Canadian LNG Projects

Key Development and Financing Issues

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Introduction

North America is experiencing tremendous gas supply realignment. In 2000, Canada exported 3.5 trillion cubic feet (tcf) of gas to the United States. In 2013, Canada produced 4.6tcf gas, of which 2.9 TCF met domestic demand and only 1.7tcf was exported to the United States. With growing U.S. energy independence, Canadian gas exports to the United States are in decline and will decline further given the advent of massive U.S. domestic shale resources.

The National Energy Board of Canada (NEB) estimates that 1,093tcf (or 238 years of production at current rates) of remaining marketable gas resources are situated in Canada. But where will this gas go? Liquefied natural gas (LNG) industry proponents and various levels of government in Canada hope that LNG is the answer, but investment is necessary to deliver gas to the export market.

With the LNG market being global, and Canadian projects competing with projects around the world, the key question is what is the appetite for major new capital LNG investment in Canada versus other jurisdictions?

This paper examines the current state of LNG project developments in Canada, identifies development regulatory matters in Canada, along with management of aboriginal law issues, and offers observations on how such projects might be financed by reference to securing LNG off-takes for these projects and potential financing structures.

Overview of LNG Projects in Canada

There have been 22 announced LNG export projects in Canada; 18 along Canada’s West coast in British Columbia (BC), eight of which have NEB export licences, and four along Canada’s East coast in Nova Scotia, one of which has an NEB export licence.

All of the projects are at various stages of project development, including in respect of siting, export licences, authorisations and environmental assessments, and formulation of their respective finance plans. The West coast projects are substantially ahead of any of the East coast projects. (See table below for detail on the West coast LNG export projects).

Projects range from large, more than 20m (metric) ton per annum (mtpa), facilities down to much smaller facilities – for example, the 2.1mtpa Woodfibre LNG floating barge facility. We discuss some of the larger projects below.
The LNG Canada project, located in Kitimat, BC, led by Shell Canada, comprises a two-train notional 12mtpa facility and includes a 650 kilometers pipeline. It has already received its export licence for up to 24mtpa for 25 years. Currently the project is advancing towards final investment decision (FID), expected within the next 24 to 36 months, with its environmental assessments well underway and its FEED contracts issued as of early 2014.

Malaysia’s Petronas is leading the 2 to 3 train, 12 to 19.68mtpa, Pacific Northwest LNG project, located on Lelu Island, near Port Edward, BC. The Prince Rupert Gas Transmission pipeline, approximately 900 kilometers long, is being developed by TransCanada Corp. to feed the terminal. It has its export licence up to 19.68mtpa for 25 years and is currently moving towards making FID, reportedly targeted for late 2014. Its environmental assessments are under way and FEED contracts were issued in May 2013. Operations are targeted for May 2019.

Kitimat LNG, located in Kitimat, BC and owned by Apache Corp. and Chevron, features a notional 5 to 10mtpa facility comprised of 1 to 2 trains and 465 kilometers of pipeline. It has a 20-year export licence issued for up to 10mtpa. It has already obtained environmental assessment approvals and its project site preparations have been advanced the furthest amongst the various projects, but Apache plans to sell its interest in the project and there are some uncertainties regarding how a new partner may impact the project.

The Prince Rupert LNG project, with a notional 14mtpa, 2-train facility, is located at the Port of Prince Rupert, BC and is owned by the BG Group. The project is expected to rely on the 850 kilometer Westcoast Connector Gas Transmission pipeline pursuant to a joint venture with Spectra Energy. An export licence has been issued for up to
21.6mtpa for 25 years. While initial environmental assessment pre-applications have been made, there is expected to be a delay in FID which is now targeted for 2017, with commercial operations expected in 2022.

**Key Regulatory and Policy Issues Affecting Development of Canadian LNG Projects**

**The Challenges**

Cast against a global playing field, Canadian LNG projects face competitive challenges. LNG liquefaction plant and pipeline construction in Canada may have labour and cost challenges unlike competitor projects in other parts of the world. Canadian gas assets are stranded and require significant pipeline infrastructure to reach liquefaction sites on Canada’s coasts. The LNG liquefaction plant sites themselves are often remote and present shipping access challenges.

Canada’s environmental laws are thorough and managing the environmental assessment process is fraught with a great deal of complexity. There are public opinion hurdles in terms of the acceptability of unconventional gas hydraulic fracturing (aka fracking) and associated environmental sensitivities. Further, as discussed in greater detail below, there are often First Nations concerns.

**The Policy Response**

In response to these challenges, the Canadian and provincial governments have clearly identified the LNG industry as a priority and have taken steps to amend legislation and clear the regulatory path to facilitate these projects.

Various amendments have been made to federal legislation governing new pipeline and environmental assessments for these projects. For example, changes were made to the *National Energy Board Act* in order to streamline approvals. British Columbia has also enacted new regulations specifically for LNG plant facilities. Furthermore, both the federal and provincial governments are considering new labour policies to address the need for temporary foreign workers required in the construction of these projects.

