



# The Global Exchange

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# DEFENCE PROCUREMENT IN CANADA'S 43RD PARLIAMENT

6TH ANNUAL DEFENCE PROCUREMENT CONFERENCE

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# Introduction: LNG's Potential in Canada's Future

by **CHRISTY CLARK**

**W**hen Alberta Premier Peter Lougheed founded the Alberta Energy Company in 1973, even he may not have imagined the colossal impact the oil sands would have on Canada: today, an annual contribution of \$14 Billion to our GDP.

When I became Premier of British Columbia, I looked to his example.

I believed, and still do, that with liquefied natural gas, Canada has a chance to create an industry whose value to the economy and Canadian workers could be almost as large as that of the oil sands.

Imagine if that \$14 Billion in annual oil sands contribution grew to \$25 Billion with new revenues from LNG. The impact on every citizen would be felt in the form of lower taxes, higher wages, better health care, and better schools.

Citizens in Asia and South Asia are demanding cleaner air. This is putting intense pressure on governments to convert from coal to natural gas – a product that is 30 – 40 per cent cleaner.

The result: LNG demand will continue to increase until 2040 – even as demand for oil flattens.

But, like Peter Lougheed, do Canadian politicians have a plan to get our country into this lucrative game?

Canada has significant advantages. Our proximity to the world's biggest markets means shorter transit times and faster turn arounds. We host a well educated population and we are governed by the rule of law.

We will produce the lowest emission LNG in the world.

The Paris agreement explicitly encourages developed countries to export products that will reduce emissions overseas. If we make use of it, exporting LNG could be recognized as the biggest contribution Canada has ever made to fighting climate change.

Unfortunately, the list of reasons not to invest in the resource sector in Canada is growing faster than our advantages.

The tangle of regulation is much heavier than it was in 1973. We now have the most expensive, time consuming, regulatory process in the world.

The botched implementation of a national carbon tax has added massive uncertainty for investors. Rising taxes in Canada vs. tax cuts south of the border have further chipped away at our competitiveness.

We were once globally known to be a dependable trading partner and a safe investment destination - not anymore.

In late 2017, Shell announced final approval for its LNG project in Kitimat – a project that our government had championed since 2011. Since then, Petronas and several other of the largest LNG investors have pulled the plug. The others are on indefinite hold. Many suspect it's "one and done" for new governments in B.C. and Ottawa.

Perhaps it just seems too hard to them. There is no denying that it took enormous commitment to shepherd along the 19 LNG



projects that were once in the approvals process.

We led dozens of trade missions to open markets for our natural gas. We created new tax and environmental legislation. We invested in new infrastructure and skills training to grow the workforce and reduce the risk of capital cost inflation due to labour shortages. We also negotiated 60 agreements with First Nations along the LNG right of way. This last element was vital because, in B.C., most First Nations don't have treaties.

In their absence, those agreements are the underpinning of the strong indigenous support that exists for LNG today. Most indigenous communities have missed out on the economic benefits of resource extraction. LNG is their way in – finally.

But there is opposition. First Nations leaders who must face regular elections have approved the agreements, but in a few communities, unelected leaders have emerged who want to overturn them. This raises the related questions of who has the right to approve resource infrastructure and can a minority get an effective veto.

Those questions, two of many in our shifting legal, regulatory and tax landscape, cannot be settled by the private sector. That's the job of government.

That's why the key to building a globally competitive LNG industry is electing governments with the political will to champion it and work with proponents to get projects past the finish line.

We urgently need a pan-Canadian resource strategy. We need certainty of regulation and taxes for investors. We need politicians and bureaucrats who see themselves as enablers of economic growth rather than as activists whose job it is to frustrate it.

Canada is late to the LNG game. But the opportunity is not lost to us – not yet.

The demand for LNG continues to grow and Canada's unconventional reserves remain

amongst the very best in the world. With political will and an appetite to embrace gas the way Premier Lougheed once championed oil, we can still put the wealth of Western Canadian gas to work for the good of all Canadians.

The papers that follow will be essential pieces for policy makers as they map out the path to Canada's next great economic transformation.

**CHRISTY CLARK** is the former-Premier of British Columbia. When Ms. Clark left office, British Columbia had been Canada's economic leader for three years running—the first time that has happened since the 1960s. B.C. went from being ninth in job creation to first among provinces. And, after inheriting a deficit of \$1.2 billion, her government went on to balance five consecutive budgets. Her last budget included \$52 billion in revenues and boasted a \$2.8 billion surplus. When she retired, B.C. was on track to eliminating its operating debt by 2020—the first time since 1976. B.C. was also the only Canadian province with a AAA credit rating.



# LNG: Caught in the Web of Opposition to Energy Projects

by **MONICA GATTINGER**

It seems there is opposition to all major energy projects in Canada these days. There is little consensus over energy projects and the country's energy future in an age of climate change, of reconciliation with Indigenous peoples and of public mistrust of institutions. Debates have become increasingly polarized, partisan and parochial, and public confidence in those making decisions about energy projects is waning.

The development of liquefied natural gas export facilities is caught in this web.

Why is this the case?

What's to be done?

Will a so-called LNG narrative help?

Addressing these questions is pivotal. The future of the LNG industry in Canada hangs in the balance.

\* \* \*

When LNG Canada announced a positive final investment decision on its \$40-billion export project, many people saw it as confirmation that the facility would be built. The federal government issued a press release stating the project will create 10,000 jobs during construction, generate billions in government revenues and lead to hundreds of millions of dollars in contracts for Indigenous businesses. In light of recent experience with large energy projects, this confidence seems misplaced.

For seasoned energy observers, the decision is important, but it is only one milestone on the lengthy road to establishing LNG export facilities in Canada. Many hurdles remain.

Despite the support of all First Nations along the pipeline route bringing gas to the planned terminal, the opposition of a small group of hereditary chiefs in one community



calls into question the project's ability to move forward. Their opposition has been highly publicized and has led to protests in cities within and beyond Canada.

Opposition to LNG development by Indigenous leaders and climate activists creates uncertainty. If opponents fight the project with court challenges, lengthy delays could ensue. And if they fight the project with protests or civil disobedience, the political will of the federal and British Columbia governments to back the project could wither. So could the will of LNG Canada and its investors.

Why is it so tough to get LNG projects built in Canada when similar countries – notably the U.S. and Australia – have been able to permit and construct multiple facilities? This paper begins by laying out the reasons why. It then recommends ways to address the challenges to LNG development in an age of climate change, reconciliation with Indigenous peoples and public mistrust of institutions. In particular, it considers whether an LNG narrative will help pave the way to construction.

### **The Web of Opposition to Energy Projects in Canada**

Why have energy projects become subject to increasing opposition and controversy in Canada even when they have the support of multiple affected communities, a majority of citizens, regulatory agencies and governments?

There is no single or simple answer to this question. Four inter-related factors have combined to generate opposition in recent years: social, value and technological change; gaps in government policy; growing uncertainty over who decides whether an energy project should move forward and by what process they should decide, and increasingly polarized debates over energy and climate.

First, take social, value and technological change. Canada's energy decision-making apparatus was built largely in the early postwar period, a time when people were more trusting and deferential, and long

before social media came on the scene. Since the 1950s, public trust in government, industry and experts has declined across Western industrialized democracies. In an era of fake news and social media echo chambers, the 2017 Edelman Trust Barometer declared "trust is in crisis around the world". In the 2018 Barometer, the media emerged as the least trusted institution and for a majority of respondents, not trusting the media "led to an inability to identify the truth" and to trust "government leaders." In 2019, the Barometer revealed that people have "shifted their trust to relationships within their control", especially to their employers.

It is difficult to discern tidy trend lines from all of this, but one thing is clear: who or what people trust, with what level of commitment and why – is in flux.

Related to changes in levels of trust, citizens' deference to authority has also declined and they have a greater desire to be involved in decision-making processes that affect them. In addition, there is much greater fragmentation and more visible lack of consensus over what constitutes the national interest and how best to determine it.

Accompanying these changes are transformations in information and communications technologies, notably the rise of social media. These changes have created unprecedented opportunities for communication between anyone and everyone, enabling rapid mobilization and instantaneous sharing of information – and misinformation.

Second, there are gaps and incoherence in government actions on broad policy issues like climate change, reconciliation with Indigenous peoples and the cumulative effects of multiple energy projects. Energy projects are often opposed for reasons stemming from broader questions of public policy well beyond their individual merits or demerits. There are policy gaps in three key areas: climate change, reconciliation with Indigenous peoples and cumulative effects. On climate change, the absence of adequate forums for, and perceptions of, meaningful

government action on climate, notably over the last decade, has resulted in concerns over climate being played out in the regulatory system through opposition to individual projects. Advocacy in this space can be highly polarized and polarizing, and includes sharp targeting of the oil and gas industry itself, notably the oilsands. Exacerbating this challenge is the tendency for governments over the years to have made (and continue to make) commitments on climate change that cannot practically be met in physical, economic, social or political terms. This generates both skepticism and a lack of confidence that governments take the issue seriously.

On Indigenous issues, inadequate government movement on reconciliation can result in energy projects being opposed by Indigenous authorities or community members, based on concerns that extend well beyond energy policy, regulation and development (e.g., clean drinking water or adequate housing). This policy gap is exacerbated by a lack of clarity and shared understandings of the legal context for Indigenous involvement in energy projects in Canada; notably, what court decisions mean for rights, title and the duty to consult and accommodate and for the scope and nature of Indigenous governments' authority.

On cumulative effects, the lack of adequate regional planning forums and mechanisms like strategic environmental assessments to address the effects of multiple projects in geographic, environmental, social and temporal terms can likewise generate opposition to individual projects for reasons that extend well beyond an individual project per se. Jurisdictions like Alberta and British Columbia have responded to these issues with frameworks to address regional cumulative effects but many challenges, including scope of coverage and interjurisdictional co-ordination, remain.

Third, the above changes create uncertainty over who ultimately holds the power to decide whether a major energy project can go forward, and by what process they make the decision. Governments are trying to

open up decision-making processes to respond to demands for citizen involvement, but this can generate real and perceived tensions between participatory democracy (citizen involvement) and representative democracy (elected or appointed officials taking decisions). Regulators are incapable of addressing issues beyond their mandates and individual project proponents face real limits to the extent to which they can address these broader issues on their own. Therefore, public frustration mounts, and confidence in public authorities (policy-makers, regulators) and industry (individual companies, entire industry sectors) can weaken.

Citizens may be less likely to trust that governments make fair, unbiased, balanced decisions and may lack confidence in expert opinion and scientific evidence, giving more weight to evidence from sources they trust (e.g., close friends), regardless of their knowledge or expertise. A democracy has multiple avenues for trying to overturn or influence public decisions (lobbying, campaigns, the courts, etc.). Who decides and how has become a very open question in Canada.

Finally, recent trends toward greater polarization and partisanship on energy issues in Canada make reasoned, balanced debate difficult to come by. Two very different visions of the country's energy future are on offer. Unfortunately, they mostly talk past one another because they're anchored in different starting points. The first, which can be called Canada's low carbon transition, takes climate science and the Paris emissions reduction targets as its starting point. Successive reports from the Intergovernmental Panel on Climate Change (IPCC) documenting the rapidly changing climate and articulating an urgent need to decarbonize energy systems anchor the view. The low carbon vision is grounded in the existential threat climate change poses: countries must meet the Paris targets to avert temperature increases that models say would be disastrous for the planet.

For Canada, this approach advocates for a rapid low carbon transition away from oil and

gas by phasing out oil and gas production (especially the oilsands), ramping up renewable energy (especially wind and solar), rapidly electrifying energy systems (especially adopting electric vehicles), and putting a price on carbon (especially one that applies across the country).

The low carbon vision is primarily domestic- and upstream supply-focused. According to this view, Canada must reduce its emissions and eliminate the oil and gas sector to meet its Paris targets. Globally, the view maintains that the country has a moral responsibility to demonstrate leadership on the international stage. If Canada – a Western industrialized democracy whose development contributed to anthropocentric climate change – doesn't take action, why would others?

