LETTER DECISION

File OF-EI-Gas-GL-W159-2014-01 01
7 May 2015

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Mr. Ben Thompson
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Dear Messrs. Liteplo and Thompson:

WesPac Midstream – Vancouver LLC
20 June 2014 Application for a Licence to Export Natural Gas
National Energy Board Reasons for Decision

On 20 June 2014, WesPac Midstream – Vancouver LLC (WPMV) applied to the National Energy Board (Board) pursuant to section 117 of the *National Energy Board Act* (NEB Act) for a licence (Licence) to export natural gas (Application), in the form of liquefied natural gas (LNG). WPMV seeks a 25-year Licence, starting on the date of first export. WPMV requests a maximum annual export quantity of 4.76 billion cubic metres (10^9m^3) or 168 billion cubic feet (Bcf)[1] and a maximum quantity of 116.44 10^9m^3 (4,100 Bcf) over the term of the licence.[2]

In its Application, WPMV requested the following export points: the outlet of the loading arm at the WesPac LNG Marine Terminal and the hose connector of the pump at the truck rack at the Tilbury liquefaction plant adjacent to the Marine Terminal, both located at Tilbury Island in Delta, British Columbia.

Board Decision

We have decided to issue a Licence to WPMV, 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. Our role, under section 118 of the NEB Act, is to assess whether the natural 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 (Surplus Criterion).

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[1] Applied-for quantity of 4.14 10^9m^3 (146 Bcf) with requested 15 per cent tolerance
[2] Applied-for quantity of 103.50 10^9m^3 (3,650 Bcf) with requested 12.5 per cent tolerance

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 gas supply or gas 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 gas proposed to be exported by WPMV is surplus to Canadian needs. The Board is satisfied that the gas resource base in Canada, as well as North America overall, is large and can accommodate reasonably foreseeable Canadian demand, the natural gas exports proposed in this Application, and a plausible potential increase in demand.

The Board acknowledges that, 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. Consistent with the evidence submitted in WPMV's Application, the Board believes that not all LNG export licences issued by the Board will be used or used to the full allowance. The Board also evaluates each application based on the merit of its own evidence.

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 North American 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. Since deregulation of Canadian gas markets in 1985, 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.

Natural Gas Export Regulation

The Board's regulation of natural gas exports is governed by a statutory framework that includes the following three components:

- that all natural gas exports must be authorized by an order or licence;[3]
- that the Board must satisfy itself that the natural gas to be exported by licence is surplus to Canadian requirements;[4] and
- that all exports must be reported. [5]

A mandatory hearing for gas export licences is no longer required by the NEB Act. For this Application, the Board utilized a written process involving a Notice of Application by the applicant and a Comment Period for impacted persons.

Summary of Public Notice, Comment Period and Information Requests

On 24 July 2014, WPMV published a Notice of Application and Comment Period (Notice) for impacted persons in both the *Globe and Mail* and *La Presse*. WPMV also confirmed they served the Notice on specified persons and agencies. The Notice requested that any impacted person who wished to file submissions on the merits of the Application do so by 2 September 2014 and that WPMV respond by 12 September 2014. The Board received comments from Mr. Ian D. Robertson of Delta, British Columbia on 30 August 2014. WPMV submitted a reply to Mr. Robertson's comments on 12 September 2014.

[3] Section 116 of the NEB Act.
[4] Section 118 of the NEB Act
[5] Section 4 of the *National Energy Board Export and Import Reporting Regulations*

The Board issued three Information Requests (IRs) to WPMV on 20 August 2014, 2 September 2014, and 10 February 2015. WPMV filed its responses on 11 September 2014, 23 September 2014, and 26 February 2015, respectively.

Surplus Determination

WPMV submitted that, as required by the Surplus Criterion, the quantity of gas it seeks to export does not exceed the surplus. In support of this submission, WPMV submitted the follow studies: (1) a *Supply and Demand Market Assessment* (SDMA) by Navigant Consulting Inc. (Navigant), and (2) an *Export Impact Assessment* by Gordon Pickering (Mr. Pickering).

Navigant stated that the primary result of its SDMA is an outlook for both the Canadian and the North American natural gas markets that is characterized by ample, stable supplies and competitive, stable prices. The SDMA examined supply and demand conditions in Canada assuming 1.3 Bcf/d of net LNG exports from Canada and 2.0 Bcf/d of Canadian liquefaction capacity. Navigant stated that the magnitude of Canadian natural gas resources is sufficient to support WPMV's proposed exports as well as a much larger level of exports should they develop. Navigant stated that even if all the quantities from the approved and applied-for export licences are exported,[6] there would be over 100 years of Canadian recoverable resources.

