

NATIONAL ENERGY BOARD

IN THE MATTER OF the *National Energy Board Act*, RSC 1985, c N-7 ("*NEB Act*"), as amended, and the Regulations made thereunder;

AND IN THE MATTER OF an application by AC LNG for a licence pursuant to section 117 of the *National Energy Board Act* authorizing the import of natural gas and a further licence for the export of liquefied natural gas.

**TO: Ms. Sheri Young, Secretary
National Energy Board
517 – 10th Avenue S.W.
Calgary, AB T2R 0A8**

A C LNG INC.

**APPLICATION FOR A LICENCE TO IMPORT NATURAL GAS AND A LICENCE TO EXPORT
LIQUEFIED NATURAL GAS**

May 26, 2015

TABLE OF CONTENTS

I.	APPLICATION	1
	A. IMPORT LICENCE APPLICATION	2
	B. EXPORT LICENCE APPLICATION.....	3
II.	PROJECT OVERVIEW	5
	A. PROJECT.....	5
	B. PROJECT OWNERSHIP	6
III.	THE SOURCE AND VOLUME OF GAS TO BE EXPORTED	6
IV.	FORECAST OF EXPECTED GAS SUPPLIES AND GAS DEMAND OVER THE REQUESTED EXPORT TERM.....	7
V.	THE IMPLICATIONS OF THE PROPOSED EXPORT VOLUMES ON THE ABILITY OF CANADIANS TO MEET THEIR GAS REQUIREMENTS	10
VI.	CONCLUSIONS AS TO SURPLUS EVALUATION	12
VII.	RELIEF REQUESTED	12

I. APPLICATION

1. A C LNG INC. ("AC LNG" or the "Applicant"), a corporation organized under the laws of the Province of Nova Scotia, hereby applies to the National Energy Board ("NEB" or "Board") pursuant to section 117 of the *National Energy Board Act* ("NEB Act")¹ for: (i) a licence to import natural gas in vapour form from the United States to Eastern Canada ("Import Licence"); and (ii) a licence to export liquefied natural gas ("LNG") from Canada to international markets ("Export Licence").
2. The Applicant seeks the Import Licence in accordance with the following terms and conditions:²
 - (a) **Import Term:** The term of the Licence shall be 25 years commencing on the date of first import of natural gas under the Licence ("Import Term");
 - (b) **Annual Import Quantity:** Subject to the Annual Import Tolerance, the quantity of natural gas that may be imported in any consecutive 12-month period shall not exceed approximately 839.7 billion cubic feet ("Bcf") or 23.8 billion m³ ("Annual Import Quantity");
 - (c) **Annual Import Tolerance:** The quantity of natural gas that may be imported in any consecutive 12-month period may exceed the maximum Annual Import Quantity by 15 percent in order to allow for operational and design optimization, variability in gas specification, and operating and maintenance variables ("Annual Import Tolerance");
 - (d) **Term Import Quantity:** Subject to the Annual Import Tolerance, the quantity of natural gas that may be imported over the term of the Licence shall not exceed approximately 17,821 Bcf or 504.8 billion m³ ("Term Import Quantity");³
 - (e) **Import Point:** The point of import of natural gas into Canada will be at the point at which the Maritimes & Northeast Pipeline ("M&NP") crosses the Canada-United States border near the town of St. Stephen, New Brunswick or such other border point as may become accessible over the Import Term;⁴ and
 - (f) Any further terms and conditions as may be requested and as the Board may impose in the circumstances.
3. The Applicant seeks the Export Licence in accordance with the following terms and conditions:⁵
 - (a) **Export Term:** The term of the Licence shall be 25 years commencing on the date of first export of LNG under the Licence ("Export Term");

¹ RSC 1985, c N-7.

² The requested terms and conditions as set out have been calculated based on NEB conversion factors as set out in the NEB Filing Manual (NEB conversion factor used 1 m³ gas = 35.3 cubic feet of natural gas), and the assumptions set out in Appendix D of Appendix 1.

³ The Term Import Quantity reflects expected ramp-up volumes and excludes the Annual Import Tolerance.

⁴ AC LNG is not presently aware of existing or planned import points on the Canada-United States border other than St. Stephen. However, the potential exists for additional pipeline infrastructure to be built in response to the development of regional natural gas resources and increased natural gas demand over the Import Term, including increased demand due to the proposed Project. AC LNG would like the flexibility in its Import Licence to import natural gas on whatever infrastructure, and at whatever border crossing, offers the most economical transportation alternative at any point in time over the Import Term.