The second vision can be called Canadian energy in the world. It takes energy economics and global energy demand as its starting point. International Energy Agency (IEA) studies documenting oil and gas demand growth over time and into the future anchor the view. So do IEA and other scenarios projecting fossil fuels will continue to account for the majority of global energy demand – even under the Paris targets. The actual and potential benefits of the oil and gas sector to the Canadian economy, to economic reconciliation with Indigenous peoples and to government revenues also ground the approach.

“Canadian energy in the world” is an opportunity-based vision. With global demand for oil and gas remaining strong – even under ambitious climate policy – there are significant export opportunities for the country's vast energy resources. In this view, shutting down Canadian oil and gas production will do nothing to reduce global demand, as other producers – the U.S., the Organization of Petroleum Exporting Countries (OPEC), Norway, Australia and Russia – will gladly step in to fill the breach.

The vision is global-, technology- and emissions performance-focused: if Canadian oil and gas can be produced with lower greenhouse gas (GHG) emissions than the

global average – an emerging reality given recent years' innovations – then why shouldn't it be sold in international markets? And if Canadian energy exports can reduce global emissions by displacing higher emitting energy sources elsewhere, why shut them in?

As discussed below, this vision is particularly relevant to LNG development and it underpins many of the arguments supporters make in favour of LNG. But in a polarized political context coloured by social and value change, policy gaps and uncertainty over who decides what and how, it's unclear whether an LNG narrative will pave the way to getting projects built.

### **Can LNG Break Free From the Web of Opposition?**

There is no silver bullet when it comes to addressing these issues. Rather, there are multiple avenues that need to be pursued.

The first relates to developing a so-called LNG narrative. Many think that if Canada has the right LNG story, this will resolve the challenges. But as shown above, public opposition to energy projects results from multiple factors – social, value and technological change; policy gaps; uncertainty over who decides what and how; and polarized debates. In this context, getting the narrative right is at best a necessary but insufficient condition. At worst, it can contribute to amplifying polarization if it's developed or promoted in a way that's seen as a shallow trope to advance narrow industry interests with little consideration for climate or other social imperatives.

For a narrative to be helpful, it needs to begin with clear comprehensive messaging from governments, industry, Indigenous leaders and multi-stakeholder groups that addresses the full suite of reasons for opposing projects. It needs to have credible answers to many questions. How are LNG projects developed in ways that provide meaningful opportunities for public input? How do they advance progress on issues

like climate change, reconciliation with Indigenous peoples and cumulative effects? Why should people trust both the substance of decisions to move forward with LNG exports and the processes used to make them?

Moreover, for a narrative to be helpful, it needs to put its metrics where its mouth is: it needs to be grounded in performance indicators and metrics benchmarked over time. Metrics for economic, social and environmental impacts need to be clear, credible and broadly communicated on an ongoing basis. Claims that Canada has world-class regulation, safety or industry performance on the environment, or for partnerships with Indigenous communities, need to be substantiated and widely communicated. And they need to be developed and collected in ways that are viewed as trustworthy by all involved.

Communicating performance metrics should also include support for informed media coverage of the issues by mainstream outlets across the country. Outside of specialized industry and trade outlets, media coverage is often poorly informed on energy in general and the realities of community support or opposition to individual projects in particular (this tendency likely grows the further away outlets are from project locations). The declining number of journalists specializing in energy is of particular concern.

But even a balanced narrative with benchmarked performance that's widely communicated is unlikely to be successful unless accompanied by effective government action on policy gaps and on clarifying who decides what and how. A brave new world of energy confronts decision-makers – one that is far more complex, interconnected, volatile, prone to polarization, fragmentation, distrust and misinformation, and far less controllable. To date, no Canadian government has gotten the balance right and managed to align economic, social and environmental imperatives in ways that provide a clear predictable investment climate that also meets 21st century citizen demands.

When it comes to LNG exports, part of the challenge may well lie in the fact that in contrast to countries like the U.S. and Australia that have been able to permit and construct facilities, Canada has limited experience with LNG (either export or

import) and the country has never exported oil and gas resources in meaningful volumes using anything but a pipeline. In addition, facilities will mainly be located in areas with limited prior experience with energy infrastructure and with multiple Indigenous communities that have long histories of mistrust of government and industry, and varying interests both within and between them. These projects also come at a time when debates over Canada's energy future in an age of climate change are polarized along partisan and regional lines.

Given this, Canada is in a period of unprecedented experimentation when it comes to energy decision-making. But the stakes are high. LNG Canada is the largest private sector investment in Canadian history. It will be a pivotal test case. A positive final investment decision (FID) has been made and both the federal and British Columbia governments have attempted to address policy gaps, and tried to reform energy and environmental impact decision-making to address contemporary demands. Importantly, both support the project. Will they stand firm in the face of opposition?

Botching LNG Canada will have effects well beyond the lost economic opportunity of the project itself. It will have ripple effects for investor confidence in other projects, whether in the LNG sector or beyond.

\* \* \*

What all of this will mean for the future of the natural gas sector in Canada is a very open question. Thanks to the advent of fracking and the so-called shale revolution, natural gas production in the U.S. has climbed from 18.1 trillion cubic feet of dry (consumer grade) natural gas in 2005 to 30.4 trillion cubic feet in 2018 (production for the first half of 2019 is estimated at 16.3 tcf). This has had a predictable impact on natural gas trade: the U.S. was a net importer of natural gas for decades, with the majority of imports coming from Canada. Now, the U.S. exports natural gas in increasing volumes (including to Eastern Canada from shale deposits in the northeast): U.S. gas exports more than

tripled over the last decade, rising from 729 billion cubic feet in 2005 to 3.6 trillion cubic feet in 2018 (exports in the first six months of 2019 alone total 2.1 tcf). Beginning in 2017, the U.S. was a net exporter of natural gas – the first time it exported more gas than it imported since the 1950s (net exports grew from 125 bcf in 2017 to 719 bcf in 2018; they were 740 bcf in the first six months of 2019 alone). Of course, this is made possible by the development of LNG export facilities.

While Canada has been struggling to get one project built, the U.S. has been permitting and building multiple facilities. Between 2016 and 2019, the U.S. brought four LNG export facilities into operation in the lower 48 states. Two more are expected to be added by 2020, bringing the U.S.'s total export capacity to a staggering nine billion cubic feet per day. In very short order, the U.S. has become both consumer and competitor for Canadian gas: U.S. imports from Canada have declined from 3.7 trillion cubic feet in 2005 to 2.8 trillion cubic feet in 2018 (they stood at 1.4 tcf in the first six months of 2019). The situation will likely get even more challenging. The U.S. Energy Information Administration (EIA) projects a further decline in natural gas imports from Canada in the decades ahead, along with an increase in U.S. gas exports to Eastern Canada.

All of this underscores the importance for Canada of developing the LNG industry. But it must do so at a time when there is little consensus over the country's energy future in an age of climate change, of reconciliation with Indigenous peoples, of public mistrust of institutions, and where energy projects are opposed far more often than not.

Can LNG break free from this web? Possibly, but any approach to doing so needs to avoid single simple solutions and must address all of the factors that create the web of opposition.

**MONICA GATTINGER** is Director of the University of Ottawa's Institute for Science, Society and Policy, Associate Professor at uOttawa's School of Political Studies, and Fellow at the Canadian Global Affairs Institute.

Lead image: **Emilee Gilpin/Canada's National Observer**



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# First Nations, LNG Canada, and the Politics of Anti-Pipeline Protests

by **WILFRID GREAVES** and **WHITNEY LACKENBAUER**

In October 2018, LNG Canada – a C\$40 billion joint venture supported by some of the largest multinational corporations in the world, including Shell, Petronas, PetroChina, Mitsubishi and the Korean Gas Corporation – was approved by its investors, and a new chapter in Canadian political economy began. The project consists of a coastal liquefied natural gas terminal at Kitimat, British Columbia, which is fed by a 670-kilometre pipeline from the shale gas-producing region in the province's northeast interior. It is the largest private-sector and natural resource investment in Canadian history, in a country where resource extraction still contributes more than 17 per cent of GDP. Moreover, LNG Canada is the

cornerstone of the B.C. NDP government's economic policy, promising to provide 10,000 jobs during construction and up to 950 permanent jobs once the project is fully operational. It will also create \$5 billion in additional provincial GDP per year and \$23 billion in new revenues over the project's life, while spurring the growth of a new natural resource industry. Predicted economic benefits in the rest of Canada will total \$2 billion per year and approximately \$500 million in new federal revenues. These benefits will be in addition to an increase in the value of all Canadian liquefied natural gas exports of between \$519 million and \$5.8 billion per year, depending on market prices. Thus, it is not surprising that the federal government is also strongly supportive, and that Prime Minister Justin Trudeau was seated next to B.C. Premier John Horgan when the agreement was signed.

For all the enthusiasm, LNG Canada raises a series of crucial questions about principles and political trade-offs, ultimately touching on issues central to Canada's current divisive public policy debates and its strained constitutional fabric.

Notwithstanding the shared insistence of the B.C. and federal governments that an LNG industry can be established without compromising Canada's or British Columbia's greenhouse gas emissions targets, environmentalists and other actors have criticized the project. Critics note Canada's poor performance in reducing its GHG emissions, and the apparent inconsistency between building a new LNG sector and the province's desire to position itself as "CleanBC". Indeed, the provincial government's eponymous economic and environmental policy statement goes to considerable lengths to allay environmental concerns. But for many critics, a government that has provoked backlash elsewhere in Canada by opposing construction of new diluted bitumen pipelines from Alberta to the Pacific coast is a hypocrite for supporting its own fossil fuel pipeline and export terminal mega-project. The project comes alongside B.C.'s opposition to the expansion of the Trans Mountain pipeline, and federal rejection of the Northern Gateway pipeline that would also have built a fossil fuel export facility at Kitimat. The perception that British Columbians will support their own fossil fuel sector while obstructing Alberta's has fuelled the interprovincial acrimony that resulted in a brief trade war last year, even though both provinces were, until very recently, governed by provincial wings of the New Democratic Party.

Government support for LNG also further undermines the already delicate political landscape of reconciliation between Indigenous peoples and non-Indigenous Canadians. Shortly after the LNG Canada project launch, the Wet'suwet'en nation – through whose lands the LNG pipeline is supposed to pass – reinvigorated a campaign of civil disobedience and territorial occupation. As discussed below, for weeks in late 2018 and early 2019, the Unist'ot'en protest encampment blocked access to representatives of Coastal GasLink seeking to begin construction on the pipeline route. Many local people and their supporters claimed a lack of Canadian jurisdiction to interfere in the traditional decision-making processes of the Wet'suwet'en. The RCMP's subsequent enforcement of a court order

supporting Coastal GasLink's right to enter the territory did little to resolve underlying conflicts between legislated and hereditary traditional governance structures among First Nations in B.C. and elsewhere in Canada. Nor did it inspire much hope that the federal reconciliation agenda, a centrepiece of the post-2015 Trudeau government, offered much different to Indigenous peoples than the Harper government that preceded it.

At least three aspects of the LNG Canada project raise unresolved questions critical to British Columbia's and, indeed, Canada's future. First, what is the balance between climate change policy and non-renewable natural resource extraction, particularly fossil fuels? Second, how should Canada decide which resource projects to approve, and by extension, which provinces will stand to benefit most from their natural resources? Beyond its implications for regional economies and Canada's contributions to combating climate change, this question also strikes at the heart of Canadian national unity. It stirs the volatile mix of Western Canadian grievance against Ottawa, cultural and economic differences between Alberta and B.C., and the contentious debate over perpetuating Canada's petro-economy during a federal election year. Finally – and the main focus of this paper – the Unist'ot'en dispute vividly captures the complexity and uncertainty of ongoing debates over settler-Indigenous reconciliation, Indigenous governance structures and their varied degrees of legitimacy, state-sanctioned violence in the interests of private capital, and the possibility of decolonizing Canada's Indigenous political landscape. As the most recent episode of contentious natural resource extraction in Canada, LNG Canada is high stakes to multiple potentially incompatible interests, and thus is also high politics for elected leaders, local communities, First Nations, and affected constituencies from coast to coast.

