National Energy Board

Office national de l'énergie

LETTER DECISION

File OF-EI-Gas-GL-B275-2014-01 01
13 August 2015

Mr. Chris W. Sanderson, Q.C
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Facsimile 604-694-2902

Mr. John Godbold
Bear Head LNG Corporation
1001 McKinney St. Suite 600
Houston, Texas 77005

Dear Mr. Sanderson and Mr. Godbold:

Bear Head LNG Corporation
6 November 2014 Application for a Licence to Export Natural Gas and Import Natural Gas
National Energy Board Reasons for Decision

On 6 November 2014 Bear Head LNG Corporation (Bear Head LNG or Applicant) applied to the National Energy Board (NEB or Board) pursuant to section 117 of the *National Energy Board Act* (NEB Act) for a licence (Export Licence) to export natural gas in the form of liquefied natural gas (LNG) and a licence (Import Licence) to import natural gas (Application).

In respect of the Export Licence, Bear Head LNG seeks:

- a 25 year Export Licence starting on the date of first export;
- a maximum annual export quantity of 19.4 billion cubic metres (10^9 m^3) or 685.9 billion cubic feet (Bcf)[1];
- a maximum term export quantity of 453 10^9 m^3 or 16 003 Bcf over the term of the Export Licence[2];
- the point of export to be the outlet of the loading arm of the LNG facility to be located in Richmond County near Point Tupper, Nova Scotia; and
- an early expiration clause where, unless otherwise authorized by the Board, the Export Licence will expire ten years from the date of Governor in Council approval of the issuance of the Export Licence if exports have not commenced on or before that date.

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[1] Applied-for annual export quantity of 16.9 10^9 m^3 (596.4 Bcf) plus the 15 per cent annual tolerance.
[2] Applied-for term export quantity of 394 10^9 m^3 (13 916 Bcf) is adjusted for ramp-up schedule plus the 15 per cent tolerance.

In respect of the Import Licence, Bear Head LNG seeks:

- a 25 year Import Licence starting on the date of first import;
- a maximum annual import quantity of 14.2 $10^9 m^3$ (503 Bcf);
- a maximum term quantity of 356 $10^9 m^3$ (12 574 Bcf);
- the point of import to be the point at which the Maritimes & Northeast Pipeline crosses the Canada-United States border near St. Stephen, New Brunswick, or such other point as the Board may approve; and
- an early expiration clause where, unless otherwise authorized by the Board, the Import Licence will expire ten years from the date of Governor in Council approval of the issuance of the Import Licence if imports have not commenced on or before that date.

Summary of the Public Notice, Comment Period and Information Requests

Bear Head LNG published a Notice of Application and Comment Period (Notice) for impacted persons in *La Presse* on 15 April 2015 and the *Globe and Mail* on 16 April 2015. The Notice requested that any impacted person who wished to file submissions that are relevant to the Surplus Criterion in section 118[3] of the NEB Act do so by 19 May 2015 and that Bear Head LNG respond to any comments by 27 May 2015.

On 19 May 2015, the Board received submissions from the Nova Scotia Department of Energy and Heritage Gas Limited (Heritage Gas).

On 27 May 2015, Bear Head LNG filed a reply to the comments filed by the Nova Scotia Department of Energy and Heritage Gas.

The Board issued Information Requests (IR) to Bear Head LNG on 9 March 2015 and on 27 April 2015. Bear Head LNG filed its responses on 17 March 2015 and 13 May 2015, respectively.

The Board addressed Heritage Gas's comments regarding the assessment process on 11 June 2015.