Navigant stated that resource development will be incented according to the economics of North American supply and demand factors. Navigant stated that additional base load natural gas demand represented by LNG exports would increase the size of the gas market, decrease market volatility, foster further development of shale gas resources, and support additional supply development. Navigant also stated that Eastern Canadian imports from the United States of America (U.S.) will lessen competitive demand for Western Canadian natural gas supplies, thereby enhancing Western Canadian supply availability for WPMV's exports. Navigant submitted that the pipeline flows between Canada and the U.S., and the ability of North American natural gas supply and demand to balance efficiently and effectively indicate that there is an interconnected, competitive and functional nature to the North American natural gas market.

Navigant increased its forecasted Canadian natural gas demand growth rate by 20 per cent to provide a sensitivity test on the robustness of its assessment of Canadian surplus. Navigant concluded that this incremental increase in Canadian demand is not material to its conclusions regarding surplus given the size of the gas resource.

In its SDMA, Navigant stated that most LNG liquefaction ventures that are currently proposed in North America will not be built. In consideration of global LNG demand, Navigant estimated a need for only 30 Bcf/d of additional liquefaction capacity by 2035. Navigant identified about 111 Bcf/d of potential incremental liquefaction capacity that is beyond the existing and under construction capacity around the globe. Navigant stated that assuming a uniform chance of success for all potential global projects would result in a 27 per cent success rate that could lead to Canadian liquefaction capacity of about 12.5 Bcf/d. However, Navigant stated there would be factors that would further limit its outlook on Canadian liquefaction capacity to 2.0 Bcf/d.

Navigant submitted that many of the proposed Canadian sites are "greenfield" (a site with little or no existing infrastructure), as opposed to "brownfield" (sites that already exist) and that increases the costs and decreases the competitiveness of these sites. Furthermore, Navigant noted that from a cost perspective, developers of British Columbia coastal projects will generally be faced with the prospect of building or funding expensive pipelines to bring feedgas from sources

[6] All applications that were before the Board as of 1 April 2014, that is 23.3 Bcf/d

or interconnections over coastal mountains. Other Canadian LNG export industry risks identified by Navigant include both regional and international market changes affecting natural gas prices delivered to a facility, technical challenges facing large LNG ventures, uncertainty of the ultimate construction costs, permitting hurdles, changes in the price of oil, and other market cycles that could occur over the long term life of these LNG ventures.

Mr. Pickering observed that the well-functioning North American gas market is considered the largest and most sophisticated gas market in the world, and it has shown reliable performance over a variety of circumstances and market changes. Mr. Pickering noted that changing pipeline flows between Canada and the U.S., due to the impact of Marcellus and Utica shale development, will allow export markets to access Western Canadian natural gas supply. Mr. Pickering concluded that WPMV's proposed export volumes are highly unlikely to cause Canadians difficulty in meeting their gas requirements over the proposed licence term. Mr. Pickering also stated that not all Canadian LNG export ventures will go ahead.

Views of the Board

The Board is satisfied that the gas resource base in Canada, and the overall North American gas resource base, is large and can accommodate reasonably foreseeable Canadian demand, including the LNG exports proposed by WPMV, and a plausible potential increase in demand. The Board agrees with WPMV's evidence that the North American gas market is sophisticated, efficient, integrated, and responsive to changes in supply and demand. The Board further accepts WPMV'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 gas market, concludes that Canadian gas requirements will be met.

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 (WCSB) and in the U.S. Furthermore, since deregulation of Canadian gas markets in 1985, 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.

In aggregate, the LNG export licence applications submitted to the Board to date represent a significant volume of LNG exports from Canada. All of these LNG ventures are faced with a growing but limited, global market for LNG, and they face numerous challenges. Factors such as global LNG demand, lack of existing infrastructure, remoteness, changing market dynamics, and the Canadian cost structure are among the issues that Canadian LNG ventures are facing. Consistent with Navigant's and Mr. Pickering's evidence, the Board believes that not all LNG export licences issued by the Board will be used or used to the full allowance. Navigant assumes 2.0 Bcf/d of Canadian liquefaction capacity, which is a quantity well below the total proposed Canadian LNG export ventures, including Board approved export licences, to date. It is the Board's view that there are sufficient resources to meet Canadian demand plus the level of LNG exports forecasted by Navigant. In addition, the Board will not predict which licences will be used or used to the full allowance.

The Board evaluates each application on the merit of its own evidence. In this case, based on all of the foregoing, the Board is satisfied that the quantity of gas proposed to be exported by WPMV does not exceed the surplus remaining after due allowance has been made for reasonably foreseeable requirements for use in Canada, having regard to the trends in the discovery of gas in Canada.

<u>Issues Raised During the Comment Period</u>

On 30 August 2014, Mr. Robertson filed comments with the Board outlining several issues relating to the size of the property at which the Tilbury liquefaction facility is located, the access to funds for expansion, WPMV's capability or background in manufacturing LNG for export, the requirement for expansion of natural gas supply pipelines, the role of Port Metro Vancouver, and undertakings about sharing natural gas between export and domestic and industrial users in Vancouver and Vancouver Island.