⁵ The requested terms and conditions as set out have been calculated based on NEB conversion factors as set out in the NEB Filing Manual (NEB conversion factor used 1 m³ gas = 35.3 cubic feet of natural gas and 1 tonne LNG = 1,379.5 m³ of natural gas), and the assumptions set out in Appendix D of Appendix 1.

- (b) **Annual Export Quantity:** Including the Annual Export Tolerance, the quantity of LNG that may be exported in any consecutive 12-month period shall not exceed 15.5 million tonnes ("MMT"), which has a natural gas equivalent of approximately 755.7 billion cubic feet ("Bcf") or 21.4 billion m³ ("Annual Export Quantity");
- (c) **Annual Export Tolerance:** The quantity of LNG that may be exported in any consecutive 12-month period may exceed the maximum Annual Export Quantity by 15 percent in order to allow for operational and design optimization, variability in gas specification, and operating and maintenance variables ("Annual Export Tolerance");
- (d) **Term Export Quantity:** Including the Annual Export Tolerance, the quantity of LNG that may be exported over the term of the Licence shall not exceed 329 MMT, which has a natural gas equivalent of approximately 16.038 trillion cubic feet ("Tcf") or 454.3 billion m³ ("Term Export Quantity");⁶
- (e) **Export Point:** The point of export of LNG from Canada will be at the outlet of the loading arm of the natural gas liquefaction terminal ("Export Point"), which is anticipated to be located in the vicinity of Middle Melford, Nova Scotia, Canada;
- (f) **Early Expiration Date:** Unless otherwise authorized by the Board, the term of the Export Licence shall end 10 years after the date of Governor-in-Council approval of the issuance of the Licence, if the export of LNG has not commenced on or before that date ("Early Expiration Date"); and
- (g) Any further terms and conditions as may be requested and as the Board may impose in the circumstances.

A. IMPORT LICENCE APPLICATION

4. The Project will likely be dependent on the ability to reverse the M&NP, which is a cross-border pipeline located in both Canada and the United States. Any M&NP reversal will necessarily result in an importation of natural gas into Canada. Spectra Energy, which is the majority owner in M&NP has publicly announced that it is considering fully reversing the M&NP⁷ and indeed as noted by the Board, has periodically reversed the flow in M&NP in recent years.⁸
5. Section 117 of the NEB Act specifies that the Board may issue licences for the import of natural gas on "such terms and conditions it may impose."
6. Section 13 of the *National Energy Board Act Part VI (Oil and Gas) Regulations* ("Regulations")⁹ sets out the information that an applicant for a natural gas import licence will be required to provide, "unless otherwise authorized by the Board."
7. The *Regulations* were modified by amendments that were made to the *NEB Act* pursuant to the *Jobs, Growth and Long-Term Prosperity Act ("Prosperity Act")*,¹⁰ which received Royal Assent on June 29, 2012. However the existing wording of the *Regulations* has not yet been amended to reflect those changes.
8. On September 20, 2012, pending a review and update of the *Regulations*, the Board issued a consultation letter concerning, among other things, whether the information required for

⁶ The Term Export Quantity reflects expected ramp-up volumes and includes the Annual Export Tolerance.

⁷ See "Maritimes and Northeast Pipeline capacity to be expanded", *CBC News* (4 July 2014).

⁸ See the *NEB Canadian Pipeline Transportation System, Energy Market Assessment for 2014*, at page 33.

⁹ SOR/96-244

¹⁰ SC 2012, c 19.

long-term export licence applications should be reduced given the amendments to the *NEB Act* ("Consultation Letter"). The Consultation Letter posed the following questions in the context of import licences:

- (a) Would it be appropriate to modify the Part VI Oil and Gas Regulations to exempt natural gas imports from Board authorization?
- (b) What are the implications, if any, of removing a gas import authorization requirement?

9. Taking the Consultation Letter into account together with the proposed changes to the *Regulations*, the Applicant requests relief from the filing requirements set out at section 13 of the *Regulations*, except to the extent those requirements have been addressed by this Application.

B. EXPORT LICENCE APPLICATION

10. Section 118 of the *NEB Act* specifies what the Board is legally mandated and authorized to consider for an LNG export licence application. Section 118, which the Board refers to as the 'Surplus Criterion,' reads as follows:

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.