While any foreign investment in Canada over certain thresholds must meet *Investment Canada Act* requirements and approvals, it is clear that unlike industries such as Canada’s oil sands and potash, the LNG industry is open for foreign investment and lack of *Investment Canada Act* approval is a very remote risk.

**B.C. Provincial LNG Income Tax and Project Development Agreements**

Having arguably misstepped by announcing in February 2014 a two-tier tax on income earned from the sale of LNG produced in BC, the British Columbian government seems to be trying to provide fiscal certainty for projects by clarifying the LNG tax and negotiating project development agreements with certain projects to encourage FID decisions.
Initially, significant concern was expressed by the LNG industry that this tax proposal would place a disproportionate burden on BC LNG projects in comparison with LNG projects elsewhere globally. The BC provincial government seemed to listen and announced on October 21, 2014 Bill 6, the *Liquefied Natural Gas Income Tax Act*, which will be considered at the legislature’s next sitting.

The Bill clarifies that the tax will apply to the net income earned from liquefaction activities at LNG facilities located in BC. A tax rate of 3.5% will apply on this income beginning January 1, 2017. A tax rate of 1.5% will apply during the period when net operating losses and capital investment are to be deducted (and taxes paid in this period will be creditable against the future income when the 3.5% tax rate is in effect). The Bill also clarifies that the earlier upper range of the proposed tax rate (originally announced to be up to 7%) will not apply, instead a tax rate of 5% will apply beginning in 2037.

This legislation further provides that a corporate income tax credit will be available to any LNG income taxpayer with a permanent establishment in BC. This tax credit will be calculated based on the natural gas acquired for an LNG facility.

The BC government no doubt hopes Bill 6 will placate project proponents’ concerns regarding project tax burdens, but it remains to be seen whether these concessions, and the project development agreements, will be sufficient to attract necessary investment.

**First Nations Concerns**

*Duty to consult*

Section 35 of Canada’s Constitution, along with related case law, provides certain protections of the traditional rights of aboriginal, or First Nations, peoples. Where government authorizations are required for a project that could impact aboriginal rights or interests, the Crown has a duty to consult with First Nations and, where appropriate, to accommodate affected aboriginal groups for any infringement to their traditional rights.

Following the July of 2014 Canada’s Supreme Court decision in *Tsilhqot’in Nation v. BC*, which found that the concept of aboriginal title exists for the potential benefit of aboriginal groups situated in Canada, proponents of LNG projects can expect that governments will place greater emphasis on assessing the strength of aboriginal claims to title in the context of the Crown’s duty to consult.

In practice, even though it is a Crown duty, project sponsors typically cover costs and manage this process. As project development unfolds, they need to ensure that aboriginal consultation occurs early and often throughout the development process. Meticulous records of consultations and any accommodations should be kept.

The legal, practical and regulatory risk associated with managing the Crown’s duty to consult and accommodation can be daunting, in particular to foreign investors or
financiers considering investing in or financing an LNG project who are not familiar with this process or its context. However, proponents of resource projects in Canada have been managing these issues sensitively and successfully for some time to the mutual satisfaction of all stakeholders.

**Impact Benefits Agreements**

Outside of any legal duty to consult or accommodate, a common practice that has emerged in Canadian resource projects is the negotiation of impact benefits agreements between project sponsors and stakeholder aboriginal groups to provide certainty on project development and manage aboriginal and government risk. By focussing on finding ways for affected aboriginal groups to be meaningful economic and strategic partners should allow agreements to be struck in order for projects to proceed on a timely basis.

**Securing Long-Term Offtakes for Canadian LNG Projects**

LNG projects in Canada are most likely to look to finance construction through the project bond or project loan markets (most likely utilizing a mix of commercial bank and export credit agency debt). Key to any financing strategy will be securing long-term purchase agreements with creditworthy off-takers for the bulk of LNG that will be produced. This task is increasingly difficult and is likely to impact on the number of projects that will be able to obtain financing over the next few years.

Although demand for LNG continues to grow and the number of importing countries continues to expand (25 countries have plans to build their first regasification terminals by 2017, in addition to 39mtpa of new capacity that has been built in just the last four years), this is far outstripped by planned new supply sources. In North America alone, more than 190mtpa of new liquefaction capacity is planned. This has created a “buyers” market where there are multiple potential supply sources, particularly into North Asia where many of the key creditworthy off-takers are located.

Three noticeable effects can be observed as a result of the abundance of supply sources. First, LNG buyers are generally showing reluctance to move quickly to close long-term supply deals. They are interested in negotiating with multiple projects to find the best commercial arrangements, not only on price but also such key terms as repricing mechanisms (ie, how often the pricing formula is revisited), dispute resolution and destination flexibility.