### **Indigenous Politics, Infrastructure Projects and Direct Action**

Observations from previous cases of Indigenous direct action might indicate what we can expect in the current LNG case. Certainly, the threat of blockades and (re)

occupations of land remains a powerful political tool for opponents of projects that cross Indigenous traditional territories – and particularly those lands which Indigenous groups consider to be unceded. In 2010, Queen's University professor Douglas Bland noted: "The Canadian economy is very vulnerable [...] especially oil, natural gas and electricity to the United States. It's undefended and undefendable infrastructure [...] that] run[s] through aboriginal territories. It would take a very small number of people very little time to bring [it] down." Past cases demonstrate that some Indigenous groups seek "to grind the country's economic lifelines to a halt through strategically placed blockades on the major highways and rail lines" as a tactic to leverage broader political concessions from Canadian governments. In response, the federal government has increasingly surveilled and criminalized environmental and Indigenous activism against fossil fuel extraction, particularly that related to the Alberta bitumen sands. Canada's 2012 Counter-Terrorism Strategy identifies the potential threat of violence associated with four areas of "domestic issue-based extremism," including animal rights activists, environmentalists and anti-capitalists (in addition to white supremacists). As environmentalism and anti-capitalism overlap significantly with the political goals of Indigenous self-determination and authority over land use, Canadian law enforcement has specifically monitored Indigenous groups, including the Idle No More movement, for their anti-extractive activism and political organizing activities.

On a conceptual level, Indigenous direct action is both instrumental and symbolic. It is a means to reshape power and authority, and "to inspire individual and collective ethnic pride and to raise ethnic consciousness." Accordingly, terms such as "activism" and "protest" can lead to inaccurate interpretations of Indigenous actions as token acts of political defiance rather than as deliberate strategies. Legal scholar John Borrows highlights that these tools should be considered within an ongoing tradition of diplomacy used by

Indigenous groups seeking to retain the "occupation of areas to which they maintain or claim rights." Blockades might be better understood as nationalist tactics predicated on competing sovereignty claims with the state rather than "protest" or "activism." As geographer Nicholas Blomley observes, "to be able to assert some claim to, and control over, space (albeit temporarily) through a blockade both relies upon, and further sustains, First Nations claims to unabrogated sovereignty over specific territory."

Although media coverage and scholars often adopt binary frames that treat the state and First Nations as monolithic actors, factionalism is a reality of political life in Indigenous communities as it is in Canadian politics. Internal dynamics and competing agendas inherently complicate political action on local, regional and national levels. This reality influences strategic signalling between political actors because the audience for blockades and other direct-action tactics is not only the settler state, but also other internal factions of Indigenous nations.

In theory, the degree of cohesiveness in an Indigenous community should affect its ability to project a strong message and achieve desired outcomes. The more unified a community appears, the harder it is for non-Indigenous governments to pursue policy preferences that run contrary to those expressed by local leaders. By contrast, a nation or group beset with internal division and strife that fails to present a united front will undermine the credibility of those taking direct action. Accordingly, contests for legitimacy and efforts to discredit activists or to justify direct actions occur within Indigenous communities as well as between external actors.

There is no consensus, however, on the effectiveness of blockades and other direct actions as tactics for asserting Indigenous self-determination. One recent study suggests that there is no clear verdict about whether blockades and (re)occupations of land represent an effective way for

Indigenous groups to break an unfavourable status quo and bring about positive outcomes from their perspective. Some blockades and occupations have been more successful than others, measured according to stated Indigenous political, social, economic, environmental and spiritual outcomes. Gauging success depends upon which faction or group of Indigenous people one chooses to prioritize. Some actions are well planned, whereas others are ad hoc and poorly led. Some fulfilled their organizers' desired outcomes and bridged political divides, whereas others failed miserably and exacerbated internal divisions. Furthermore, when conflicts turn violent, the achievements must be measured against the loss of life, injury and damage to property/territory. Assessing the efficacy of Indigenous protest thus requires specific assessment of individual cases.

### **The Wet'suwet'en Nation and Coastal GasLink: Sovereignty and Dissent**

Internal battles for legitimacy within Indigenous communities often expose deep-seated divisions between elected First Nations leadership (recognized by the federal and provincial governments) and hereditary chiefs. In many cases, these groups question each other's motives and their claims to speak on behalf of their First Nations. A clear example is the January 2019 move by the Unist'ot'en hereditary chiefs and their supporters to build a checkpoint on a remote logging road near Houston, B.C., – defying a B.C. Supreme Court injunction ordering them to move so that TransCanada Pipelines could build the Coastal GasLink project through Wet'suwet'en traditional territory. The elected chief and band council of the Wet'suwet'en First Nation have voted to support Coastal GasLink. Indeed, TransCanada (recently renamed TC Energy), Coastal GasLink's parent company, signed agreements with all of the First Nations along the proposed route, who are reportedly seeking at least 22.5 per cent ownership in the pipeline project. Hereditary leaders from all five Wet'suwet'en clans asserted, however, that the band councils did not have jurisdiction

over their nation's traditional territory under Wet'suwet'en law. The Unist'ot'en blockade and encampment thus claim to derive their legitimacy from the Wet'suwet'en hereditary leadership: "What we're here for ... is to protect the 22,000 square kilometres and this section of the territory for our grandchildren and our great-great-grandchildren that aren't even born yet so they can enjoy what we enjoy today out on the territory," hereditary chief Madeek of the Gidimt'en clan told reporters.

Disagreement within the hereditary leadership of the Wet'suwet'en further complicates the situation. Three female leaders who support the construction of the Coastal GasLink pipeline allege that their hereditary titles and traditional roles were removed by other hereditary chiefs as punishment for their views. The women claim that their authority has been usurped and that the Office of the Wet'suwet'en Nation – the non-profit entity that co-ordinates and represents the hereditary governance system – has violated traditional protocols and decision-making processes. This dispute over hereditary authority within the Wet'suwet'en nation has significant implications for LNG Canada. For instance, one of the five hereditary chiefs who has led the opposition to the project only assumed his hereditary title after it was stripped from his predecessor, Gloria George, for her support of Coastal GasLink. While critics contend that the Wet'suwet'en Matrilineal Coalition established by these female leaders has been funded by the B.C. government and TC Energy to sow dissent among the Wet'suwet'en, the three women claim to represent not just a valid constituency, but the majority of people within their community. Such disputes complicate both the processes of representing the Wet'suwet'en externally and the B.C. and federal governments' abilities to perform their consultative responsibilities towards affected First Nations under section 35 of the Constitution Act 1982. And compared to instances where First Nations and other Indigenous communities speak with a single voice, the dispute over traditional authority increases the likelihood



of the state achieving its desired outcome, as governments can claim that Wet'suwet'en leaders do not all oppose the project, and that substantial segments of the community support it.

That members of a First Nation community articulate competing ideas about LNG should come as no surprise, given that Indigenous peoples hold a range of perspectives on the role of resource development in their desired economic and political futures. Instead, understanding how power and authority actually play out encourages observers to pay specific attention to discerning those who are establishing themselves as the leaders or spokespersons for each position and their rationale(s) for pursuing it – both within the community and to the outside media. It also begs the question of whether a blockade or occupation enjoys widespread support among local and regional First Nations, and what the respective responsibilities of legislated and hereditary Indigenous governance structures are in practice. As former chief of the Wet'suwet'en First Nation and current CEO of the First Nations LNG Alliance Karen Ogen-Toews has stated: "There is no doubt that the hereditary leadership has some responsibility for land and natural resources within our territory. At the same time, the elected leadership has responsibility for our people and the external affairs of their First Nation." Clarifying these areas of jurisdiction will be a critical aspect of natural resource governance in Canada.

In most cases, government officials and corporate actors prefer to negotiate with elected band councils and avoid conferring political legitimacy on dissident groups that may act without clear community support. This fits with the state's position as a status quo political actor seeking to protect its sovereignty, territory, political authority and legal integrity. The challenge to Canadian sovereignty, in which protesters identify and assert what is Indigenous space and confront state authority to protect it, marks blockades and occupations as legal and political crises from the perspective of the settler state and broader society.

By extension, some proponents of a state-defined law-and-order framework portray blockades and (re)occupations as illegal forms of dissent, and cast Indigenous participants in such direct actions as Canadian citizens subject to state laws. According to this line of argument, societies operate efficiently only when one law applies equally to everyone. Conversely, one can also make the claim, as Borrows does, that blockades are also about bringing law and order as logical and appropriate responses to settler society's illegal occupation of traditional Indigenous homelands. In this context, Indigenous participants in direct action often invoke "colour of right" arguments that assert the Indigenous lawfulness of their actions, and reject the jurisdiction of settler legal system and colonial political processes.

At their core, these confrontations are essentially strategic messaging contests between different Indigenous groups with competing interests as well as with the private sector and/or state authorities. Political scientist C. Radha Jhappan suggests that Indigenous people participating in direct actions "use symbols which appeal to society's general sense of justice and fairness" when publicizing their grievances. This underscores the perceived importance of securing public support for addressing alleged injustices, securing space for groups and issues on the political agenda, attracting allies and creating a sense of urgency. In the LNG case, this involves securing the support of the national and international environmental and Indigenous rights movements.

### **Narrative Frames and the Power of Media**

Academic studies typically criticize the news media for racist coverage of Indigenous people's issues, depicting mainstream journalists as colonial "agents and handmaidens" of governments and corporate Canada who perpetuate misperceptions of Indigenous violence. Although complex histories and competing claims to legitimacy are often distilled into binary law-and-order narratives that pitch



state authorities against Indigenous protesters, it is erroneous to claim that all journalists side with government, succumb to sensationalism or adhere to a single frame or opinion. News coverage reflects different perspectives, with reporters also highlighting in a sympathetic light Indigenous opponents to resource development who fit tropes of Indigenous peoples as protectors of the land. Indeed, Indigenous groups vying for popular legitimacy recognize that the media can convey broader critiques of state power that mobilize support beyond their local group and geographical area, validate their claims and influence power relationships. Given that direct-action tactics are used to draw attention to a cause that has failed to gain traction through official legal and political channels, the media are a strategic tool.

Because blockades and occupations are predicated on Indigenous accusations of injustice, state actors must gauge the thresholds of potential violence that Canadian society will tolerate in response. Direct actions that provoke military or police action have a tendency to raise the protesting group's profile and attract national support. In the case of LNG, the RCMP took action when anti-pipeline protesters at the Unist'ot'en camp indicated that they would not comply with a court order to remove their blockade preventing Coastal GasLink from accessing its pipeline right-of-way. When the RCMP took 14 people into custody in early January 2019, Assembly of First Nations (AFN) National Chief Perry Bellegarde proclaimed that the use of force against peaceful protesters violated their human and constitutional rights. "If this was really about the 'rule of law' then governments would be honouring the rights and title of First Nations in their traditional territories, which are recognized by Canada's own courts," he added. "The AFN supports the governance and decision-making process of the Wet'suwet'en leaders. Canada and B.C. should do the same. There is no reconciliation in the actions that unfolded yesterday." What Bellegarde did not specify is which Wet'suwet'en leaders should ultimately be empowered to represent their people and make vital decisions such as those over land use and natural resources.

This situation also revealed the tendency for direct action by First Nations groups to slide from issue-specific protests (e.g., over an LNG pipeline and environmental protection) to broader issues of Indigenous land title, colonial oppression and sovereignty. Bellegarde and other regional and national Indigenous leaders connected the Wet'suwet'en protest to the United Nations Declaration on the Rights of Indigenous Peoples, insisting that this reflected the problematic imposition of state laws on Wet'suwet'en. However, they sidestepped any acknowledgment that all elected First Nation band councils along the pipeline route support the project. As such, even national organizations such as the AFN – whose own legitimacy is subject to similar disagreements among Indigenous peoples – find themselves trapped within the competing claims and sources of authority of different actors representing Indigenous peoples.