11. Section 12 of the *Regulations* sets out the filing requirements for gas export licence applications, which applicants are required to provide unless otherwise authorized by the Board. As noted above, the *Regulations* were modified by the *Prosperity Act*, however the existing wording of the *Regulations* has not yet been amended to reflect those changes.
12. On July 11, 2012, the Board issued an *Interim Memorandum of Guidance Concerning Oil and Gas Export Applications and Gas Import Applications under Part VI of the National Energy Board Act* ("MOG"). In the MOG, the Board stated that as a result of the amendments to section 24 of the *NEB Act*, public hearings with respect to gas export licences are no longer mandatory. The Board also stated that, as a result of the amendments to section 118 of the *NEB Act*, it no longer requires applicants for gas export licences to file "information respecting the potential environmental effects of the proposed exportation and any social effects that would be directly related to those environmental effects" pursuant to subsection 12(f) of the *Regulations*.
13. On July 27, 2012, LNG Canada Development Inc. ("LNG Canada") filed an application for an LNG export licence with the Board. This was the first application that was considered by the Board under the amended *NEB Act*. The Board approved LNG Canada's application and provided further guidance on the filing requirements for export licence applications. In its letter decision, the Board said that it had focused its assessment of the application on the Surplus Criterion. The Board also found that not all of the section 12 requirements remain applicable or relevant:

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 [*Regulations*].

... The Board also recognizes that not all of the filing requirements contained in Section 12 of the [*Regulations*] are relevant for this Application.¹¹

14. Pursuant to the Consultation Letter, the Board raised concerns as to whether the information required for long-term export licence applications should be reduced given the amendments to the *NEB Act*.
15. The latest revision of the NEB Filing Manual, Guide Q requires applicants to file the following information for gas export licence applications:
 - The source and volume of gas to be exported.
 - A description of gas supplies, including Canadian gas supply, expected to be available to the Canadian market (including underlying assumptions) over the requested licence term.
 - A description of expected gas requirements (demand) for Canada (including underlying assumptions) over the requested licence term.
 - The implications of the proposed export volumes on the ability of Canadians to meet their gas requirements.
16. Guide Q also states that the "filing requirements, by their very nature, are not prescriptive and can be met in a variety of ways, including quantitatively or qualitatively" and provides further guidance in that regard.
17. As noted in the Board's decision regarding Woodside Energy Holdings Pty Ltd. ("Woodside Energy"), the focus of the material that the Board will consider under section 118 of the *NEB Act* is identified in Guide Q. More specifically the Board noted:

As stated previously, the Board focused its assessment of the Application on the Surplus Criterion contained in section 118 of the NEB Act. The requirements that are needed for the Board's assessment are identified in Guide Q of the National Energy Board Filing Manual. It is the Board's view that the information included in Woodside Energy's Application met the requirements outlined in Guide Q.¹²
18. In accordance with the MOG, the Consultation Letter, the new Filing Manual Guide Q, the Board's LNG Canada and Woodside Energy decisions and other recent letter decisions in respect of applications for licences to export LNG, the information provided by the Applicant in support of this Application is focused on a demonstration that the quantity of gas applied to be exported meets the Surplus Criterion in section 118 of the *NEB Act*.
19. The reports submitted as Appendix 1 and Appendix 2 to this Application demonstrate that the Surplus Criterion will be met in this instance. More particularly, the quantity of gas proposed to be exported by the Applicant will 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."¹³
20. Taking the MOG, Consultation Letter and Guide Q into account, together with recent decisions of the Board, to the extent required, the Applicant requests exemption from the filing requirements contained in section 12 of the *Regulations* (including Schedules I and II) that are not otherwise addressed in this Application.

¹¹ Ibid at page 10.

¹² File OF-EI-Gas-GL-W160-2014-01 01 at page 6.

¹³ The reports submitted in Appendix 1 and Appendix 2 are intended to be complete as written and the information as supported by internet references is intended to be adequately described. However, the internet references may be provided upon request by the Board.