In his submission, Mr. Robertson states that the Board's review of the adequacy of supply assumes that Canada has unfettered/equal access to all North American supplies, despite there being no treaty with the U.S. to that effect. Mr. Robertson asserts that the foregoing suggests that all Canadian supply could be exported from Canada, leaving Canada entirely dependent on importing for its gas needs. Mr. Robertson reviewed approved and pending applications and noted that exports could total 28.4 Bcf/d and that expert submissions from other applications suggest that Canada could provide 17.3 Bcf/d by 2045. Mr. Robertson stated that the Board has approved an amount in excess of Canadian capacity and requested an explanation from the Board.

On 12 September 2014, WPMV responded to Mr. Robertson's comments by noting previous Board decisions on the issues of Board jurisdiction in natural gas licence applications, the significant WCSB resources, the integrated North American natural gas market, market dynamics, and the Board's view on adding up approved and proposed LNG export volumes. WPMV also reiterated portions of the evidence from its Application.

Views of the Board

In the Board's view, the comments relating to the physical parameters of the export facility, WPMV's export experience level, its ability to access funds for facility expansion, and commercial arrangements of Canadian domestic gas users are matters outside the scope of the Board's jurisdiction on natural gas export licence applications. The Board notes the approval of an export licence does not directly or indirectly authorize, influence or pre-determine the decisions of other regulators or government agencies responsible for assessing those issues.

As noted, the Board recognizes that Canadian natural gas requirements are met in the context of free trade within a North American energy market. WPMV has submitted evidence, supported by the Board's market monitoring, that the North American gas market is functioning effectively to match supply and demand. When assessing the Surplus Criterion for this Application, the Board considered Canadian gas resources and the potential for Canada to access gas imports from the U.S.

With respect to the quantity of gas that the Board has authorized with its LNG export licences, the Board has found that the gas resource base in Canada, and the overall North American gas resource base, is large and can accommodate reasonably foreseeable Canadian demand, including the LNG exports proposed by the WPMV. Furthermore, the Board has stated that it does not believe that all LNG export licences issued by the Board will be used or used to the full allowance and will not predict which export licences will be used or used to the full allowance. Therefore, the Board finds that adding volumes is not useful in making its surplus determination.

The Board also notes that all of the recently issued gas export licences have included an early expiry of ten years. In WPMV's case, the export of gas must commence within ten years from the date of issuance of the licence. The licence would expire if exports of gas do not commence by that time. This condition is also referred to as a sunset clause because the licence would expire if exports do not commence within the specified timeframe.

Relief and Additional Terms and Conditions

Relief from Filing Requirements

WPMV requests relief from the information requirements for gas export licence applications set out in section 12 of the *National Energy Board Act Part VI (Oil and Gas) Regulations* (Oil and Gas Regulations), except where those requirements are addressed within its Application. WPMV also requests relief from the Board's Filing Manual, except where those requirements are addressed within its Application. Lastly, WPMV requests any further terms or relief the Board may consider appropriate in the circumstances.

Views of the Board

The Board notes that it may exempt applicants for gas export licences from filing requirements contained in section 12 of the Oil and Gas Regulations. In its *Interim Memorandum of Guidance Concerning Oil and Gas Export Applications and Gas Import Applications under Part VI of the National Energy Board 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) of the Oil and Gas Regulations. The Board further recognizes that not all of the filing requirements contained in section 12 of the Oil and Gas Regulations are relevant to its assessment of this Application. The Board is in the process of updating the Oil and Gas Regulations to align with changes to the NEB Act. Therefore, the Board exempts WPMV from the filing requirements contained in section 12 of the Oil and Gas Regulations that were not included in the Application. The Board notes that WPMV adequately addressed the requirements in the Filing Manual and therefore, providing relief from Filing Manual requirements is unnecessary.

Annual and Term Tolerance

WPMV requests a 15 per cent annual tolerance to the amount of natural gas that may be exported under the Licence in any 12-month period. WPMV, in its response to IR 1.1, requests Board approval of an annual tolerance of 15 per cent, subject to a maximum average tolerance of 12.5 per cent over the term of the Licence.

Views of the Board

The Board accepts WPMV's request for a 15 per cent annual tolerance, and the maximum annual quantity permitted under the Licence is inclusive of the annual tolerance amount. The maximum requested term quantity recognizes that the full annual tolerance will not be used in every year of the term. It has been the Board's practice to licence term quantities with an allowance for annual tolerance rather than to expressly grant a term tolerance; the Board accepts WPMV's request to have a maximum term quantity inclusive of an average 12.5 per cent tolerance (i.e. 116.44 $10^9 m^3$).