Surplus Determination

Bear Head LNG submitted that, as required by the Surplus Criterion, the quantity of gas it seeks to export does not exceed the surplus remaining after due allowance has been made for the reasonably foreseeable requirements for use in Canada. In support of this submission, Bear Head LNG submitted the following studies: (1) *Long Term Natural Gas Supply and Demand Forecast to 2050* for Bear Head LNG prepared by Ziff Energy – A Division of HSB Solomon Associates Canada Ltd. (Ziff); (2) *A Description of the Implications of Bear Head LNG's applied-for*

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[3] Section 118 of the NEB Act states: "On an application for a licence to export oil or gas, the Board shall satisfy itself that the quantity of oil or gas to be exported does not exceed the surplus remaining after due allowance has been made for the reasonably foreseeable requirements for use in Canada, having regard to the trends in the discovery of oil or gas in Canada."

exports on the ability of Canadians to meet their natural gas requirements and an Assessment whether this gas is surplus to reasonably foreseeable Canadian requirements prepared by Mr. Roland Priddle (Mr. Priddle) and (3) *Canadian LNG Exports and Global LNG Outlook* prepared by Poten & Partners (Poten).

Ziff submitted that the North American and western Canadian gas resource bases are robust and continue to grow with the development of horizontal drilling and multi-stage fracture technologies. Ziff noted that these developments have led to an abundance of low-cost natural gas available in North American and Canadian tight and shale gas plays. Ziff expects natural gas markets in North America to continue to function in a rational manner during the forecast period and to provide appropriate market signals for the development of resources to meet Canadian domestic and export demand.

Ziff stated that Canadian gas markets have been adequately supplied and this trend is forecast to continue as these markets are a component of the integrated North American market. Ziff submitted that the North American gas market is highly liquid, open, and efficient. Ziff also provided a Canadian demand sensitivity analysis considering a 20 per cent increase in Canadian demand which assumed that additional demand would be met by a combination of increased Canadian natural gas production and increased imports from the Lower-48 states, within a well-functioning North American market. Mr. Priddle observed that the marketplace will generally operate in such a way that Canadian requirements for natural gas will be met. Mr. Priddle and Ziff concluded that the export of gas proposed by the Applicant will not cause Canadians any difficulty in meeting their natural gas requirements.

In its supply/demand forecast, Ziff included nearly all NEB approved exports to date, to a maximum of 18 Bcf per day when considering the total level of LNG exports from Canada. Ziff considered the approach as a stress test for the Canadian natural gas market but also stated that it did not consider the current level of NEB-approved LNG export volumes to be likely and noted limiting factors such as significant capital costs, consolidation within Canadian LNG projects, and the existence of global competition. Ziff noted that economics and market differentials will ultimately determine if increased liquefaction investment is warranted.

When considering the level of Canadian LNG exports, Poten provided low and high case projections ranging from 10 - 77 million metric tonnes/year (approximately 1.3 - 10.3 Bcf per day[4]). In considering the risks, Poten stated that it is confident that the likely range of exports would be far closer to the low end than the high end. Poten noted that LNG ventures are very challenging to bring to fruition and lengthy delays are common. Poten stated that complex factors facing LNG ventures include difficult resource locations and feedgas compositions, remote plant sites with challenging logistics, heterodox stakeholders, environmental and regulatory requirements, financing constraints and proliferating contracts to align both in timing and content. Poten stated there are many ventures competing for robust, though not unlimited, demand for LNG, and, given the practical time and resource constraints of project development, many will fail.

[4] The Board converted metric tonnes to Bcf per day based on a conversion factor of .1334232.

Views of the Board

We have decided to issue an Export Licence to Bear Head LNG, subject to the approval of the Governor in Council, to export natural gas with the terms and conditions described in Appendix I to this letter. In addition, we have decided to issue an Import Licence to Bear Head LNG, subject to the approval of the Governor in Council, to import natural gas with the terms and conditions described in Appendix II to this letter.

Our role, under section 118 of the NEB Act, is to assess whether the gas proposed to be exported does not exceed the surplus remaining after due allowance has been made for the reasonably foreseeable requirements for use in Canada, having regard to trends in the discovery of gas in Canada. In fulfilling this mandate, we recognize that Canadian natural gas requirements are met in the context of free trade within a North American energy market. Depending on regional characteristics, exports and imports contribute to either natural gas supply or demand. It is in this context that we consider whether the Surplus Criterion in the NEB Act is satisfied.