## Conclusion

The natural resource sector's reliance on critical infrastructure that crosses both First Nations reserve lands and unceded traditional territories to transport commodities to markets poses a series of challenges for British Columbian, Canadian, and Indigenous politics and governance structures. In addition to the local and global environmental consequences of fossil fuel-intensive or -producing economic activities, the construction of a new project throws into sharp relief many of the unresolved tensions that exist within Canadian society and constitutional architecture. LNG Canada and the construction of the Coastal GasLink pipeline is the most recent episode of a resource mega-project receiving strong support from state and private actors, only to encounter uncertainty and grassroots opposition on the basis of fundamental underlying questions of Indigenous rights and title and the appropriate source of Indigenous political authority.

At the heart of the dispute over LNG in British Columbia is the central question of politics: who governs? But any answer is complicated by the fact that multiple

governance fault lines intersect in Wet'suwe'ten territory in the B.C. interior. While all orders of settler government support LNG Canada and Coastal GasLink – unlike even more heavily disputed bitumen pipelines further south – the same is not true of Indigenous authorities within the Wet'suwe'ten nation. Within that single Indigenous nation, multiple voices claim to speak on behalf of the people and their interests, and invoke both legislated and hereditary forms of legitimacy as the basis for their political authority. This dispute thus reflects uncertainties and ambiguities within Indigenous nations over the appropriate source of political decision-making.

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# LNG Trade and Market Shifts

by **GEOFFREY CANN**

**T**he commercial aspects of the liquefied natural gas (LNG) industry are works in progress because of the market's unprecedented growth. New sector participants need to understand these commercial aspects and anticipate how the global trade landscape will react to shifting supply and demand.

## Introduction and Context

When I was based in Australia during the build-out phase of the country's LNG industry, I was struck by the opacity of the sector's commercial side. Industry participants were notoriously close-lipped about the actual mechanical and commercial aspects of trade in LNG. Consequently, I found that the national ambition to be a global LNG powerhouse, supplier-contracting strategies and taxation policy were sharply and frustratingly disconnected

from the realities of trade in this commodity. LNG was about to become the second most valuable globally traded commodity after crude oil, and few individuals seemed to grasp how the sector operated and the implications for their interests.

At the same time, the trade in LNG was adapting to the arrival of the new volumes of production from Australia and the impending delivery of massive new U.S. exports. The terms of trade for new LNG shipments were beginning to vary from legacy contracting approaches, allowing the creation of new business models, industry participants and commercial structures. Changes in national energy policies, growing demand in new markets and shifting sources of supply added further pressures and greater uncertainty to the market. New entrants into this dynamic industry, including Canada, need a more sophisticated understanding of the industry to achieve competitiveness.

## LNG as a Luxury Good

The more time spent studying the LNG sector, the more one concludes that LNG behaves like a luxury good. It does not meet

the strict economist definition of a luxury good – one whose demand rises more than proportionately with rises in income, or put another way, the richer you are, the more you buy of it. Luxury goods frequently have a readily available, functionally equivalent and usually lower cost alternative. In the case of LNG, the substitute is coal, but LNG buyers, once hooked on LNG, tend to buy a lot.

### *The AAA fuel*

Russian exporters like to call gas the “Triple-A fuel” – available, affordable and abundant. From both a handling and emissions perspective, gas is cleaner than coal. Despite the occasional spectacular pipeline mishap, gas is very safe to handle. It delivers precise and instant heat exactly where you want it at your desired intensity. That heat is highly controllable. As nations get richer, their populations are prepared to pay for access to gas, for heating and cooling, for power generation, for high-end manufacturing, and increasingly, for cleaner air.

LNG is a remarkably complicated way to deliver fuel relative to alternatives. First, the input gas has to be purged of any impurities that might damage the refrigeration equipment. That means extra cost to remove water vapour, CO<sub>2</sub>, nitrogen, mercury, butane and other compounds. Next, the manufacturing process needs a large amount of energy to chill the gas down to its liquid state. The manufacturing takes place using specialty steel alloys capable of handling extreme temperatures and pressures.

The LNG supply chain requires specialty insulated storage tanks at point of export and import, a fleet of cryogenic vessels that cost six times as much as equivalent oil tankers to move the gas to market, and a regasification plant to remove all the energy that went into chilling the gas. That energy is often vented or absorbed into a medium like water as waste. The utilization rate of regas plants is about 30 per cent, as most plants run for a few months of the year, usually in the winter when the demand is

high, the price is high and the customer is price-insensitive.

### *A game of scale*

The LNG sector’s stand-out feature is scale. Large companies access global capital markets to tap large stranded gas supplies using very large assets to supply large distant markets with limited fuel alternatives over very long timelines. In other words, this is a business for those with deep pockets.

Unsurprisingly, the market penetration of LNG is relatively low for a technology that is 60-70 years old. In energy terms, gas provides about 22 per cent of global energy, and of that amount, pipelines deliver 89 per cent to consumers. LNG makes up the balance of 11 per cent of 22 per cent or about 2.4 per cent of the global market for energy. Historically, the biggest market has been the energy-poor but economically rich nations of Japan, Korea and Taiwan (JKT). Among them, these three countries have accounted for as much as 60 per cent of LNG consumption.

Despite its luxury features, the demand for gas should be strong for years to come. Gas displaces coal quickly as the baseload fuel in power generation because the power infrastructure (transmission lines, local distribution, metering) requires little upgrading. Countries that aim to reduce their carbon footprint (primarily China) will turn naturally to gas, as the U.S. already has done. Gas is also finding its way into the transportation sector as a trucking, rail and marine fuel for those countries whose carbon goals cannot be achieved solely through fuel changes in the power sector.

### **The Holy Trinity**

Underpinning the global market for this premium energy product is the holy trinity of long-duration contracts, oil-indexed pricing and destination restrictions.

### *Long contracts*

LNG trade agreements are often based on contracts of 20 years’ duration or longer. This aligns banks, gas sellers and gas

buyers and binds them to manage risk (financing, supply, market and revenue), from the endeavour. As a result of these lengthy agreements, LNG spot markets have been a much smaller proportion of overall LNG trade compared to crude oil. Long contracts take considerable time to finalize because of the need to align so many market participants, and incorporate many contractual elements to manage the variability that inevitably occurs in commodity markets over time.

#### *Oil-indexed pricing*

Oil-indexed pricing gives gas buyers and sellers upside and downside price exposure, access to financial markets for hedging and risk management, a recognized currency basis and the support of existing commodity analysis expertise. There is an industrial logic to pricing LNG with reference to oil – these two commodities are sometimes substitutes as fuels for power generation. Banks have a deeper and richer history banking the oil trade, and pricing relative to oil can play somewhat to that experience. Oil-indexed pricing also implies the use of the U.S. dollar as the base currency, which provides access to global currency markets.

#### *Destination restrictions*

Destination clauses prevent gas buyers from turning into gas sellers and competing with their own source of supply for markets.

The destination clause is a standard shipping term dating back to the very earliest days of international trading. The buyer of the cargo takes possession as the cargo is offloaded from the ship to the buyer's dockside facilities (called Destination Ex Ship, or DES). Up to that point, the cargo is owned by the seller, who has chartered the ship, contracted the crew, financed the journey, paid the insurance, etc. The majority of older contracts, from Qatar and Australia, are contracted DES. In practical terms, buyers rarely trans-ship the cargo onto another carrier for sale to another party because the costs to do so are too

high. Freely available LNG was relatively scarce.

Working together, the holy trinity has helped maintain a small but lucrative market for this premium, high-quality product.

### **Market Shifts and Pressures on the Trinity**

Global energy markets have experienced several pronounced shifts that exerted, and continue to exert, pressures on LNG and the three sisters of the holy trinity.

#### *Customer demands for flexibility*

In the first instance, the run-up in oil prices from 2006 to 2014 laid bare the pricing risk to buyers whose contracts were priced with reference to oil prices. At one stage, Japan's annual LNG import bill topped US\$66.67 billion, creating huge pressures on the national current account. Pakistani buyers simply tore up their contracts for Qatari gas and forced a new pricing basis. Asian customers are now wary of volatility in oil prices and the vagaries of international oil politics. They seek more flexibility in the market to allow a different pricing basis, free-on-board (FOB) shipping and shorter contracts.

#### *Worries about energy security*

Energy-importing customers value energy security, and the holy trinity delivers security of supply. However, over-reliance on long contracts with single suppliers can create critical risk, as Europeans learned on two occasions when Gazprom suspended gas shipments to Europe because the transit nation, Ukraine, had not paid for its gas purchases. By leveraging a flexible contracting model in the continental North American market, the U.S. has deftly avoided an over-reliance on Canada as a gas and oil supplier, and reaps the benefits of lower energy prices.

While Canada brands itself as a highly reliable supplier, LNG customers will want more frequent and smaller cargoes with a



broad range of suppliers to manage supply risk.

### *Shorter contracts*

Next, the adoption of renewable energy sources stimulates demand for stand-by power facilities, with gas being the logical fuel choice over coal – due to lower capital cost, faster cycle time and cleaner, more potential optionality. Battery technology is moving quickly into the peaking power market, and early evidence from a Tesla power supply agreement in Australia using large industrial-grade stand-by batteries suggests batteries will begin to take market share. However, the long supply contracts and DES terms that characterize LNG tend to block the development of markets that have shorter terms, such as supplying for renewable intermittency.

### *Deregulated markets*

Third, market deregulation is now a feature in key markets. Japan, facing long-term population decline, restructured its power and gas markets, creating new domestic competition for customers. Tokyo Gas and Osaka Gas merged their fuel supply businesses to create JERA, the world's largest customer for LNG with 40 per cent of Japan's total purchases. China deregulated city gas markets in key locations to enable more private investment in gas imports, creating demand for more flexible supplies. Prior to this, city gas markets were dominated by the state energy companies (Sinopec, CNOOC and CPNC) who were unenthusiastic about enabling third-party access to their gas infrastructure. Markets will continue to deregulate.

### *New technology*

Changing technology contributes to pressure on the trinity. Floating regasification facilities, instead of large fixed on-shore plants, open up new markets faster. These facilities are built en masse in yards, floated to sites and quickly integrated into domestic gas infrastructure. Independence, a floating regasification plant in Lithuania, allowed this

former Russian state to import LNG in addition to gas supplies from Russia. By creating head-to-head competition for the domestic market, Lithuania forced Russian gas prices to fall. Most of Russia's gas sold to European customers is on long contracts which cannot be readily undone, but at the margin, customers seek more flexible supply.

### *New uses*

Regulation plays its role. Maritime fuel specifications are triggering significant new investment in cleaner shipping fuels in ports around the world, and LNG is a leading contender to supply this market. Other transport markets, such as rail and long-haul trucking, are also exploring alternative fuels, including battery technology and LNG, as a replacement for diesel. These new uses are very different from LNG's traditional role as a base fuel for gas and power utilities.

### *New business models*

Business models are shifting, beginning with the U.S. suppliers. In the North American market, continental gas prices are a reflection of overall supply and demand, where the price of gas allows suppliers to cover their costs and make a small profit. The new U.S. LNG export facilities (not quite new – most are conversions of former import facilities) tap into the massive available U.S. gas supply and liquefy gas for a fee, in a tolling model.

Much of the new LNG originating in the U.S. is sold FOB, meaning the buyer takes title as the gas is loaded onto the ship the buyer has chartered. FOB gives the buyer more flexibility to either bring the cargo to their home market or to find an alternative market. U.S. LNG disrupts the market because it is available FOB, priced partially with reference to the domestic price and not necessarily tied to long contracts.

The combination of FOB terms and tolling models creates new business concepts. Shell treats its LNG sector as a portfolio,

where it optimizes the supply of LNG from its various facilities with customer demand. Traders with no facility ownership, such as Glencore with their enormous customer reach and established credit facilities, enter into the sector. Japan's JERA becomes both a buyer and a seller of fuel.

