CANADA

National Energy Board

Reasons for Decision

ProGas Limited

GH-5-86

February 1987

Application for a Licence to Export Natural Gas

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In the Matter of

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Application for a Licence to Export Natural Gas

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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 ProGas Limited pursuant to Section 82 of the *National Energy Board Act* and Section 4 of the National Energy Board Part VI Regulations for a licence authorizing the export of natural gas, filed with the Board under File No. 1537-P38-4.

HEARD in Calgary, Alberta on 7 January 1987.

BEFORE:

R. Priddle	Presiding Member
R.B. Horner	Member
A.B. Gilmour	Member

APPEARANCES:

D.G. Davies K.J. MacDonald	ProGas Limited
L.E. Smith K.M. Simon	Ocean State Power
J.R. Smith, Q.C. A.A. Fradsham	Alberta and Southern Gas Co. Ltd.
N.A. Harburn R. Roberts	Dome Petroleum Limited
J.W. Lutes	Foothills Pipe Lines (Yukon) Ltd.; and Westcoast Transmission Company Limited
G.F. Hulme	KannGaz Producers Ltd.
R.J. Lane	Mobil Oil Canada, Ltd.
G. Clayton	New Brunswick Power
P. McMillan	PSR Gas Ventures Inc.
J. Ebbles	Pan-Alberta Gas Ltd.
G. Dann	The Consumers' Gas Company Ltd.
C. Dahl Rees	TransAlta Utilities Corporation
D. Russell	TransCanada PipeLines Limited

R.W. Graw	National Energy Board

Chapter I
Background

By application dated 26 September 1986 ProGas Limited (ProGas) requested the National Energy Board (Board) to issue a licence authorizing ProGas to export natural gas. Accordingly, pursuant to Hearing Order GH-5-86, a hearing was held in Calgary, Alberta on 7 January 1986.

Nineteen parties filed interventions. Twelve appeared at the hearing; none presented evidence. During the proceedings two parties, other than the Board, conducted cross examination and three parties, other than ProGas, presented final argument. No party opposed the ProGas application.

This report constitutes the Board's Reasons for Decision. Chapter 2 describes the application; Chapter 3 sets out the Board's reasons; Chapter 4 contains the decision.

Chapter 2
The Application

By its application dated 26 September 1986 ProGas sought a licence to export gas at Niagara Falls, Ontario commencing 1 May 1989. The United States customer, Ocean State Power (OSP), is a partnership which will be composed of affiliates from Eastern Utilities Associates, New England Electric System, Newport Electric Corporation, TransCanada PipeLines Limited (TransCanada) and J. Makowski Associates, Incorporated. OSP will use the gas to fuel a new 235-megawatt, combined-cycle electrical power plant which it intends to build in Burrillville, Rhode Island. OSP has contracted the entire output of the plant to four New England power companies, and construction of the plant is expected to begin in mid-1987.

The gas to be exported would be transported by TransCanada to the Niagara Falls, Ontario export point. The gas would then be carried from the international border to the point of interconnection with the OSP facilities by Tennessee Gas Pipeline Company (Tennessee).

ProGas applied for a licence with the following terms and conditions:

Export Point	Niagara Falls, Ontario or such pother point as agreed to by ProGas and OSP and approved by the Board.
Term	1 May 1989 to 31 October 2009. The first six-month period of the licence is requested in order to test the new OSP facility.
Maximum Daily Quantity	1 420 000 cubic metres (50 MMcf)
Maximum Annual Quantity	517 million cubic metres (18.25 Bcf)
Maximum Term Quantity	10 340 million cubic metres (365 Bcf)

Chapter 3
Reasons for Decision

3.1 Issues Considered by the Board in Reaching Its Decision

In its review of the ProGas application, the Board considered whether the proposed exports were surplus to reasonably foreseeable Canadian requirements; the nature of the proposed market and the likelihood of OSP purchasing the gas contracted from ProGas; the impact, if any, that the Board's decision could have on required pipeline facilities; and whether positive economic benefits would accrue to Canada in the event that the licence was granted and exports took place.