II. PROJECT OVERVIEW

A. PROJECT

21. AC LNG proposes to develop an LNG project comprised of floating and onshore natural gas liquefaction plants, floating and onshore LNG storage facilities, marine loading terminal and associated supporting facilities and infrastructure ("Project").
22. The Project is proposed to be located at Byers Cove, in Middle Melford, Nova Scotia.
23. AC LNG has secured an option agreement with the Province of Nova Scotia for approximately 300 acres of land at Byers Cove in the Melford Industrial Reserve, all of which is located in eastern Nova Scotia, Canada, on the Strait of Canso and near the M&NP. AC LNG is in the process of identifying and assessing additional parcels in the Strait of Canso for the development of the marine facilities portion of the Project.
24. The Project will likely receive natural gas via the existing M&NP and thereafter convert the natural gas into LNG for shipment by LNG carrier to key growth markets in Europe and Asia where it will be regasified and distributed.
25. At full build-out the Project will include two marine jetties and LNG loading facilities capable of accommodating LNG carriers with a cargo capacity of up to 266,000 m³ ("Q-Max Carrier").
26. The Applicant is in the process of submitting a draft project description in respect of the Project to the Canadian Environmental Assessment Agency for its review.
27. The Applicant recently completed a technical-economic feasibility study for the Project, which study was comprised of liquefaction technology selection, driver selection, process configuration selection, marine infrastructure requirement analyses, and conceptual engineering.
28. The Applicant is currently reviewing the results of the feasibility study and conducting further Project analyses, including discussing various options with floating liquefied natural gas vessel ("FLNG") suppliers in an effort to secure a long term facility arrangement for natural gas liquefaction and LNG export.
29. AC LNG is currently exploring the following concept for the Project:
 - (a) Phase I consisting of a near shore FLNG. The FLNG will encompass inlet and pre-treatment facilities, liquefaction trains (LNG trains), utilities, flares and other necessary infrastructure required to convert natural gas into LNG. Phase I will also include a captive LNG carrier with a storage capacity of approximately 177,000 m³ ("Storage Carrier"), to be used for LNG storage purposes prior to transfer of the LNG to the LNG Carriers. The FLNG and Storage Carrier are intended to be moored to a specially constructed jetty-head located close to the foreshore and connected to the foreshore by a trestle, which trestle will be sized to enable the mooring of an additional FLNG. Additional infrastructure to accommodate logistics support, administration, maintenance and other similar requirements including a material offloading facility may be located onshore.
 - (b) Phase II consisting of a second FLNG and which will otherwise be similar in size and scope to Phase I.
 - (c) Phase III consisting of an onshore facility. The onshore facility will encompass inlet and pre-treatment facilities, LNG trains, utilities, 3 storage tanks each with an estimated storage capacity of up to 200,000 m³, flares and other necessary

infrastructure required to convert natural gas into LNG. LNG will be delivered from the LNG storage tanks to Q-Max Carriers via LNG rundown lines to the jetty-head.

30. Phase I of the proposed Project is expected to produce an Annual Export Quantity of 3.5 MMT. Phase II is expected to include an additional Annual Export Quantity of 3.4 MMT. Phase III is expected to include an additional 8.6 MMT Annual Export Quantity for a total of 15.5 MMT Annual Export Quantity.¹⁴
31. The number of LNG trains will be determined by the Applicant during the detailed engineering and screening studies for each Phase in order to optimize construction costs and operating efficiency.
32. The feasibility, timing and commissioning of Phase I, Phase II and Phase III will be influenced by a variety of factors such as LNG market conditions, Project economics, labour market conditions, environmental assessment decision and approval conditions. Subject to these factors and its final investment decision, the Applicant is targeting commissioning of Phase I and first LNG cargo in the 2019 timeframe. Phase II is likely to be determined by a separate final investment decision, although the proposed targeted commissioning at this time is 2021. Similarly Phase III is also likely to be determined by a separate final investment decision, although the proposed targeted commissioning at this time is 2025. The Early Expiration Date requested by the Applicant is justified by these factors, as well as by the expected timeframe range required to:
- 1) obtain all necessary regulatory approvals for the proposed Project;
 - 2) complete the detailed engineering and construction of same; and
 - 3) overcome potential unforeseen delays.
33. The Annual Export Tolerance requested by the Applicant is justified by the requirement to accommodate and manage expected variability in operating conditions that may be due to, but not limited to, maintenance, natural gas specifications and operational optimizations.

B. PROJECT OWNERSHIP

34. The Applicant is a Nova Scotia company, formed under and registered to do business in Nova Scotia. It is currently the sole owner of the proposed Project and was incorporated for the purposes of developing the Project, however the ownership structure may change during the Project.

III. THE SOURCE AND VOLUME OF GAS TO BE EXPORTED

35. The Applicant has assessed various natural gas supply options to determine the appropriate strategy to meet the Annual Export Quantity and Term Export Quantity. The natural gas required for the proposed Project is expected to be initially sourced from the Western Canadian Sedimentary Basin ("WCSB"), or the Marcellus/Utica basin ("Marcellus"), with prospective shale gas from New Brunswick, offshore Nova Scotia, and offshore Newfoundland and Labrador resources serving as potential subsequent supply regions.
36. The Applicant has met with potential suppliers from each of WCSB, Marcellus and Atlantic Canada regions to acquire long-term feed gas supply in the volumes needed for the Project. Some of the gas supply options under consideration include, but are not limited to, the purchase of gas by the Project owner(s) from existing and expanded western Canadian, eastern Canadian and United States gas markets and upstream resource holders, and tolling