Exports on Behalf of Affiliates and Third Parties

WPMV seeks authorization to export natural gas on its own behalf and as an agent of the actual owners of the gas.

Views of the Board

Section 116 of the NEB Act prevents any person, except as otherwise authorized by the regulations, from exporting gas except under and in accordance with a licence issued by the Board. In the Board’s view, this section of the NEB Act does not require the holder of the export licence to also be the owner of the natural gas; therefore, the Board does not find it necessary to include a term on the Licence permitting WPMV to act as agent on behalf of the owners of the natural gas. The Board notes that WPMV, acting in its capacity as an agent, would be exporting natural gas under its Licence which requires it to report those exports in accordance with the *National Energy Board Export and Import Reporting Regulations*.

Export Points

WPMV stated it intends to export LNG produced at the Tilbury plant in Delta, British Columbia, which is owned by FortisBC Energy Inc. The applied-for export points were requested at the outlet of the loading arm at the WesPac LNG Marine Terminal adjacent to the Tilbury plant and the hose connector of the pump at the truck rack at the Tilbury plant where ISO shipping containers or truck tankers are filled with LNG. WPMV stated that the hose connector at the pump at the truck rack, where LNG is filled, is the point at which custody of the LNG is transferred, and this point is analogous to the outlet of the loading arm at a marine terminal, which is an export point that has been approved by the Board in previously issued licences. The Board considered this rationale, and ultimately proposed different export points, which WPMV accepted with a minor change.

Regarding its proposed exports to the U.S., WPMV stated that it requires long-term export authorization in order to provide WPMV and its commercial counterparties with the certainty they require to enter into long-term commercial contracts and finance capital investments. WPMV also stated that including exports to the U.S. in the licence would provide WPMV the flexibility it needs to respond to changes in market demand.

Views of the Board

Historically, the Board considered the act of exporting to occur when gas was sent or removed from Canada and not when gas was loaded into a mode of transport. The exception to that approach is an export point designated to be the outlet of a loading arm of a terminal at which LNG is loaded directly into marine vessels for export. The Board has previously stated that the point at which LNG tankers pass into international waters is not a precise location.

In requesting an export point located at the pump of the truck rack where ISO shipping containers are filled with LNG, WPMV requested a level of flexibility that is not demonstrative of the act of exportation from Canada. In authorizing the following export points, the Board is balancing its practice of conditioning precise locations on an export licence with the flexibility needed to export LNG in ISO containers using different modes of transportation.

For marine exports, the Board approves the last land-based locations of the gas before it begins its marine journey to depart Canadian waters. Therefore, the Board approves the following marine export points:

- The outlet of the loading arm at the WesPac LNG Marine Terminal in Delta, British Columbia; and
- The marine cargo terminals in the metropolitan area of Vancouver, British Columbia.

For land based exports, the Board approves the following export point:

- The highway border crossings along the international boundary between British Columbia and the U.S.

The Board accepts WPMV’s evidence that it requires the flexibility to access various markets and the certainty of a long-term export licence to enter into long-term commercial contracts and finance capital investments.

Early Expiry

WPMV requested a sunset clause where, unless otherwise authorized by the Board, the Licence will expire ten years from the date of issuance if exports have not commenced on or before that date.

Views of the Board

The Board accepts WPMV’s request for a ten year sunset clause, from the date of Board issuance of the licence. It has generally been the Board’s practice to issue a gas export licence that sets an initial period during which, if the export of gas commences, the licence becomes effective for the full term approved by the Board.

R. George
Presiding Member

P.H. Davies
Member

J. Gauthier
Member

May 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. WesPac Midstream – Vancouver LLC (WPMV) shall comply with all of the terms and conditions contained in this licence unless the Board otherwise directs.

Licence Term, Conditions and Point of Export

2. Subject to Condition 3, the term of this licence shall commence on the date of first export of natural gas, in the form of liquefied natural gas, produced at the Tilbury LNG plant located in Delta, British Columbia from any of the export points listed in Condition 5, and shall continue for a period of 25 years thereafter.

3. This Licence shall expire 10 years from the date of Board issuance, unless exports from the export points listed in Condition 5 have commenced on or before that date, or the Board otherwise directs.

4. The maximum quantity of natural gas, inclusive of tolerance, that can be exported by WPMV under the authority of this licence is:

    a. 4.76 10^9m^3 annually, in any 12-month period; and

    b. 116.44 10^9m^3 for the term.

5. Liquefied natural gas may be exported from Canada at the following export points:

    a. the outlet of the loading arm at the WesPac LNG Marine Terminal in Delta, British Columbia;

    b. the marine cargo terminals in the metropolitan area of Vancouver, British Columbia; and

    c. the highway border crossings along the international boundary between British Columbia and the United States of America.