3.1.1 Supply and Deliverability

ProGas provided estimates of reserves for those fields from which it intends to produce the natural gas for the proposed exports. For comparative purposes the Board prepared its own estimate of the reserves in question. Table 1 shows that the Board's estimate is less than that of ProGas, but sufficient for the volumes requested in this application and for ProGas' previously authorized exports.

The Board notes that the Applicant holds a gas removal permit from Alberta for 80.6 billion cubic metres, which is sufficient to meet the supply requirements for currently authorized and proposed exports. The Board is satisfied that ProGas has adequate supply for its proposed exports.

ProGas provided the results of its detailed assessment of deliverability of its contracted reserves. The Board is satisfied that ProGas will have adequate deliverability to meet its requirements.

Table 1

Comparison of Estimates by ProGas and the NEB of Reserves in Fields To be Relied Upon for Authorized and Proposed Exports (10^6m^3)

	Remaining Established Reserves	Remaining Authorized Exports	Proposed Exports	Total Remaining and Authorized Proposed Exports
ProGas[1]	99 752	38 244	10 340	48 584
NEB[2]	93 050	38 244	10 340	48 584

1. The ProGas remaining reserves estimate is as of 31 May 1986.

2. The Board's estimate is of reserves remaining at 31 December 1985.

3.1.2 Natural Gas Surplus

ProGas submitted that, based on the Board's own estimates of domestic and export demand[1] and taking into account the recently approved extension of ProGas' export licence GL-98 and the proposed export to OSP, the forecast reserves-to-production ratio in the Western Canadian sedimentary basin would not fall below 15 until 2004. As well, the Company's productive capacity analysis indicated that there would be spare productive capacity until 2004.

ProGas noted that the volumes proposed to be exported are small relative to the production of natural gas in Canada and indicated that approval of the project would have little effect on deliverability in the latter years of the export The Board notes that authorization of the proposed exports would lead to a technical breaching of the Board's surplus determination procedures in the latter years of the term of the export. The deficits are small and, in the Board's opinion, well within the margin of forecasting

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1 ProGas quotes the figures outlined in the Board's April 1986 report on Phase 1, Surplus Determination Procedures of the Gas Export Omnibus Hearing, 1985.

error. The Board finds that a rigid application of the Reserves to Production Ratio surplus determination procedure is not in the public interest in this case.

Similarly, application of the Productive Capacity Check shows minor deficits in the closing years of the proposed export licence. A key purpose of this test is to serve as a form of early warning of potential deliverability problems so that corrective action can be initiated. It is the Board’s view, in this case, that the deficits are de minimus and the time at which they may arise is sufficiently removed that remedial action can and will be taken. The Board finds, therefore, that the amounts proposed to be exported by ProGas do not exceed the surplus remaining after making due allowance for reasonably foreseeable requirements for use in Canada.

3.1.3 Transportation and Facilities

Under the Applicant’s export proposal, the gas would be transported from ProGas’ sources of supply in Alberta, through the system of NOVA, An Alberta Corporation (NOVA) to an interconnection with TransCanada at the Alberta/Saskatchewan border. From there the gas would be transported by TransCanada to the international boundary near Niagara Falls, Ontario, where it would be delivered to Tennessee. The gas would then be transported by Tennessee via its Niagara Spur and existing mainline system to a point in Worcester County, Massachusetts. From Worcester County, the gas would be transported approximately 18 kilometres via Tennessee’s proposed Rhode Island Extension to the OSP plant site in Burrillville, Rhode Island.

The Applicant indicated that additional pipeline facilities would be required on both the NOVA and TransCanada systems to accommodate OSP’s 1 420 000 cubic metres per day export volume. In the benefit-cost analysis submitted by the Applicant, the capital cost of the required additional facilities was estimated to be $2.1 million for NOVA and $50 million for TransCanada (1986$). The Applicant also submitted evidence showing that the capital cost of the expansion might deviate somewhat from these estimates depending on whether or not other export projects proceed. The incremental annual operating and maintenance costs (excluding fuel) were estimated at $0.24 million on NOVA and $0.88 million on TransCanada, both expressed in 1986 dollars. The Board is of the view that the overall net benefits of the project will be positive, even if the capital costs of additional facilities are somewhat higher than presently estimated.