Second, many buyers are showing a reluctance to enter into the traditional ~20 year LNG off-take agreement and are, instead, offering shorter terms and/or exploring sourcing large amounts on the spot or short-term market. Spot sales of LNG increased from 5% of global traded LNG volume in 2000 to over 31% in 2012.

Last, sponsors are increasingly looking to new buyers of LNG as the main buyers. Some of these buyers do not have credit ratings at the level offered by the most active North Asian buyers which have been the anchor buyers for most of the recent large LNG projects. As project financing looks to the revenue stream as the sole source of
repayment of the project financing bonds or loans, a lower credit rating of the main off-takers has a substantial impact on both pricing and the availability of financing.

In response to these challenges, many sponsors are looking with interest at tolling type structures, where the project enters into long-term tolling agreements with entities who both buy gas for liquefaction and take the LNG, paying a tolling fee for the use of the LNG facility. Again, credit of the counterparty is key and the counterparty to such an agreement must be creditworthy.

**Financing Considerations for Canadian LNG Projects**

Assessing the financeability of the Canadian LNG projects under development is difficult in the current period of steeply declining energy prices. However, these projects have a number of unique features. As was noted above, securing new long term markets for Canadian gas is critical to the BC and Canadian Governments. This will drive a more flexible approach to meeting lenders concerns than has been seen in other markets where the export of gas is controversial or of a lower national priority. Sponsors currently developing projects in BC have taken comfort that this will enable sponsors, lenders and governments to negotiate bankable solutions.

Unlike projects outside of North America, Canadian LNG projects will likely be able to access the US debt capital markets to raise some or all of the debt on terms that are competitive with commercial bank financing. As has been seen on some of the US LNG projects, the commercial bank market also has a very large appetite for LNG projects. Whilst export credit agency financing will likely be needed for the largest projects (and may be attractive on cost terms for all Canadian LNG projects) the ability to finance using the bond or commercial bank markets is a significant advantage to Canadian LNG projects over projects outside of North America.

Most export credit agencies continue to very positive towards LNG projects but it is not known if that will translate into accepting non-traditional risks for projects in Canada. Balanced against the low political risk and sophisticated labor market of Canada are the increased difficulty in securing long term offtake agreements with creditworthy offtakers, a desire on the part of some of the projects to not offer a full completion guarantee to lenders (relying, instead on EPC contracts and/or cost-overrun support not rising to the level of a full completion guarantee) and the large number of projects seeking funding at essentially the same time.

It is likely that the end result will be a mix. Some projects will proceed on the same basis as previous projects with long term offtake agreements and full completion guarantees. Other projects will likely not have these advantages and will test the boundaries of what is financeable for LNG projects in developed countries.
# LNG Export Facilities – West Coast

<table>
<thead>
<tr>
<th>LNG Project Location</th>
<th>Proponent</th>
<th>Volume (MTPA)</th>
<th>NEB Export License</th>
<th>B.C. Environmental Assessment Office</th>
<th>Canadian Environmental Assessment Agency</th>
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<tbody>
<tr>
<td>Discovery LNG (Campbell River, BC)</td>
<td>Quicksilver Resources Canada</td>
<td>Being assessed</td>
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<td>Douglas Channel Energy/ BC LNG (Kitimat, BC)</td>
<td>Douglas Channel Energy Partnership, Haisla Nation, Golar LNG, LNG Partners</td>
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<td>Kitimat LNG (Kitimat, BC)</td>
<td>Apache Corp and Chevron</td>
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<td>Approved</td>
<td>Certificate Issued</td>
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<td>LNG Canada (Kitimat, BC)</td>
<td>Shell Canada, KOGAS, Mitsubishi and PetroChina</td>
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<td>Application Under Review</td>
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<td>Pacific Northwest LNG (Port Edward, BC)</td>
<td>PETRONAS, JAPEX, Petroleum Brunei, India Oil Corp., SINOPEC</td>
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<td>Prince Rupert LNG (Port of Prince Rupert, BC)</td>
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<td>Pre-Application</td>
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<td>Woodfibre LNG (Squamish, BC)</td>
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<td>Triton LNG (located TBD)</td>
<td>AltaGas Ltd and Idemitsu Canada Corp.</td>
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<td>WCC LNG Ltd. (location TBD)</td>
<td>Imperial Oil, ExxonMobil Canada</td>
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<td>Aurora LNG (Grassy Point near Prince Rupert, BC)</td>
<td>Nexen, INPEX Corp., JGC Corp.</td>
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<td>Kitsault Energy Project (Kitsault, BC)</td>
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<td>Canada Stewart Energy Project (location TBD)</td>
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<td>WesPac Marine Terminal (Delta, BC)</td>
<td>WesPac Midstream – Vancouver LLC</td>
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<td>Cedar LNG Export (Douglas Channel, BC)</td>
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<td>Steelhead LNG (Sarita Bay, BC)</td>
<td>Steelhead LNG and Huu-ay-aht First Nations</td>
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