## **The Future of LNG Markets**

The LNG marketplace cannot change overnight. Existing long-duration contracts cannot be easily unwound. Joint venture project owners value DES restrictions to reduce pricing pressures on specific projects. Recent lower oil prices moderate the demands for changes to the pricing basis. Demographic shifts, such as Japan's aging and shrinking population, take decades to unfold. New projects take many years to bring on stream.

It is unlikely that the LNG sector will transition completely from its moorings as a premium luxury fuel and take on the trappings of the more pedestrian crude oil industry. For one, the product degrades over time – it needs the constant addition of energy to keep it in a liquid state. It does not inventory well. Shippers face heightened pressures to move cargoes quickly to a customer. There are far fewer customers and suppliers in the industry, which limits optimization potential. The specialized ships needed to move LNG number in the hundreds and are costly.

However, the signposts of the future LNG market are clear.

### *Market Flexibility*

The market will become more flexible. Contracts will be shorter in duration, with more options to reopen them for renegotiation. More volumes will have destination flexibility.

### *Pricing Flexibility*

Pricing will be more dynamic. Asian customers will seek exposure to as many pricing bases as available so as to hedge

risk. North American sellers will incorporate a component of their domestic market into pricing, rather than sticking exclusively to the oil index. This should not be viewed as a disadvantage, but as a distinct advantage over the incumbents unwilling or unable to alter legacy contract terms.

### *Fragmented Markets*

There will be more and diverse players. Large, integrated LNG projects will share the market with new importing utilities, second-tier Asian cities, island economies, ports, portfolio players, traders and banks. JKT may continue to dominate the market, but a sizable fragmented second market will emerge. New applications in transportation, and new infrastructure such as hubs and floating regasification, will grow, driving demand beyond the traditional incumbents. Complex markets will favour sophisticated players with better-than-average analytics.

### *Competing Supply*

New projects will compete with the expansion potential of existing projects. Australia has recently completed the construction of nine export facilities, most of which were designed to be expanded at attractive terms. Qatar has announced expansion of its industry. The competitiveness of the local construction industry is suddenly a differentiator in determining if a project can expand.

### *Rising Uncertainty*

The level of uncertainty in the market is likely to increase. With the stabilizing influence of the holy trinity eroding in the face of a growing spot market, customer pressures for more flexibility, new market entrants and new pricing models, this formerly cozy and predictable market is becoming more like other pure commodity markets. The market may well change in multiple unanticipated ways as participants stake out their respective positions.

## Improving Canadian Competitiveness

Canada stands well placed to succeed as a new entrant supplier to the global LNG sector. The country is blessed with a superior gas resource, proximity to global markets and a track record in continental reliability as a gas supplier. Nevertheless, market participants should be mindful that LNG's status as a luxury good is transitioning.

### *Superior market intelligence*

The LNG market is dramatically more complex and uncertain than in its earliest days –more participants, fragmenting markets, shorter contracts, destination flexibility, pricing variety, greater volumes and more overall optionality. The level of uncertainty in the market, stabilized by the influence of the holy trinity, is rising. The winners in this industry will have superior market intelligence and deep understanding of global gas supply and demand. Major importing nations devote enormous resources to the study and analysis of gas markets, in the form of think tanks, research houses, conferences and academic institutes.

Canada has no track record in truly international gas markets, and does not presently supply any markets beyond the U.S. As was the case with Australia, the country will benefit by stepping up its analysis and understanding of global gas markets so as to be best positioned to meet new supply opportunities. Deepening the national understanding of international risks and uncertainties related to supply and demand, geopolitics and energy usage will be a significant asset. Maintaining active relationships with the Asian importing region and an enduring presence in Asian trade circles will contribute to market intelligence.

### *Market development support*

Next-generation markets for LNG will include new entrants, fast-growing but unrecognized Asian cities, island economies and less credit-worthy nations. They will also be

unfamiliar with the LNG trade, and will contribute to the level of contracting risk and uncertainty in the market. There may be an opportunity for Canada to bring its export development capabilities to bear in novel ways to enable these new market participants to de-risk their involvement.

### *Stability and reliability*

Stability and reliability in this industry are assets. Buyers generally do not inventory LNG, but convert it quickly into gas and feed it directly into their domestic energy markets. In cold winter months, ratable supply is highly valued. Canada's political system, subject to social pressures, runs on election cycles at odds with decision making in LNG buyer circles, and the nation is not well served with tax and regulatory changes that impact ratable supply. Examples include the country's recent experience with oil markets, including blocked pipeline developments and production curtailment.

To build global confidence in Canada's ability to supply demanding markets, successive governments need to resist the urge to tinker with this sector. Changing royalty regimes, adjusting land taxes and imposing additional onerous regulations do not instill confidence in investors or customers. Instead, governments should demonstrate Canada's seriousness about this growth industry by supporting trade missions, promoting the industry internationally and funding the research required to understand global gas markets on behalf of the emerging LNG export industry.

### *Construction performance*

While Canada has considerable experience in building large complex energy infrastructure in demanding locations, including gas processing facilities, it has no track record yet in the global LNG sector. The recent LNG construction track record in Australia, a nation with similar political, fiscal, legal and regulatory regimes, is not encouraging. Almost all of the projects were delivered over budget, late or both. Notably,

none of Australia's recent projects has been sanctioned for expansion.

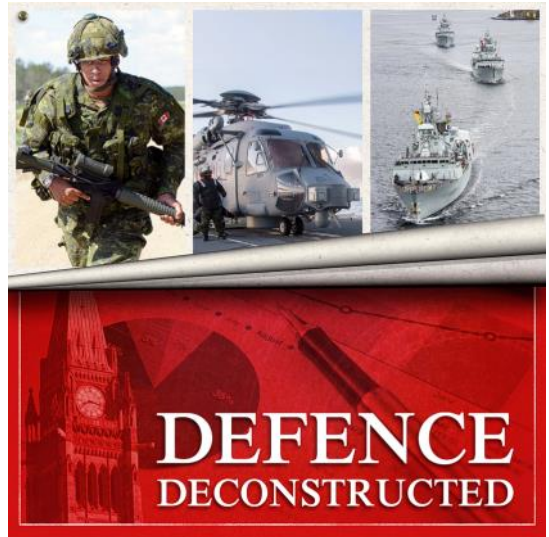
To avoid the fate of Australia's stranded expansion potential, Canadian companies and labour should commit to the construction of the LNG facilities following the most efficient construction programs possible. The potential gains from the use of digital tools to improve the productivity of the capital projects should be aggressively explored.

## Conclusion

The demand for gas looks strong for decades to come, and it is not too late to be a new entrant into the global LNG sector. However, the status of the LNG sector, its historic behaviour as a luxury good purchased by rich Asian nations and its underlying commercial features, are changing. New entrants should be mindful of these changes and prepare to innovate their business models accordingly.

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Lead image: **Reuters**



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# How to Manage LNG Project Risk?

by **MATTHEW FOSS**

**E**nergy use continues to grow, fuelled by global economic growth, population growth, the improvement in living standards, and growth of the middle class in the developing world. According to the International Energy Agency (IEA): “Rising incomes and an extra 1.7 billion people, mostly added to urban areas in developing economies, (will) push up global energy demand by more than a quarter to 2040.” These trends are here to stay and the world must seek solutions to how to affordably meet the needs of this growing population.

The growth in energy demand worldwide has strained all sources and forms of energy to keep up with this demand. Innovation has tempered the strain. Wind, solar and other renewables are the fastest growing forms of energy on a percentage growth

basis, yet hydrocarbons remain the largest forms of energy supply and continue to meet most of the growth in demand.

Projections are for natural gas to play a pivotal role over the next generation or two in reducing emissions and providing energy with lower air quality impacts in an affordable manner for the developing world. The IEA has proclaimed that we are on the cusp of a golden age for natural gas. Supermajor energy companies, having recognized this, are increasing their focus on the global gas trade. Canadian governments have a role to play in furthering the development of Canadian natural gas to international markets through advancing overseas marketing and enabling policies and legislation to keep Canadian infrastructure projects internationally competitive.

## International LNG Markets

The International Gas Union (IGU) reports that the global liquefied natural gas trade set a record in 2018 for the fifth consecutive year, reaching 316.5 million tonnes. This market continues to increase, with LNG



being the fastest growing portion of this as growth markets are not well connected to supply basins by land.

The supply of LNG is diverse globally. Qatar and Australia represent almost half of the current supply. Qatar has a project in development to expand its exports. Australia is consolidating the liquefaction capacity it has already built, and has demonstrated how quickly a country can become a major player in the LNG market. Australia went from roughly 20 million tonnes per year of LNG exports to nearly 70 million tonnes per year and to holding the world's largest amount of liquefaction capacity over the past 10 years. The United States is becoming a much more prominent supplier, with several projects under construction that would make the U.S. the third largest player. Further proposed projects could make the U.S. the largest exporter within the next decade. Russia and Mozambique also represent areas with significant developments.

The major consumption areas for LNG are currently in East and South Asia and this is expected to continue. The traditional LNG markets of Japan and South Korea are the largest and third largest importers of LNG. China and India, the second and fourth largest importers, are expected to experience some of the largest increases over the coming years. A recent McKinsey and Company report forecasts that China is likely to have the most growth in LNG imports with other Southeast Asian nations forecast to represent the next largest source of LNG demand over the next 20 years. Most of this demand growth is forecast to come from electric power generation and industrial demand, particularly for plastic manufacturing and other chemicals. In both of these applications, LNG will be forced to compete for market share. In the power generation sector, natural gas is both competing with renewables such as wind and solar power to satisfy growing power needs and displacing coal as a fuel. The case for natural gas in these countries is compelling. Their economies are rapidly growing, with a burgeoning middle class seeking increased consumer comforts and

requiring energy to satisfy this demand. Additionally, air quality both from coal-fuelled power generation and the use of transportation fuels is a major concern, as can be attested to by anyone who has ever visited these countries or seen pictures of the locals garbed in masks to filter the air they breathe. However, this demand will be fickle and will require that natural gas remains cost-competitive with coal.

## **LNG in Canada**

Canada has no operating liquefaction terminals; yet, according to the IGU, we have the second largest amount of proposed liquefaction capacity next to the U.S. Some of this interest has fallen away with decisions by at least three of the project proponents not to proceed with their projects at this time.

Despite this, Canadians should be very interested in the successful development of LNG for two key reasons: improved global environmental outcomes and the economic benefits to Canada. Natural gas is widely viewed as environmentally helpful, as a substitute for coal. "Natural gas is one of the mainstays of global energy: worldwide consumption is rising rapidly and in 2018 gas accounted for almost half of the growth in total global energy demand. Gas plays many different roles in the energy sector and, where it replaces more polluting fuels, it also reduces air pollution and limits emissions of carbon dioxide," the IEA says. The agency has identified that natural gas reduces emissions by 50 per cent relative to coal for power generation, even when methane emissions are considered.

The development of natural gas represents significant economic benefits. Several studies have been undertaken on how much value LNG on Canada's West Coast would add to the country's economy. Each study suggests a massive impact, as should be expected from a multibillion-dollar investment. Many of the economic benefits, perhaps 70 to 75 per cent, would occur in B.C.; however, all of Canada would experience benefits. LNG exports are expected to add over \$7 billion per year to

Canada’s economy and an average of 65,000 jobs. Jobs associated with natural gas extraction tend to be high-paying ones that add value to Canada’s economy. Estimates are that these jobs pay about three times the national average and offer nine times more value to the economy than the average job. It is not surprising that an investment that is roughly twice the size of all of the investment that goes into manufacturing in Canada in a given year would be so impactful.

LNG export facilities appear to be in Canada’s interest. They offer clear global environmental benefits, and clear financial and economic benefits to Canada. There have been many proposed projects; however, only one project has made a definite commitment to proceed. LNG Canada announced a final investment decision on Oct. 1, 2018 for its roughly \$40-billion project to export 26 million tonnes per year, or roughly 3.5 billion cubic feet per day. The project is a joint venture partnership between Shell, Petronas, PetroChina, Mitsubishi Corporation and KOGAS.