3.1.4 Market

An applicant for an export licence is required to demonstrate that the market to be served offers reasonable assurance that the gas proposed for export will be taken. In this regard ProGas provided the following evidence.

3.1.4.1 Market Potential

ProGas submitted that the proposed export to OSP was unique in that it offered Canadian gas producers an attractive, new market for gas over a 20-year term at both a high load factor and a premium price. ProGas’ export price for sales to OSP will be composed of a demand charge, to be paid monthly, and a commodity charge. The demand charge will cover the fixed transportation costs incurred in Canada to move the gas to the Niagara Falls, Ontario export point. The export price would be indexed to the monthly cost of fossil fuels used by the participants in the New England Power Pool

(NEPOOL). NEPOOL is a dispatching and planning agency for 93 electrical utilities which are located in the northeastern United States. The main objectives of NEPOOL are to provide the most economic power supply for the region, ensure reliable service and have an equitable sharing of the costs incurred.

OSP has contracted 100 percent of the power output of its proposed plant on a 20-year firm basis to four New England power companies: Boston Edison Company, New England Power Company, Montaup Electric Company, and Newport Electric Corporation. ProGas noted that each of these purchasers is a member of NEPOOL and that NEPOOL meets its daily requirements by dispatching the electrical generating facilities of its participants on an increasing incremental cost of generation basis. ProGas stated that under this procedure the power from the OSP facility would be dispatched based upon the commodity cost of the gas purchased by OSP plus the variable U.S. transportation charges incurred. ProGas submitted that, based on this dispatching procedure, the OSP facility was expected to be used to supply base-load requirements and be called upon following NEPOOL's hydro and nuclear generating capability.

ProGas further stated that OSP would purchase gas at a high load factor because it had contracted for transportation of its gas on a firm basis in the United States and that increased purchases would reduce per unit costs of transportation. Similarly, high load factor operation would also minimize the per unit demand charge incurred with ProGas.

ProGas noted that, in order to compete within NEPOOL, its export price was to be indexed to the NEPOOL fossil fuel price paid for all fossil fuels used to generate electricity by its members. Furthermore, OSP's power would become available to the remaining 89 other NEPOOL members if it was not required by the four OSP purchasers.

Based on the evidence submitted by ProGas, the Board finds that the proposed exports to OSP represent an attractive new market for Canadian gas. The demand/commodity pricing methodology employed by ProGas and OSP and the electricity dispatching methodology employed by NEPOOL in meeting its electrical requirements will provide a strong incentive for those exports to occur at a high load factor.

3.1.4.2 The Need for a 20-Year Term

The ProGas witnesses, which included representatives from OSP and the power purchasers, stressed the need for a firm 20-year gas supply contract. ProGas was adamant that a firm 20-year supply of gas was required to enable OSP to demonstrate to state and federal regulators that its gas-fired plant would be more advantageous on a life-cycle basis than a new coal-fired facility. OSP's financing and contractual commitments with its utility buyers also require at least a 20-year term. The initial one-half year portion of the proposed licence is required for testing purposes for the new OSP facility.

3.1.5 Sales Contract

In support of its application, ProGas filed an executed precedent gas purchase agreement dated 17 April 1986 between itself and OSP. Upon completion of all the terms and conditions precedent to that agreement both parties have agreed to enter into the gas purchase contract as filed.

3.1.6 Status of United States Regulatory Approvals

ProGas stated that OSP was proceeding on schedule to obtain the regulatory approvals required in the United States. OSP has filed its application for import authorization with the Economic Regulatory Administration (ERA). The Federal Energy Regulatory Commission (FERC) review of the power sales contracts and approval of the transportation arrangements with Tennessee have begun. OSP's environmental report and request for exemption under the *Fuel Use Act* have been filed with the ERA. In addition, applications for state and local approvals were about to be filed.

3.1.7 Benefit-Cost Analysis

The Applicant submitted a benefit-cost study of the proposed export which examined whether the project would yield positive net social benefits to Canada. The approach taken in the analysis was to identify private benefits and costs, and to apply the necessary adjustments to move from a private to a social perspective. Annual revenue and cost streams were projected by using forecasts of export revenues, by-product revenues, and the incremental capital, operating and production costs associated with the project.