We have determined that the quantity of natural gas proposed to be exported by Bear Head LNG is surplus to Canadian needs. The Board is satisfied that the natural gas resource base in Canada, and the overall North American natural gas resource base, is large and can accommodate reasonably foreseeable Canadian demand, including the LNG exports proposed by the Applicant, and a plausible potential increase in demand. The Board agrees with the evidence of Bear Head LNG that the North American natural gas market is highly liquid, open, efficient, integrated, and responsive to changes in supply and demand. The Board further accepts the Applicant's analysis of Canadian demand and, given the size of Canadian natural gas resources and the integrated and well-functioning nature of the North American natural gas market, concludes that Canadian gas requirements will be met.

The Board monitors Canada's natural gas supply and demand, including LNG developments. Monitoring assists the Board in identifying where markets may not be functioning properly or where the evolution of supply and demand casts doubt on the ability of Canadians to meet future energy requirements. The Board notes that the evidence in this Application is generally consistent with the Board's own market monitoring information. Recent studies of natural gas resources indicate that advances in drilling and hydraulic fracturing have resulted in greatly increased estimates of recoverable resources in the Western Canada Sedimentary Basin and in the United States. Furthermore, since deregulation of Canadian gas markets in 1985, natural gas markets in North America have functioned efficiently and there is no evidence to suggest that they will not continue to do so in the future. The North American natural gas market is characterized by a large number of buyers and sellers, an extensive and growing pipeline and storage network, and a sophisticated commercial structure.

In aggregate, the LNG export licence applications submitted to the Board to date represent a significant volume of LNG exports from Canada. However, all of these LNG ventures are competing for a limited global market and face numerous development and construction challenges. The Board acknowledges Bear Head LNG's evidence which cites several factors that could limit Canadian LNG volumes, including significant capital costs, global competition, remote locations and difficult logistics. The Board will not predict which licences will be used or used to the full allowance and, therefore, the Board evaluates each application on its own merit.

Issues Raised During the Comment Period

On 19 May 2015, Mr. Murray Coolican, Deputy Minister of Energy, Nova Scotia Department of Energy filed a Letter of Comment supporting Bear Head LNG's Application because it has potential to underpin infrastructure development to enable large volumes of U.S. and Canadian gas to flow to Nova Scotia for both domestic and export markets. Mr. Coolican's letter also stated that the Bear Head LNG project provides an opportunity for increased security of supply and liquidity in gas markets served by Maritimes and Northeast Pipeline (M&NP). Finally, Mr. Coolican's letter stated that the Bear Head LNG project should serve to grow interest in exploration and development in the offshore.

On 19 May 2015, Heritage Gas filed a Letter of Comment which stated that M&NP is the only pipeline connecting the Maritimes with production basins in other parts of North America and that Bear Head LNG's plan to source and transport natural gas to the proposed facility will have an impact on capacity available on the M&NP system. Heritage Gas further stated that as a result of the decline in domestic offshore natural gas supplies, it is expected that Maritimes shippers will be required to source their natural gas supply needs from other North American production basins and that Bear Head LNG's gas procurement plan may affect how and where natural gas flows into the Maritimes. Finally, Heritage Gas stated that depending on the Applicant's natural gas procurement plan, additional gas infrastructure development in Nova Scotia may be required which could impact the gas procurement of other natural gas users in the province, including Heritage Gas.

On 27 May 2015, Bear Head LNG filed its reply to the comments filed by Mr. Coolican and Heritage Gas. Bear Head LNG noted that the Nova Scotia Department of Energy supports Bear Head's project and that Heritage Gas did not take a position as to whether the applied-for Export Licence should be granted. In its reply, Bear Head LNG noted that it has not made any arrangements with M&NP to make use of the existing transportation system and that if any such arrangements were to be made in the future, Heritage Gas would have an opportunity to voice concerns during the Board's processes for review of tolls and tariffs and facilities additions. Bear Head LNG also submitted that the Bear Head LNG project would provide benefits to the Maritime Provinces by: increasing utilization factors on existing facilities; providing access to new infrastructure; making the Maritimes gas market more viable for producers and midstream infrastructure builders and operators; and improving their supply options over the longer term.