¹⁴ Inclusive of the Annual Export Tolerance.

agreements with upstream resource owners that wish to access Project capacity. To that end, the following actions have been undertaken:

- Identification and selection of gas sourcing areas for the Project including Marcellus (United States), WCSB (Canada), New Brunswick shale gas (Canada), offshore Nova Scotia (Canada) and Newfoundland and Labrador (Canada);
- Preliminary technical and economic assessment of identified gas sourcing areas including access to transportation routes to the Project from Marcellus, WCSB and offshore Atlantic Canada;
- Identification and selection of gas producers in each gas sourcing area;
- Parallel discussions with both Marcellus and WCSB suppliers in an effort to source the most competitive feed gas. Preliminary discussions have also been held with shale gas project developers in New Brunswick;
- In respect of sourcing gas from Marcellus, discussions with producers and aggregators regarding securing the necessary natural gas volumes have resulted in the identification of several suppliers that can aggregate up to 1.0 Bcf/d of gas with contract terms that extend to the end of the Export Term;
- In respect of sourcing gas from the WCSB, discussions with AECO, Empress and NISKA partners regarding securing natural gas volumes have also resulted in positive responses and interest regarding the potential supply of up to 1.0 Bcf/d of gas on a long-term supply basis; and
- Negotiations involving long-term gas supply agreements, which negotiations are expected to be finalized by the first quarter of 2016.

37. The Applicant has also met with several potential natural gas pipeline companies, both in the United States and Canada, with the ability to transport natural gas necessary for the Project on a long-term basis.

38. As indicated, AC LNG is evaluating the prospect of sourcing feed gas supply from the United States, western and/or eastern Canada. The gas would be transported to the proposed Project via a Canadian transportation route and/or a U.S. transportation route. For both Marcellus and WCSB options, the Applicant is seeking to secure long-term transportation capacity and has entered into preliminary discussions with pipeline providers to explore possible transmission options.

39. New markets created by the Project could provide opportunities for existing and new producers in the entire North American gas market.

IV. FORECAST OF EXPECTED GAS SUPPLIES AND GAS DEMAND OVER THE REQUESTED EXPORT TERM

40. The Applicant retained ICF Consulting Canada ("ICF") to provide an assessment of:

- gas supplies, including Canadian gas supply, expected to be available to the Canadian market (including underlying assumptions) over the requested Export Term; and

- expected gas requirements, (demand) for Canada (including underlying assumptions) over the requested Export Term.
41. ICF's report, entitled *Supply and Demand Market Assessment in Support of AC LNG Export Licence* ("Supply and Demand Assessment") provides a quantitative forecast of North American, and Canadian, including Marcellus, WCSB and Atlantic/Eastern Canada supply and demand to 2050, including the provision for the requested Annual Quantity and Term Quantity, and is attached as **Appendix 1**.
42. The main conclusions of the Supply and Demand Assessment concerning demand, supply, and market dynamics during the Export Term include:
- The North American gas resource base is robust and can easily support the Project;
 - The combined U.S. and Canadian gas market ("North American gas market") is highly integrated and highly developed in terms of price formation, freedom of flows and transparency compared to the rest of the world's gas markets. ICF expects normal functioning of the North American gas market to continue well into the future and such a market will respond to the demand for LNG exports, as well as for domestic consumption, in such a way that both can be served without any major disruptions;
 - The technological innovations of combining horizontal drilling and hydraulic fracturing in shale formations has unlocked a vast resource and has made accessible an enormous quantity of natural gas and oil in North America. LNG import terminals planned and built are now being converted to export facilities. North America is likely to become a net exporting region for oil and gas;
 - The overall resource base for North America, assuming current technology, is over 4,000 Tcf, with shale resources accounting for over half of the remaining, economically recoverable gas;
 - Proven resources in onshore and offshore eastern Canada total 1.1 Tcf (on an economically recoverable basis) and unproved plus discovered undeveloped resources total 87.7 Tcf (on an economically recoverable basis). Furthermore, in 2008 Nova Scotia developed a geophysical analysis of offshore potential ("Play Fairway Analysis"), which concluded there is an un-risked, in-place resource potential in the deep waters off of Nova Scotia of 120 Tcf of natural gas;
 - The current abundance of North American economically recoverable gas resources, including shale resources, can support 133 years of total North American consumption, including gas demand from the Project, other likely LNG exports as well as to Mexico;
 - Using Canadian resources alone and domestic Canadian consumption, the abundance of Canadian economically recoverable gas resources can support 238 years of consumption, including gas demand from the Project. Thus, the natural gas resources are more than adequate to meet domestic demand and exports from the Project;
 - ICF's resource supply curve shows approximately 1500 Tcf are producible at prices at or below \$5.00/MMBtu. Accordingly, there are substantial resources available at moderate prices to meet future demand for gas in North America and Canada;

