department and the AERCB and the Board has since learned that both permits have received Lieutenant Governor in Council approval.

2.1.3.3 Transportation Arrangements

Alberta gas to be exported to Dome Corp. for resale to NSP will be transported by NOVA to its interconnection with TransCanada at Empress, Alberta. TransCanada will then transport the gas to the export point near Emerson, Manitoba. From the export point the gas will be carried by Midwestern to NSP’s own facilities for redelivery in its North Dakota market area.

Dome’s Saskatchewan gas proposed for export would be delivered to the TransCanada system at Bayhurst, Saskatchewan on facilities which are currently being constructed by TransGas Limited.

Each of the above-noted companies supplying transportation for the Dome proposal has signed a letter of intent to transport the gas once Dome has received the required export authorizations and removal permits.

Dome noted that NSP’s purchases from Dome Corp. would be transported on the Midwestern system pursuant to existing Federal Energy Regulatory Commission (FERC) authorizations which would expire on 26 October 1991. NSP intends to apply for an extension of its transportation service with Midwestern beyond the October 1991 expiry date.

Although Dome Corp. currently holds blanket permits under which it could import the proposed supply, NSP has decided to obtain its own authorization and has applied to the Economic Regulatory

Authority for authority to import the gas. Parties had until 17 October 1988 to oppose the NSP application for import authorization and Dome has since advised the Board that no party opposed the NSP application.

The Board is satisfied that, except for the facilities under construction in Saskatchewan, the necessary facilities to transport the Dome gas are in place and that the transportation contracts and authorizations required to move the Dome gas to the NSP markets will be executed once all regulatory requirements have been met.

2.1.3.4 Market

The Gas proposed for export by Dome for resale to NSP will be used in the Fargo and Grand Forks, North Dakota area. Dome has been selling approximately the same volumes of gas into this area under short-term export orders over the past two years and the proposed licence sale will continue this existing arrangement but on a long-term firm basis.

The market itself tends to be highly seasonal and temperature sensitive with a correspondingly low load factor. However, Dome indicated that because its gas would be market competitive, NSP would purchase the 422.5 thousand cubic metres per day (15 MMcfd) from Dome at a fairly high load factor and would use higher cost domestic and other sources of supply for its peaking requirements.

The Board recognizes that it is NSP's intention to diversify its supply portfolio by contracting for Canadian gas supply where these supplies are competitively priced. The Board is of the view that the NSP market offers an opportunity to achieve relatively high load factor sales.

2.1.3.5 Gas Sales Contract

Dome intends to export gas to Dome Corp., its wholly-owned U.S. subsidiary, which will, in turn, market gas to various U.S. customers. Therefore, as part of its application, Dome filed a 7 April 1986 gas sales agreement under which Dome Corp. agrees to bill its U.S. buyers and remit the proceeds from such sales to Dome less any legitimate costs incurred. Dome estimated such costs to be about one percent of the selling price.

Dome also filed the Dome Corp./NSP 1 November 1987 gas purchase contract which outlines the terms and conditions of the proposed resale of the Dome Corp. gas to NSP. This contract provides for the sale of 425 thousand cubic metres per day (15 MMcfd) on a firm basis, and 566.5 thousand cubic metres per day (20 MMcfd) on an interruptible basis during the period to 31 October 1989. The contract includes the provision for two five-year extensions upon receipt of appropriate authorizations.

The Dome Corp./NSP gas sales agreement provides for a two-part export price consisting of a demand charge and a commodity charge.

The demand charge component of the export price would be $U.S. 214,440 per month ($U.S. 0.48/Mcf or $U.S. 16.94 per thousand cubic metres) which is approximately the fixed cost involved in transporting the gas in Canada to the Emerson, Manitoba export point. The commodity charge would be $U.S. 1.47 per MMBtu ($U.S. 1.37/GJ) during January and February, $U.S. 1.17 per MMBtu ($U.S.1.09/GJ) during November, December, March and April and $U.S. 1.07 per MMBtu ($U.S. 1.00/GJ) during the summer months.

The contract includes a maximum price provision whereby NSP's price plus U.S. transportation costs cannot be greater than NSP's then current delivered cost of gas purchased from Northern Natural Gas Company less $U.S. 0.20 Mcf ($U.S. 7.06 per thousand cubic metres). A minimum pricing condition stipulates that the commodity charge component of the price cannot be less than $U.S. 0.38/Mcf ($U.S. 13.41 per thousand cubic metres) below the most recent 3-month average for U.S. spot gas supplies delivered into Northern Natural Gas Company's system.