LNG Project Risks

An LNG facility faces many risks. The IGU identifies the following risks to an LNG project: (See figure below)

Table 4.1: Liquefaction Project Development Risks

Risk Factors	Impact on LNG Project Development
Project Economics	Long-term sales contracts that allow for a sufficient return typically underpin the financing of LNG projects. High project costs or changing market prices can have a large impact on when or if a project is sanctioned, and cost overruns post-FID can impact project returns.
Politics & Geopolitics	Permitting may be time consuming. National or local governments may not be supportive of exports and could levy additional taxes on LNG projects or establish stringent local content requirements. Political instability or sanctions could inhibit project development or operations.
Regulatory Approvals	Regulatory approval may be costly and extends to the approval of upstream development and pipeline construction. Local environmental opposition, including from indigenous groups, may also arise.
Partner Priorities	Not all partners are equally committed to a project and face different constraints depending on their respective portfolios. Ensuring alignment in advance of an FID may be difficult.
Ability to Execute	Partners must have the technical, operational, financial, and logistical capabilities to fully execute a project. Certain complex projects may present additional technical hurdles that could impact project feasibility.
Business Cycle	Larger economic trends (e.g. declining oil prices, economic downturns) could limit project developers’ ability or willingness to move forward on a project.
Feedstock Availability	The overall availability of gas to supply an LNG project may be limited by technical characteristics of the associated fields or the requirement of long-distance pipelines.
Fuel Competition	Interest in a project may wane if project developers or end-markets instead seek to develop or consume pipeline gas or competing fuels, including coal, oil, or renewables.
Domestic Gas Needs	Markets with high or rising gas demand may choose to use gas domestically rather than for exports. This often results in new or existing liquefaction projects being required to dedicate a share of production to meet domestic demand. In some cases, it may also limit the life of existing projects.
Marketing/Contracting	Project developers generally need to secure long-term LNG buyers for a large portion of project capacity before sanctioning a project. Evolving or uncertain market dynamics may make this task more difficult.

Some of these are clearly business risks that the developers should manage. Some risks are more related to the social context and require at least some government involvement. A third category involves those that benefit from a partnership approach between industry and government.

Domestic, Community and Design Risks

Managing the design, development and construction of a liquefaction terminal is clearly best left to the companies that will operate the facility within guidelines established by professional regulatory bodies to ensure the health, safety and environmental outcomes that Canadians expect. Similarly, co-ordinating across partners, managing the availability of natural gas feedstocks and the timing of when to proceed within the business cycle are best left to the developers to co-ordinate.

Risks associated with the processes for regulatory permitting and social acceptance of projects start to swing into areas that are joint responsibilities between the developer, Canadians and the governments that represent us. The current approach in Canada, where governments leave most of the work of building community support on major projects to the proponents, creates significant delays and may end up stalling or

frustrating projects to the point that they ultimately do not proceed. The Crown has a duty to consult for projects that may impact Indigenous rights and often, project proponents are relied upon to conduct a substantial portion of this obligation. For projects with clear social, environmental and economic benefits, a different balance may be in the interest of all Canadians. There is currently a clear societal polarization fuelled by equally unrealistic expectations of status quo continuing development and immediate cessation of hydrocarbon use. Responsible government has a role to play in mediating this debate with an informed approach. This is not to suggest that governments should go so far as to take on the role of being project proponents. However, there is significant room in the current approach to be more active in defining clearer requirements in the regulatory permitting arena and also in providing clearer statements of the public interest. One thing I learned in the years that I spent in government was the difficult time that project proponents had with moving targets of what would be required for a project to be considered acceptable. Some argue that a signal of a well-functioning regulator is for some projects to be denied. The argument behind this type of sentiment is valid although the argument itself is ridiculous. Project proponents do not invest millions in project design unless they believe the project is aligned with Canadians' expectations. The clearer our expectations, the more likely we are to have only the types of projects that we want being proposed.

Another failing within the regulatory and social acceptance of projects involves the distribution of project benefits. Often, projects were delayed by negotiations with small groups of stakeholders over the share of project benefits that they would be provided or earn. Frequently, the challenge in these negotiations is a misunderstanding of the value available to be shared. These negotiations may be better served by having some form of an independent and impartial third party adjudicate to ensure that all parties are treated fairly.

## **International Negotiation Risks**

At this stage, most of the LNG project proposals have secured many of the required regulatory permits and have advanced along portions of the project design phase. The challenge for many of the projects is now in securing a market so that detailed engineering design can be built. This is an area that would also benefit from a joint effort between project proponents and governments. Canadian governments should actively participate in the negotiations with the clear intent of providing clarity and stability of the rules that a project will operate under for its initial contracts. Governments should also guarantee the process's integrity and timeliness of the required infrastructure for these projects.

On the surface, the reasons for government involvement relate to the fact that these projects have markets overseas, particularly with countries that have less separation between industry and government. Canadians are very unfamiliar with this. Most of our trade has traditionally been with the United States and in western Europe with similar legal principles and institutions. Our evolving trade into new markets challenges the way we have done business. Even democratic countries such as Japan and South Korea, with largely free-market principles, are used to having governments and business co-operate, particularly in international endeavours and those that represent critical elements of the economy such as energy supplies. Buyers from these countries are used to having governments involved in the negotiations to ensure the host countries' full co-operation and support. It is quite reasonable for these international buyers to want some degree of security in organizing a 10- or more year deal in a foreign country. The buyers need a clear understanding of the rules that the foreign government would impose and at the very least, some assurance that the government would maintain an enabling business climate for the deal. Canadian companies need their governments involved in securing trade deals and providing support for the terms of the trade discussions. The alternative is to

rely solely on major multinational companies with interests around the world to negotiate these deals, using their international business savvy and global portfolios to manage the risks. Relying on multinational companies to manage this risk ultimately shifts benefits over the life of a major project away from Canada, since these companies use their international portfolios as opposed to strictly a local approach to manage risks.

### **Long-Term Market Risks**

The world remains in a state of change. Trade patterns are evolving and so are the energy sources that fuel our economies. There is tension between energy efficiency, fuel costs and supply sources. Predicting the precise success of a particular region or industry is impossible, as history has often taught us. Just when we think there is only one possible outcome, we are surprised at what happens. Take the fall in the price of oil in 2014 when people believed that high oil prices were here to stay. Here we are, five years later, with oil prices that are still well below what anyone would have predicted in 2013. A technological shift that made it economical to extract oil from shale formations has had a profound impact. What does the future hold for shifts in the energy spectrum as battery technologies make renewable power more flexible? Similarly, can we truly dismiss the possibility of a technological transformation that reduces the impact of coal consumption? Multibillion-dollar projects such as LNG that require many years to recover their investment remain risky ventures.

Beyond the role of state-to-state discussions for a major energy project, there is a role for Canadians to take on a more explicit share of the market risk, given the value that LNG brings to Canada. Much of the value arises from the development and production of Canadian natural gas resources. However, the transportation and processing of the gas represent much of the cost and therefore much of the risk. Estimates suggest that the costs of Canadian LNG are about 29 per cent for the natural gas, seven per cent for the pipeline to the coast, 50 per cent for the

liquefaction terminal and 14 per cent for the shipping. Almost three quarters of the cost is in transportation. This should make everyone nervous to an extent as it leaves room for competition from other suppliers (Alaska, Russian pipeline gas, Russian Arctic gas), that may have a locational advantage to undercut the delivered price. While other supplies with this geographical advantage do not appear to be poised to out compete Canada in the global LNG market, this can never be ruled out completely. Western Canada learned this after losing much of its market in the U.S. Midwest and northeast to production from Pennsylvania. Less than 20 years ago, it was unfathomable to consider that western Canada would not be able to sell all of the gas it wanted to into the United States and now we are all but displaced from the U.S. market.

Project proponents will try to manage this risk of losing market share to other supplies over the duration of operation through long-term contracts. However, the North American experience of the 1970s and 1980s demonstrates how fragile these contracts can ultimately be. Natural gas demand increased rapidly as a preferred fuel for heating and power as the economies of Canada and the U.S. boomed in the post-Second World War era. Natural gas was seen as a competitively priced alternative to oil in space heating, with superior air quality results to coal in power generation. Natural gas demand was expected to continue to grow unabated. Widespread challenges with price regulations and resulting supply interruptions had created supply security concerns by the mid-1970s. The U.S. Congress passed the Natural Gas Policy Act in 1978, which changed how prices were regulated, restricted some natural gas uses and ultimately sowed the seeds of years of demand decreases. Most natural gas in North America was sold to pipeline companies under long-term contracts that were 20-25 years in length. These contracts typically contained provisions known as “take or pay” that required the pipeline and distribution companies to pay for the natural gas that they had contracted for regardless of whether they could resell it to consumers,

including power plants, factories and homeowners. This was thought to be needed to secure the supply and to facilitate the upstream industry. Demand declined as prices rose to support new supply. Utilities were caught with significant financial challenges as these take-or-pay provisions required them to continue to pay for gas that they were unable to resell. The result was a forced renegotiation of these contracts to avoid bankruptcy and defaults that would have been the ultimate outcome if the take-or-pay provisions were maintained.

The history of take-or-pay contracts in North America has demonstrated that they are not sufficient to manage long-term risks. "Experience would suggest that take-or-pay does not protect the seller against the risk of a structural change in the industry." This is a particularly important consideration with international transactions. How do you enforce contractual terms across international boundaries with parties that may be subject to significant market changes? The only real protection for this is for all members of the value chain including producers, pipeline companies, liquefaction terminal owners, shipping companies, regasification companies and distribution companies to manage their businesses under the constant pressure of maintaining a value proposition for the end users. Canadian producers and liquefaction owners must maintain a competitive product offering over the life of a major infrastructure project.

Government can help manage the risk associated with structural market changes by assisting developers with the costs of the liquefaction facilities. The simplest and least costly way is for governments to defer taxes on the project through accelerated depreciation rates that help developers pay off other debts sooner. Canadian governments have used this for many industries. LNG facilities were provided with an accelerated depreciation rate of 30 per cent per year announced in 2015. This is an improvement over the previous rules that

provided an eight-per-cent depreciation rate. An eight-per-cent depreciation rate requires roughly 27 years to write off 90 per cent of the original expenditure. Increasing the depreciation rate to 30 per cent shortens this period by 20 years. However, it is important to note that this accelerated depreciation is only eligible against income from the LNG facility. Any years spent operating the facility at a loss would postpone the write-off of these expenses. This feature would be particularly useful if the liquefaction facility costs were allowed to be used against current upstream incomes. Additionally, there is room for an increased depreciation rate. The U.S. government, a key competitor in the LNG industry, allows for a full write-off or expensing of these costs in the year they occur. The Canadian government introduced a similar provision to allow machinery and equipment used in manufacturing to be fully expensed in the year of acquisition in the fall update to the 2018 budget. Paying down the debt quickly allows for greater flexibility in maintaining competitive pricing for natural gas as market conditions evolve.

## Conclusion

Canadian governments should take an active role in both establishing and securing international buyers for Canadian LNG and in ensuring LNG's long-term competitiveness through enabling policies and legislation. Governments may even wish to consider specific tax agreements with LNG facilities that accelerate the paydown of facility costs to ensure the greatest flexibility is available at times when these facilities may face increased competition. Such provisions would shift the risk profile but not the overall share of expected benefits to Canadians.

**MATTHEW FOSS** has 20 years of experience in the Canadian energy industry. He is an executive fellow with the University of Calgary School of Public Policy and Principal of MFoss Consulting. He served as the Chief Energy Economist for the Alberta Government where he was responsible for assessing the value of Alberta's energy resources, designing Alberta's oil and gas royalty formulas, programs, features and incentives, forecasting oil and natural gas prices and energy revenues.