The only adjustment that was undertaken to put the analysis on a social basis related to the cost of the gas. It was assumed that the natural gas used in the OSP project would otherwise be used to meet domestic requirements in the future; consequently, the project would necessitate the development of more expensive gas reserves to meet domestic requirements sooner than would be the case in the absence of the project. This "user cost" was included as an additional cost of the project.

According to the analysis submitted by the Applicant, the project is expected to yield net benefits of over $100 million (present value 1986 $) to Canada.

Based on the evidence submitted by the Applicant and on its own analysis, the Board finds that there is a high degree of certainty that the export project will yield positive net benefits to Canada.

Chapter 4
Disposition

The Board has decided to issue a gas export licence to ProGas. Governor in Council approval of the new licence is required before this decision may come into effect. The new licence will include the requested terms and conditions with respect to maximum daily and annual authorization, term quantity and licence term. The licence will include a ten percent daily operating tolerance condition and a two percent monthly operating tolerance condition. The Board has also decided to include in the licence a condition which will require that export sales under the licence must start before 1 November 1992. Should the condition not be met, the licence will terminate on 31 October 1992. Attached as Appendix 1 is a table showing the terms and conditions of the new ProGas licence.

The Board's decision took account of a number of factors. The Board notes the uniqueness of the ProGas/OSP export project. This export will represent the first electrical generation facility in the United States to be fuelled entirely by Canadian gas. The pricing provisions contained in the ProGas/OSP Gas Purchase Contract and the power dispatching methodology utilized by NEPOOL are such that ProGas' exports will probably remain competitively priced and will be purchased at a high load factor by OSP over the term of the export licence. The proposed demand charge component of the export price will recover the fixed Canadian transportation costs incurred. Based on the benefit-cost analysis performed by ProGas and on the Board's own analysis, the export project is expected to yield positive net benefits to Canada.

The Board believes that the features of the ProGas/OSP export proposal, which include its being an attractive new market expected to operate at a high load factor and provide positive economic benefit to Canada and to Alberta producers, warrant licensing of the export volumes for the full term requested by ProGas. The Board accepts ProGas' rationale that the full licence term is required in order for OSP to demonstrate that its gas-fired facility would be preferable to a new coal-fired facility, to provide for financing of the project, and to meet the needs of its power purchasers. As outlined in the section of the report dealing with surplus, the Board finds that the amounts proposed to be exported by ProGas do not exceed the surplus remaining after making due allowance for reasonably foreseeable requirements for use in Canada.

The Board, in making its decision, notes the advanced state of readiness of the OSP project and the commitment made to date by OSP and its power purchasers. The Board is satisfied with the current progress achieved by OSP in securing the required U.S. regulatory approvals. The Board is also satisfied with the terms and conditions of the proposed ProGas/OSP gas purchase contract.

R. Priddle
Presiding Member

R.B. Horner
Member

A.B. Gilmour
Member

Ottawa, Canada

Appendix 1
Terms and Conditions of the Licence to be Issued to ProGas

1. The term of this Licence shall be from the 1st day of May, 1989, to the 31st day of October, 1992, at which time, provided that exports have commenced hereunder, the term shall extend to the 31st day of October, 2009.

2. The quantity of gas that may be exported under the authority of and in accordance with this Licence shall not exceed;

   (a) for the period commencing on the 1st day of May, 1989, and ending on the 31st day of October, 2009, 1 420 000 cubic metres in any one day;

   (b) 517 000 000 cubic metres in any consecutive twelve-month period ending on the 31st day of October; or

   (c) 10 340 000 000 cubic metres during the term of this Licence, if extended in accordance with condition 1.

3. (1) As a tolerance, the amount the Licensee may export in any 24-hour period under this Licence may exceed the daily limitations imposed in condition 2 by ten percent of such amounts.

   (2) The amount which the Licensee may export in any calendar month under this Licence may exceed the quantity allowable during that period by two percent.

4. Gas to be exported under the authority of and in accordance with this Licence shall be delivered to the point of export near Niagara Falls, in the Province of Ontario.