Interruptible purchases pursuant to the contract would be at negotiated prices. The contract requires that NSP purchase the total firm daily contract quantity from Dome Corp. prior to purchasing interruptible gas. Dome indicated that interruptible sales were to be exported pursuant to short-term orders and would therefore not be part of the proposed export licence quantities.

The terms and conditions of the Dome Corp./NSP contract are renegotiable on an annual basis commencing 1 November 1989.

The Board notes that export contracts supporting licensed exports and any amendments to those contracts are subject to Board approval pursuant to subsection 35(2) of the *National Energy Board Part VI Regulations*. In this regard the Board requires that any amendments to the Dome/Dome Corp. 7 April 1986 gas sales agreement, or to the 1 November 1987 Dome Corp./NSP gas purchase contract be subject to the Board's consideration under the Part VI Regulations.

2.1.3.6 Cost-Benefit Analysis

The Applicant submitted a social cost-benefit analysis of the proposed gas export sale. The study was intended to evaluate the economic desirability of the gas export from the perspective of Canada as a whole.

Table 3 shows the results submitted by the Applicant of the cost-benefit analysis performed using a real discount rate of 8 percent. Export revenue is estimated assuming a 75 percent load factor, and projected gas prices in Alberta. By-product revenue is estimated on the basis of the Applicant's oil price projection. User costs of the gas export were estimated in accordance with the Board's methodology.

The Applicant analysed the sensitivity of net social benefits to several factors. For example, net benefits to Canada were estimated at $60.7 million and $42.4 million (in 1988 dollars, discounted to 1988) at real discount rates of 6 and 10 percent respectively. An increase in the value of the Canadian dollar from $0.80 U.S. to $0.88 U.S. would reduce projected benefits to $40 million.

No intervenor disputed the reasonableness of the Applicant's cost-benefit analysis and the Board is satisfied that the proposed export is likely to yield economic benefits to Canada.

Table 3

Cost-Benefit Analysis of Dome Application
From a Canadian Perspective: 8% Discount Rate
(in millions of 1988 dollars, discounted to 1988).

Benefits	
Export Revenue	99.08
By-Product Revenue	8.98
TOTAL	108.06
Costs	
Production Costs	14.98
Transmission Costs	3.28
User Costs[1]	39.89
TOTAL	58.15
Net Social Benefit	49.91

1. User cost arises because it generally costs more to find and prove up new natural gas reserves than it costs to develop existing reserves. In a quantitative sense, user cost is a measure of the increased future costs of production that arise from increasing production from existing reserves.

Chapter 3
Disposition

The Board has decided to issue a gas export licence to Dome. Governor in Council approval of the new licence is required before this decision comes into effect. Appendix I contains the terms and conditions of the proposed licence including a requirement that exports under the licence must commence on or before I November 1989. Should this condition not be met, the licence will terminate.

In arriving at its decision, the Board considered a number of factors. Of note was the absence of opposition to the proposed export in the form of either complaints or objections. Dome submitted an Export Impact Assessment which showed that because the proposed export was so small, it would have little impact on total production, gas prices or on Canadian consumption patterns, As a result of its review of these matters under its market-based procedure the Board is satisfied that the proposed export is surplus to reasonably foreseeable Canadian requirements.

The Board is of the view that the proposed export would be in the Canadian public interest. In determining this, the Board reviewed Dome's gas supplies in Alberta and in Saskatchewan and is satisfied that Dome has adequate reserves and productive capacity to meet its requirements including the new licence. As well, the Board believes that the sale to NSP under the terms of the gas sales agreement will be at a fairly high load factor and that the export will, based on its review of the cost-benefit analysis conducted by Dome, yield net benefits to Canada.

R.B. Horner
Presiding Member

J.-G. Fredette
Member

A.B. Gilmour
Member

Ottawa, Canada
December 1988

Appendix I
Terms and Conditions of the Licence to be Issued to Dome

1. The term of this Licence shall be for the period commencing on the date on which approval by the Governor in Council is received and ending on 31 October 1989, at which time, provided that exports have commenced hereunder, the term shall extend to 31 October 2001.

2. The quantity of gas that may be exported under the authority of this Licence shall not exceed:

   (a) 422 500 cubic metres in any one day;

   (b) 154 000 000 cubic metres in any consecutive twelve-month period ending on 31 October; or

   (c) 1 504 000 000 cubic metres during the term of this Licence.

3. As a tolerance, the amount the Licensee may export in any 24-hour period under this Licence may exceed the daily limitation imposed in condition 2 by two percent.

4. Gas exported under the authority of this Licence shall be delivered to the point of export near Emerson, Manitoba.