Views of the Board

The Board considers comments that are relevant to its consideration of the Surplus Criterion in section 118 of the NEB Act. The Board finds that the comments relating to infrastructure development, utilization factors on existing facilities and the capacity available on M&NP are matters outside the scope of the Board's jurisdiction on natural gas export licence applications.

The Board is of the view that Canadian natural gas requirements are met in the context of free trade within an integrated North American natural gas market. Bear Head LNG has submitted evidence, supported by the Board's market monitoring, that the North American natural gas market is functioning effectively to match supply and demand, and it is expected to continue to do so in the future.

Relief Requested

Relief from Filing Requirements

Bear Head LNG requested relief from the information requirements for gas import and export licence applications set out in section 12 and 13 of the *National Energy Board Act Part VI (Oil and Gas) Regulations* (Part VI Regulations) that are not specifically addressed in the Application.

Views of the Board

The Board notes that it may exempt applicants for gas import and export licences from the filing requirements contained in section 12 and 13 of the Part VI Regulations. In its *Interim Memorandum of Guidance Concerning Oil and Gas Export Applications and Gas Import Applications under Part VI of the NEB Act*, dated 11 July 2012, the Board indicated that it no longer requires applicants for gas export licences to file the information contained in section 12(f) or 13(e) of the Part VI Regulations. The Board further recognizes that not all of the other filing requirements contained in sections 12 and 13 of the Part VI Regulations are relevant to its assessment of this Application. Therefore, the Board grants Bear Head LNG's request to be exempted from the filing requirements contained in section 12 and 13 of the Part VI Regulations that were not included in the Application.

R.R. George
Presiding Member

P.H. Davies
Member

J. Gauthier
Member

August 2015

Calgary, Alberta

Appendix I

Terms and Conditions of the Licence to be Issued for the Export of Natural Gas

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General

1. Bear Head LNG Corporation shall comply with all of the terms and conditions contained in this licence unless the National Energy Board (Board) otherwise directs.

Licence Term, Conditions and Points of Export

2. Subject to Condition 3, the term of this licence shall commence on the date of first export and shall continue for a period of 25 years thereafter.

3. This Licence shall expire 10 years from the date of Governor in Council approval of its issuance, unless exports have commenced on or before that date, or the Board otherwise directs.

4. The quantity of natural gas that can be exported under the authority of this licence is:

    a. Maximum annual quantity that can be exported in any 12-month period, including the 15 per cent tolerance, may not exceed 19.4 10^9 m^3; and

    b. Maximum term quantity, including the 15 per cent tolerance, may not exceed 453 10^9 m^3.

5. Natural gas will be exported at a point at the outlet of the loading arm of the natural gas liquefaction facility to be located in Richmond County near Point Tupper, Nova Scotia.

Appendix II

Terms and Conditions of the Licence to be Issued for the Import of Natural Gas

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General

1. Bear Head LNG Corporation shall comply with all of the terms and conditions contained in this licence unless the National Energy Board (Board) otherwise directs.

Licence Term, Conditions and Point of Import

2. Subject to Condition 3, the term of this licence shall commence on the date of first import and shall continue for a period of 25 years thereafter.

3. This Licence shall expire 10 years from the date of Governor in Council approval of its issuance, unless imports of natural gas have commenced on or before that date, or the Board otherwise directs.

4. The quantity of natural gas that can be imported under the authority of this licence is:

   a. Maximum annual quantity that can be imported in any 12 month period is 14.2 10^9 m^3; and

   b. Maximum term quantity may not exceed 356 10^9 m^3.

5. Natural gas will be imported at the point where the Maritimes & Northeast Pipeline crosses the Canada-United States border near St. Stephen, New Brunswick, or such other point as the Board may approve.