- Marcellus and WCSB can each be sources of natural gas. In both cases there is adequate supply from these basins to support the incremental exports as a result of the Project;
- Exports from the Project will account for less than 2% of North American production once the Project is fully operational, which percentage will decline as North American production expands in the future;
- At 2.1 Bcf/d, Middle Melford could have a price impact of about \$0.15/MMBtu on North American gas prices above those prices forecast by ICF;
- Canadian gas demand growth is expected to be driven principally by industrial demand from oil sands production and a switch from coal-fired power generation;
- The major challenge for supplying gas to the Project will be adequate pipeline capacity from various sources into Nova Scotia. However, additional pipeline expansions totalling 2.68 Bcf/d have been proposed to support growth in production from Marcellus and to improve gas supply into New England and Atlantic Canada. These include the following:
 - Atlantic Bridge Project by AGT and M&NP. This involves the expansion of capacity on the existing AGT and M&NP to serve the New England and Maritime markets in an amount ranging from 100-600 MMcfd. It requires a reversal of the M&NP and is projected to be operational in November of 2017;
 - Algonquin Incremental Market ("AIM") expansion by AGT and Spectra Energy. This involves the creation of expanded capacity into New England markets and will link New England with an array of upstream supplies and pipeline interconnections. Although it is unclear what its expected capacity will be, the open season notice held in the fall of 2012 indicated that a binding precedent agreement had been reached with an unnamed anchor shipper;
 - Northeast Energy Direct by Tennessee Gas Pipeline. This involves bringing Marcellus gas into New England and the construction of a new pipeline from Wright, New York to Dracut, Massachusetts, together with the looping of an existing pipeline to Wright. Its location at Wright will also enable shippers to procure supplies from a diverse set of U.S. and Canadian sources. Its expected capacity is between 0.8-1.4 Bcf/d and it is projected to be in service in November of 2018;
 - PNGTS C2C Expansion, which connects the Trans Quebec & Maritimes Pipeline with M&NP-US at Westbrook Maine. This involves combining available unused capacity on its pipeline with new capacity from compression investments, resulting in an increased system capacity of nearly 60 MMcfd, bringing the total pipeline capacity to 300 MMcfd. Of that amount, up to 140 MMcfd would be available to shippers.
- Ultimately New Brunswick and Nova Scotia will import gas from the United States with the gas flowing over M&NP irrespective of the Project. Full reversal of the M&NP would easily support the Project's first LNG train and also meet the demand in Maine and Atlantic Canada without requiring construction of any new pipe;¹⁵ and

¹⁵ As noted in footnote 8, the reversal of M&NP is not a new phenomenon.

- The Project can act as an anchor shipper in order to support the delivery of gas into Nova Scotia, and result in increased regional investment and infrastructure which could benefit all gas consumers in Atlantic Canada.

43. The Applicant also asked ICF to prepare a Canadian demand sensitivity analysis and discuss its impact on the conclusions made in the Supply and Demand Forecast. This analysis is provided in the Supply and Demand Assessment (Section 3.7 of Appendix 1). ICF concluded that a 20% increase in gas demand by 2035 can be met at relatively small price increases (i.e. 4-6%).

44. Finally, ICF confirms that based on its analysis and experience in the North American and regional natural gas markets, the proposed LNG exports from the Project will not contribute to significant regional price increases.

V. THE IMPLICATIONS OF THE PROPOSED EXPORT VOLUMES ON THE ABILITY OF CANADIANS TO MEET THEIR GAS REQUIREMENTS

45. The Applicant retained Mr. Roland Priddle to describe the implications of the requested Annual Quantity and Term Quantity on the ability of Canadians to meet their gas requirements and to evaluate whether this gas is surplus to reasonably foreseeable Canadian requirements. The Applicant also asked Mr. Priddle to include a sensitivity analysis in his report. Mr. Priddle's report, entitled *A C LNG INC: Licence Application of the National Energy Board. A Description of the Implications of A C LNG INC.'s applied-for 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* ("Priddle Report") is attached as **Appendix 2**.