Lead image: **LNG Canada**



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# A Study of Liquefied Natural Gas Development in Australia and Requisite Learnings for Canada

by **KELLY J. OGLE**

**G**lobal energy demand continues to increase, and natural gas is the only hydrocarbon that can easily lead to further reductions in global carbon intensity. Current technologies, investments and consumption trends suggest that natural gas will be central to any global energy transformation. Moreover, abundant gas resources remain undiscovered and liquefied natural gas (LNG) will be a significant component of the global transition to a lower carbon future.

On Oct. 12, 1964, the first LNG cargo was delivered from Algeria to the U.K.'s Canvey Island regasification terminal. Today, there are more than 400 trade routes and upwards of 50 countries participating in the global LNG trade. Australia possesses vast onshore and offshore caches of natural gas and for a time in 2018 Australia overtook Qatar as the world's largest exporter of LNG. Although, Alberta and British Columbia hold similar potential, Canadian gas is completely landlocked. Pipeline infrastructure and egress from Canadian gas fields is extensive but tidewater connectivity remains elusive.

What circumstances allowed Australia to react to the rapidly expanding global LNG business? What did Australian natural gas developers do differently? How did Australian governments factor in decision-making? This begs the question: Why is Canada so late to the game? Are there unknowns that hinder Canada's ability to participate globally? Combining an historical evaluation/analysis of Australia's system of governance, regulatory bodies, natural gas reserves, egress and global market conditions, this paper examines Australian

development of export gas. What lessons can Canada learn as its burgeoning LNG business expands toward economic export of LNG?

### **Children of the Same Mother**

Like Canada, Australia is a constitutional monarchy wherein the federal government and sub-national jurisdictions (provinces and territories in Canada; states and territories in Australia) employ the Westminster parliamentary system of governance. Australia is a commonwealth federation of six states and two self-governing territories. Each state has a governor, a premier (head of government) and a two-chambered Parliament. The federal government has no power to override the decisions of state governments except in accordance with the federal constitution; however, it can and does exercise that power over territories. The Australian House of Representatives has 150 single-member electorates, each representing about 80,000 to 90,000 voters. The most populous state, New South Wales, has 49 electorates, while the smallest, Tasmania, has five. Elections for the House of Representatives are usually held every three years.

Australia's elected senate is one major difference between the two countries. All states, regardless of population, elect 12 senators, while each territory elects two. Senators serve six-year terms, except for territory senators, whose term is the same as the House of Representatives. Australian interstate disputes, and regional alienation in the form of small states' resentment of large states' domination, command less attention than in Canada and an elected senate deserves some credit for this. Another significant difference between Canada and Australia is mandatory registration and voting; fines are levied for non-compliance.

The development of large infrastructure projects, such as LNG, can be heavily influenced by the support that the project has from host governments, regulatory conditions and political stability.

While Australia is perceived as relatively stable, the past decade has witnessed

serious volatility and numerous developmental setbacks largely caused by existential factors such as commodity prices, resource policy inertia and infrastructure gridlock. Moreover, virulent Australian anti-development, anti-fracking movements are in place in virtually all states.

### **Production and Reserves**

Although the majority of Australia's natural gas is located offshore Western Australia, gas has been produced offshore Southeast Australia for over 40 years. Four gas basins account for almost 90 per cent of total estimated resources. On- and offshore the West Coast are the Carnarvon and Browse basins; the Bonaparte Basin is in the north and the Gippsland Basin is in the southeast. As well, there are unconventional coal seam gas (CSG) fields in the Surat/Bowen basins on the East Coast.

Natural gas production in Australia climbed to nearly 100 BCM in 2017, a 20-per-cent increase from 2016, largely as feedstock for new LNG export facilities and strong natural gas demand in regional markets.

No pipelines run east to west as local gas is cheaper to produce and exploit than paying for transportation. From a demand perspective, domestic consumption of gas is mainly used in manufacturing, electricity generation, mining and residential. Increasing domestic demand and a dramatic rise in LNG exports are creating difficulties as regional and federal authorities seek to find a balance between the interests of Australian consumers and producers who wish to generate higher export revenues and to guarantee export commitments. Unfortunately, domestic prices have risen above international prices, producers are locked into meeting export commitments and severe penalties exist for missing cargoes.

### **Transportation and Consumption**

The historical overarching issue facing the domestic gas market has been delivery of enough supply to meet ever-growing

demand. Moreover, the nature of the challenge is specific to each regional domestic market. Australia's well-developed natural gas pipeline networks are largely privately owned and operated. Except for Western Australia and Tasmania, the Australian Energy Regulator oversees regulation which varies depending on competition. In the main, natural gas is transported from the key production centres to main economic hubs in the east or to the coast for export. However, consumers are increasingly worried about the impact of new LNG export projects both on domestic prices and the availability of gas for the domestic market.

### **Resource Regulation**

Commonwealth, state and territory governments collect royalties for both onshore and offshore mineral and petroleum products. Although energy is of national significance, there is no common royalty regime across all Australian states and territories. Therefore, in 2011 the Council of Australian Governments (COAG) established the Standing Council on Energy (SCE). The SCE was comprised of representatives of the commonwealth, state and territorial governments who co-operate to harmonize energy policy, legislation and market rules. Subsequent legislation is administered by each Australian state and territory, and the commonwealth, with some variations between jurisdictions. In 2014, the SCE became the COAG Energy Council with a mandate to provide a "forum for collaboration on developing an integrated and coherent national energy policy ..." The council meets twice a year and discusses and advises on stakeholder engagement, resources and markets, and market reforms. Later in 2014, the council released its vision for the gas market and the Australian Gas Market Development Plan in order to improve visibility and accountability.

At the commonwealth level, the Australian government administers and collects taxes and charges on the recovery of oil, gas and condensate with a profits-based levy on all oil and gas projects both onshore and

offshore. State and territorial governments also recover taxes, royalties and rents from these activities. Petroleum royalties and taxes are paid at different rates depending on whether they are offshore or onshore. While onshore royalty rates vary by state, offshore petroleum royalties currently only apply to the North West Shelf (NWS) production area and state and territory waters.

Since 1989, LNG's economic impact has been substantial with room to grow. If so, LNG exports would surpass metallurgical coal as Australia's second biggest resource and energy-export earner. According to Malcolm Roberts, chief executive of the industry lobby, the Australian Petroleum, Production and Exploration Association (APPEA), "Australia's LNG projects will deliver decades of economic growth, jobs and exports." However, in the past few years, domestic gas supply worries stalled LNG development. Australian gas supply and demand challenges are a microcosm of global issues; Eastern Australia markets are undersupplied and face pricing pressures while at the same time exporting gas via LNG. Furthermore, some of Australia's woes are self-inflicted. The state governments have legislated moratoriums on gas development in Victoria, New South Wales, Northern Territory and Tasmania, creating regional gas shortages. There are no penalties for not supplying the domestic market, but severe penalties for shorting Asian customers.

In April 2017, then-prime minister Malcolm Turnbull initiated the Australia Domestic Gas Security Mechanism (ADGSM), giving the minister of resources the authority to curb Australia's LNG exports. Turnbull suggested that the "shortage of domestic gas supplies has resulted in dramatically higher prices in Australia – higher than prices paid in the markets to which Australian gas is being exported." The ADGSM came into effect on July 1, 2017 and will be reviewed in 2019 to assess its overall effectiveness and efficiency. Some suggest that the ADGSM follows a new wave of resource nationalism around the Asia-Pacific region in the name of



national energy security. Industrial gas users praised the plan while the natural gas industry voiced strong opposition, considering the policy damaging to Australia's reputation as a dependable global LNG supplier.

Australia also possesses very large prospective gas resources with coal CSG the main source of unconventional gas production, making Australia the third largest producer of CSG globally. According to the International Energy Agency (IEA), CSG is projected to continue to grow in importance in Australia. However, onshore production in Australia has raised social and environmental concerns regarding impacts on aquifers, land access and public health. As a result, several states banned onshore unconventional gas exploration. In March 2017, the state of Victoria banned all onshore gas exploration, imposing a moratorium on any onshore petroleum exploration and production until July 2020. Other states followed. In New South Wales, no additional wells were drilled between 2014 and 2017 because of a blanket ban on developing unconventional gas. In the Northern Territory, which extends from the centre of Australia to its northern coastline, a series of scientific studies confirmed the state's gas potential. However, a September 2016 moratorium stalled all activity, banning hydraulic fracturing amid concerns the drilling method could harm the environment. It commissioned an inquiry into the environmental, social and economic risks of the extraction process and 18 months later accepted the inquiry's conclusion that the risks were manageable. The moratorium on fracking was lifted with strict new laws to be in place before exploration or production can occur. In September 2017, Western Australia also announced a moratorium on hydraulic fracturing while it examined the potential risks associated with the drilling technique. After a 12-month independent inquiry by Australia's Environmental Protection Authority, the Western Australian government also lifted the fracturing moratorium.

In late 2018, a task force from the governments of the commonwealth, the

states and the Northern Territory released a non-partisan initiative to deliver a road map for the entire resources sector. The Resources 2030 Taskforce was created to help the resource sector advance and be more globally competitive in the medium to long term. The report criticized federal and state governments for not collaborating on much-needed policies to promote exploration. It called for more streamlined regulations that avoid unnecessary duplication. The report follows years of lobbying by the APPEA and other oil and gas trade bodies for the government to allow drilling in new basins. The APPEA pointed out that petroleum exploration in Australia is at its lowest level in more than 20 years, mainly due to endless conflicts over the role of renewables in energy supplies. Furthermore, the gas industry has been frustrated over a decade-long failure to effectively integrate energy policy and climate policy.

In the Pacific basin consumer markets, geographic proximity and abundant natural gas resources have made Australia a leading LNG supplier. Asian markets are almost exclusively the terminus of Australia exports. Japan is the largest importer of LNG from Australia, purchasing about 51 per cent of Australia's exports in 2016, mostly through long-term contracts. The 2011 Fukushima nuclear power plant accident increased natural gas-fired generation as a substitute for lost nuclear capacity. Other key consumers include China, South Korea and Taiwan.

The North West Shelf Venture began shipping cargoes in 1989. Until 2004, export volumes were stable around 10 bcm per year. Five years later, they had doubled. The project has since grown to include five production units (or trains). It now produces up to 16.3 million tonnes per annum (mtpa).

At the beginning of 2017, Australia had seven existing LNG export facilities with a total capacity of almost 2.9 Tcf/y.

Australia's LNG development experienced several challenges. Relatively compressed



timetables, cost inflation and labour shortages led to delays in almost all energy projects. The LNG schemes in Northern Territory and Western Australia have experienced problems from inception, with cost overruns and project delays undermining project economics. The Pluto project provides a stark example.

Pluto received final investment decision (FID) and sanction in July 2007 with first LNG scheduled for February 2011 and an estimated development cost of US\$11.2 billion. However, in November 2009, a six- to 10-per-cent increase in the cost estimate was blamed on lower than budgeted productivity in both onshore and offshore construction. Labour practices were a prominent issue and two strikes saw half the workforce walk off the job in December 2009 and June 2010. The proponent announced a six-month delay in the project's commissioning and a further seven-per-cent increase in costs. In June 2011, another six per cent was added to the overall cost estimate and a further commissioning delay to March 2012. First LNG was exported in May 2012, 15 months late and \$3.7 billion over initial estimate.

Projects in the east suffered from execution issues as well, and since commissioning, the three East Coast LNG projects have run well below nameplate capacity although exports did pick up in late 2018 and early this year. This is largely a production-type challenge; the necessity of continually drilling CSG wells to sustain gas production drives high production costs and access to services, not to mention increasing environmental pressures.

Another key catalyst to the rising costs of early LNG projects was rapidly increasing raw material costs, particularly steel. Unfortunately, engineering procurement contractor (EPC) bids were prepared for FID long before first construction. As global LNG development was already in a frenzied state, project investors could not pass the risk of materials cost escalation to the EPC as part of the construction contract. Past experiences in Qatar caused contractor

reluctance to take fixed-price risk. Therefore, such risks and liability for higher raw material and labour costs could not be passed on to the project proponent. More recent Australian projects focused on modularized equipment to minimize construction work at the site due to high labour costs and personnel restrictions.