46. The main conclusions of the Priddle Report, which are essentially qualitative, include:

- The consideration of the Canadian and North American gas sector does not reveal anything that has troubling implications for the ability of Canadians to meet their gas requirements if the export licence applied for is issued and the proposed LNG exports take place. Indeed the short-term development of gas supplies, flows and requirements has only positive implications for Canadians in relation to the applied for exports;
- The North American gas sector presents all the features of an integrated, price-transparent, highly liquid commodity market characterized by a large number of buyers and sellers and service-providers of all kinds, huge volumes of paper and physical transactions, with no evidence of dominant positions and resulting market power being present in its unregulated component;
- The macro-economic impacts of the Project export volumes from Nova Scotia would, after allowance for the effects of changed basis differentials, be similar to those of exports of Canadian gas from British Columbia, of Canadian-source gas from the U.S. Pacific Northwest or of American gas from the U.S. Gulf Coast areas;
- The proposed Project export volumes at rates at full build-out of 2.1 Bcf/day and in a term quantity of some 16 Tcf, both figures including the requested 15 percent Annual Export Tolerance, do not have unfavourable implications on the ability of Canadians to meet their gas requirements;

- The proposed Project export volumes are modest in size and their impact over a time period approximating the second quarter of this century are likely to be lost in the ongoing 'churn' of market activity;
- The quantity of gas applied to be exported in liquefied form, namely 2.1 Bcf/d or approximately 16 Tcf over the Export Term, inclusive of the requested Annual Export Tolerance, does not have unfavourable implications on the ability of Canadians to meet their gas requirements;
- By anchoring a large, new, high load factor demand for gas and thereby entraining new sources of gas to supply that demand, the Project will have a transformative positive effect on the ability of Canadians in Nova Scotia and the region to meet their gas requirements;
- The new infrastructure needed to meet the Project's plant use and liquefaction requirements would assure a long-term high-quality gas supply to Nova Scotia and the Maritimes, building confidence for the future of gas in the region on the part of policymakers, regulators, gas distribution businesses and their customers, large and small;
- In relation to the gas commodity, this supply would increase the competitive options available to Canadians. Maritime gas buyers would be able to access the liquidity and take advantage of the transparency offered by gas hubs in the northeastern United States, attributes that are presently lacking. They would enjoy this access whether the gas in question was obtained from western Canada by displacement or directly from U.S. sources;
- Multiple alternatives will be available to Canadian gas buyers in terms of the type of supplier and the services available to them. Indeed, in a larger total market resulting from LNG exports, those alternatives may be enhanced compared to today;
- In relation to gas transportation, the volume required by the Project would dilute unit costs of gas transmission, a benefit that would be shared by local consumers, large and small;
- The Board has been aware from more than a dozen years that Maritime gas buyers do not have access to an upstream hub that would provide them with high liquidity and price transparency, such as is available at the Dawn, Ontario hub. Instead, the relevant pricing point to assist Maritime gas buyers is Dracut, Massachusetts, the southern terminus of the M&NP;
- The problem is that pipelines to New England from nearby prolific U.S. gas resources such as the Marcellus are congested and as a result gas prices in that U.S. region tend in peak seasons to become disconnected from pricing elsewhere. Thus, in recent winters, New England prices have spiked into the range of \$US 25-20/MMBtu with these very high prices flowing back at the margin to Maritime Canada;
- The Project, by entraining a new, large-volume supply of natural gas to the Maritime market, some ten times larger than the present market demand, would go a long way to correcting this situation. The implications are that Canadians in New Brunswick and Nova Scotia should then be able to meet their gas requirements at relatively lower prices than now, particularly in winter;

- The Project will be the catalyst for the development of the sort of large volume new supply of gas which the Board considers may lead to a more transparent and distinct Maritimes natural gas market, by bringing more suppliers into the picture and providing local gas buyers with more leverage;
- From a regional perspective, the implications of the Project on the ability of Canadians requiring gas in Nova Scotia and the Maritimes are wholly positive. Indeed, the Project could be critically important to the future secure and adequate supply of gas to meet the needs of Nova Scotia and Maritime gas consumers, at prices relatively lower than those available today;
- The Board can confidently find that the gas applied to be exported is surplus to reasonably foreseeable requirements for use in Canada, as is required by s.118 of its Act;
- The Board can have confidence that the "trends in the discovery of gas in Canada," which by law it must have regard to in making its surplus determination, are positive and will remain so for the foreseeable future; and
- The gaseous quantity of gas applied to be exported in liquefied form, namely 16.2 Tcf or approximately 756 Bcf per annum for a term of 25 years commencing in about 2019-2020, including allowances for the requested Annual Export Tolerance, 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 gas in Canada;

47. Mr. Priddle considers that these conclusions are generally consistent with the Board's own monitoring of the gas market as reflected in its energy market assessments and other documents and with the Board's statements that Canadians can expect energy markets to continue to function well, and that supplies of oil, natural gas and electricity will remain in excess of Canadian requirements for the foreseeable future.

VI. CONCLUSIONS AS TO SURPLUS EVALUATION

48. The assessments of ICF and Mr. Priddle demonstrate that the quantity of gas proposed to be exported by the Applicant does not exceed the surplus remaining after due allowance has been made for reasonably foreseeable requirements for use in Canada, having regard to trends in the discovery of gas in Canada.

VII. RELIEF REQUESTED

49. The Applicant respectfully requests that the Board issue an Import Licence authorizing the import of natural gas subject to the following terms and conditions:

- (a) **Import Term:** The term of the Licence shall be 25 years commencing on the date of first import of natural gas under the Licence;
- (b) **Annual Import Quantity:** Subject to the Annual Import Tolerance, the quantity of natural gas that may be imported in any consecutive 12-month period shall not exceed 839.7 Bcf or 23.8 billion m³;
- (c) **Annual Import Tolerance:** The quantity of natural gas that may be imported in any consecutive 12-month period may exceed the maximum Annual Import Quantity by

15 percent in order to allow for operational and design optimization, variability in gas specification, and operating and maintenance variables;

- (d) **Term Import Quantity:** Subject to the Annual Import Tolerance, the quantity of natural gas that may be imported over the term of the Licence shall not exceed approximately 17,821 Bcf or 504.8 billion m³;
 - (e) **Import Point:** The point of import of natural gas into Canada will be at the point at which the M&NP crosses the Canada-United States border near the town of St. Stephen, New Brunswick or such other border point as may become accessible over the Import Term; and
 - (f) Any further terms as may be requested and as the Board may impose in the circumstances.
50. The Applicant respectfully requests that the Board issue an Export Licence authorizing the export of natural gas subject to the following terms and conditions:
- (a) **Term:** The term of the Licence shall be 25 years commencing on the date of first export of LNG under the Licence;
 - (b) **Annual Export Quantity:** Including the Annual Export Tolerance, the quantity of LNG that may be exported in any consecutive 12-month period shall not exceed 15.5 MMT (natural gas equivalent of approximately 755.7 Bcf or 21.4 billion m³);
 - (c) **Annual Export Tolerance:** The quantity of LNG that may be exported in any consecutive 12-month period may exceed the maximum Annual Export Quantity by 15 percent in order to allow for operational and design optimization, variability in gas specification, and operating and maintenance variables;
 - (d) **Term Export Quantity:** Including the Annual Export Tolerance, the quantity of LNG that may be exported over the term of the Licence shall not exceed 329 MMT (natural gas equivalent of approximately 16.038 Tcf or 454.3 billion m³);
 - (e) **Export Point:** The point of export of LNG from Canada will be at the outlet of the loading arm of the natural gas liquefaction terminal, which is anticipated to be located in the vicinity of Middle Melford, Nova Scotia, Canada;
 - (f) **Early Expiration Date:** Unless otherwise authorized by the Board, the term of the Licence shall end 10 years after the date of Governor-in-Council approval of the issuance of the Licence, if the export of LNG has not commenced on or before that date; and

- (g) Any further terms as may be requested and as the Board may impose in the circumstances.

ALL OF WHICH IS RESPECTFULLY SUBMITTED this 26 day of May, 2015.

A C LNG
By its counsel Blake, Cassels and Graydon LLP

Per: Katis Duff
Per: Mr. Dufferin Harper, Partner

Communications with respect to this application should be directed to:

The Applicant

A C LNG INC.
1959 Upper Water Street
Suite 1301
Halifax, Nova Scotia B3J 3N2 Canada

Attention: Andrew Parsons

P: 902-482-2910
Email: aparsons@henergy.com

And to its counsel:

Blake, Cassels and Graydon LLP
855 - 2nd Street S.W.
Suite 3500 Bankers Hall East Tower
Calgary, AB T2P 4J8 Canada

Attention: Mr. Dufferin Harper, Partner

P: 403-260-9710
F: 403-260-9700
Email: duff.harper@blakes.com

LIST OF APPENDICIES

Appendix 1: ICF Consulting Canada – Supply and Demand Market Assessment in Support of A C LNG Export Licence, May 2015

Appendix 2: Roland Priddle - A C LNG INC: *Licence Application of the National Energy Board, A Description of the Implications of A C LNG INC.'s applied-for 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, 5/19/2015*