At the time, Australian trade unions wielded significant power in the country. Furthermore, in a country with a relatively small population, the development of seven LNG plants at the same time led to a shortage of skilled labour, a situation exacerbated by strict foreign worker rules. Furthermore, until September 2013, the Labour government imposed severe restrictions on visas and forced companies to provide exact estimates of their workforce. Domestic employees were hugely advantaged – skilled, semi-skilled and unskilled such as laundry workers or drivers. In summary then, LNG development was hamstrung by increasing labour costs caused by a tight labour market in the oil and gas sector, a strengthening local currency, some project management and design inefficiencies, general cost inflation for materials and an increasing focus from regulators and the local population on the environmental impact of projects. The weakening of the Australian dollar after 2012 eases some of the cost pain for some projects, but nevertheless it seems likely that only brownfield expansions, or floating liquefaction, will be seriously considered in the future. In 2014, Brian Songhurst of the Oxford Energy Group made the same observations. The high costs of Australian projects were driven by a strengthening Australian dollar, very high construction costs and the remote locations far from any infrastructure.

## **Supply and Demand**

Natural gas is destined to have an expanded share of the energy mix for power generation, space heating, petrochemical feedstocks and transportation fuels. Until the end of the 20th century, most global jurisdictions with natural gas resources

looked first to ensure domestic supply and Australia was firmly in that camp. Horizontal drilling and hydraulic fracturing changed all that, as enormous reserves and marketable resources were freed up for export. In the next decade, production is forecast to grow dramatically in the Middle East, Russia and Eurasia, North America and Africa, greatly exceeding localized demand. At the same time, Europe, Asia and Oceania will face growing supply deficits. LNG solves some of the geographic difficulties and the growth in LNG is largely attributable to this increasing mismatch between areas of natural gas supply and demand. Globally, there is plenty of gas and increasing absolute demand; however, the difficulty remains in reserves location versus markets.

In the past decade, eight new Australian LNG projects, plus at least four in the United States and a handful of others caused forecasters to predict a long-term global glut, well into the 2020s. However, current global LNG surpluses are likely to be as little as 10 million tonnes in the early years of the 2020s and will not last. According to consultancy Wood Mackenzie, by 2025 the market is likely to switch to an annual deficit of about 50 million tonnes, and there simply aren't enough projects being approved to meet the potential supply gap. In a total market of more than 350 million tonnes a year, such a small surplus really amounts to a market that is more or less in balance.

Moreover, the narrative of industry over-investment in capacity did not completely factor China into the expanding supply/demand nexus. From 2015 to 2018, Chinese LNG demand tripled and China became the world's second largest LNG buyer. The major drivers were coal-to-gas switching in industry and buildings, and an increasing role for gas in electricity generation and transport. Gas is presently seven per cent of the country's overall energy mix. However, the Chinese government has set an aggressive target of 30 per cent by 2030. After several years of modest increases, several other large northeast Asian players have again become active in global LNG contracting activity as well.

Although a handful of shovel-ready projects in the United States, Canada and East Africa exist, in 2017 just one LNG project reached a FID, that being the relatively small Coral floating LNG development in Mozambique. It takes several years to go from FID to moving cargoes of LNG from supply hubs to markets. The rapid build-out in the past decade was partly driven by the steep rise in oil prices and its direct impact on the LNG price. However, when crude prices crashed in 2014, gas prices followed and many LNG projects in the FID process were suspended and/or terminated. Canada certainly suffered this fate as the approximately 20 former projects on the books were reduced to the two B.C. projects that exist today, LNG Canada and Chevron/Woodside. Furthermore, the discount between domestic gas prices in Australia versus LNG prices in Asia confirmed the huge Australian gas supply. The arbitrage caused the rapid build-out. If Australia domestic gas had been priced relative to oil, there would not have been an arbitrage opportunity.

This is about to change and 2019 could be a record year for LNG project sanctions, with over 220 mmtpa of gas targeting final FID. "Looking forward, 2019 will be the biggest year ever, in terms of LNG capacity sanctioned, for liquefaction project FIDs. Asia's major buyers will be at the forefront in ensuring this next generation of LNG supply is brought to market." However, LNG development will remain volatile until the disconnect between markets and price closes and surpluses disappear.

LNG buyers are price makers, and historical long-term contracts will only be part of the pricing equation. Buyers have led the charge to link LNG indexes to other natural gas prices, such as the U.S. benchmark Henry Hub and short-term contracts, even spot pricing. Furthermore, price is not the only factor, albeit the most important. In more mature markets, such as Japan, South Korea and Taiwan, uncertainty will mean more room for spot and short-term purchases.

## Lessons for Canadian LNG

Late last year, Australia was the world's largest exporter of LNG and will be a leading natural gas exporter for decades to come. Why did Australia react so fast to the rapidly expanding global LNG business? The major reason is geographic. All of Australia's states and territories border the oceans, coastal terrain is conducive to large, industrial projects, and there is a long history of selling commodities to Asian markets via coastline. As an example, Australia has supplied coal to Asian nations for decades. Furthermore, unlike Canada, there are no interstate borders to trade and Australia's offshore LNG export capacity does not face the challenges (physical and societal) of traversing several mountain ranges and communities. Conversely, Canada has had to look south to the U.S. for markets.

How did Australian governments factor in decision-making? The establishment of the Standing Council on Energy which became the COAG Energy Council in 2014, combining federal, state, territorial and municipal policy-makers was a step in the right direction. Any effort to harmonize energy policy, legislation and market rules and regulatory streamlining should be beneficial. Has it been effective? The council's approach is based on several principles: promoting the interests of electricity and gas consumers; overseeing competitive electricity and gas markets and effective regulation of network monopoly infrastructure; greater productivity, energy efficiency and sustainability; industry and stakeholder participation in policy development and implementation; and regulatory and governance reform to streamline processes and decision-making and deliver outcomes more efficiently and consistently. This is certainly something Canada should explore. Siloed regions and pressure from communities, environmentalists and overarching federal policies are turning the Canadian courts into the regulator. Perhaps a national body such as Australia's COAG Energy Council could help solve some of Canada's infrastructure and resource development gridlock.

What did Australian natural gas developers do differently? Australian LNG development experienced several challenges. Relatively compressed timetables, cost inflation and labour shortages led to delays in almost all energy projects. Increasing labour costs, a tight labour market, a strong currency, inefficiencies, cost inflation and an increased focus on the environmental impact of projects all conspired to slow development. How should Canadian LNG developers view this historical record and what lessons can Canada learn as its burgeoning LNG business expands toward economic export of LNG?

Canadian developers are aware of the cost of raw materials, potential labour challenges and societal pressures. According to Susannah Pierce of LNG Canada, the five-member consortium is making every effort to stay ahead of these issues. The large complex modules cannot be manufactured in Canada and will be purchased offshore under fixed EPC conditions. Moreover, tariffs will not apply as the Canadian steel industry should not be affected. In fact, the Canadian steel industry should benefit as the LNG sector has the potential to help support the 120,000 direct and indirect jobs that exist today in the Canadian steel industry.

LNG developers must also be wary of the potential for labour disruption, shortages and wage escalation. In the case of LNG Canada, Pierce advised the following:

*LNG Canada has spent more than \$2.5M to date creating a robust workforce development strategy to attract women, First Nations, and youth into the trades in order to build new capacity. This includes a commitment to having 25% apprenticeships on site. Memoranda of Understanding (MOUs) between the joint venture partners and unions contain terms and conditions to mitigate site unrest and promote harmony on a managed open site; no strikes, no lockouts etc. Domestic supply and demand analyses by the partners, government, labour, First Nations and owners (e.g. WDAG in BC) provide advanced view of potential shortages which will trigger training programs, investments and/or sourcing plans to mitigate risk.*

The LNG Canada project can provide a blueprint for other Canadian LNG projects. However, time is of the essence. The rapid build-out of LNG projects in the past decade was partly driven by the steep rise in oil prices. A variety of factors, largely driven by escalating project costs coupled with a falling gas price, moved most Canadian projects from the drawing board to the shelf. Like any commodity, the price of gas is the key. Unless LNG price driven by Asian demand returns to the \$8-\$12 per MMBtu range, it will be difficult for the few remaining planned LNG projects to be profitable. Moreover, projects must have requisite expansion capability. According to global LNG expert Geoffrey Cann, "Aside from Northwest Shelf and Darwin, I believe all the Australian projects were designed to expand. The economics of those projects improve with growth because much of the infrastructure (jetties, power plant, tankage, housing) is already in place. Yet Australia is struggling to sanction projects. They are not competitive."

Despite all of this, LNG Canada stands out as its owners are heavily involved in Asia Pacific LNG trading. All of the parties are truly global. Furthermore, Shell and Petronas are among the world's largest companies. Along with Japanese multi-conglomerate Mitsubishi Corp., the project has attracted other Japanese companies who have purchased long-term contracts for LNG Canada's gas. Finally, China (PetroChina) and South Korea (Korea Gas) are also part of the LNG Canada project. One would have to look far and wide to find this lineup of global players.

Canada has a moral obligation to provide the rest of the world with this country's clean, responsibly developed energy to improve lives and preserve the environment. Furthermore, natural gas delivered as LNG to global markets will be the lowest GHG-emitting gas in the world. However, continued discord and subsequent gridlock with the build-out of large projects clearly in the long-term national interest are baffling. Does Canada require an overarching resource policy body? Perhaps a truly

national strategy to kick-start additional Canadian LNG development would help. If not, the ability to compete with other LNG export projects in the U.S. Gulf Coast, in Asia or Australia, will disappear. Canada will miss the global demand increases about to occur in the next decade and beyond. All levels of government must coalesce to take advantage of this global opportunity so Canada can become a major LNG supplier. There are abundant reserves, while drilling, completion and production technologies are efficient, and environmentally the best in the world. Internally, a sophisticated delivery system is in place. When connected with West Coast and East Coast points of sale, Canada will provide market benefits. Moreover, Canadian projects need to be competitive with U.S. projects. The U.S. currently has huge advantages: year-round deep-water ports, favourable governments, tolling models, gas FOB, Henry Hub pricing, deep technical skill set on the Texas Gulf, reusable infrastructure and low construction cost. However, Canadian LNG shipped from the West Coast will have shorter shipping times and distances and is thereby much more competitive.

All levels of government and Canadians must support LNG development. Let the departure of energy majors and international companies from the oilsands be a lesson. Moreover, investors have left the industry. Canada's LNG sector needs to attract domestic and foreign investment. If not, Canada will miss a great nation-building opportunity.

Finally, is the debacle over infrastructure development the catalyst needed to make changes to Canadian federalism? Certainly, mandatory voting is a first step. An elected Senate? Probably a wishful chimera and certainly too large of a discussion for this paper. However, an overarching strategic and pan-national resource policy arm is a must.

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Lead image: **The Gladstone Observer**



# Energy in Canadian Foreign Policy: Missing the [LNG] Train

by **JEAN-SÉBASTIEN RIOUX**

**S**uccessfully harnessing and controlling forms of energy is among the key factors that has shaped human evolution. Mastering fire enabled early humans to cook their food, heat and light their shelters, and eventually to smelter, forge and shape metals for tools, coins and structures. Harnessing wind and water energy led to building ships that sailed and mills that crushed grains. Steam power that converted heat into mechanical energy led to better and faster methods of transportation such as locomotives and steamships, and fuelled the machines that gave rise to the Industrial Revolution. In sum, energy has shaped how humans organized their societies and economies from time immemorial (Bithas and Kalimeris 2016, 6-7). Moreover, there is a strong statistical correlation between

higher per capita energy consumption and a higher per capita GDP (European Environment Agency 2019).

The internal combustion engine was a further evolutionary step because products refined from oil – kerosene, gasoline, diesel, etc. – provide vastly more energy per unit to turn into mechanical energy than steam. In the fields of military history and international relations, this “energy density” advantage manifested itself most notably in the early 1900s when the British Royal Navy converted its entire fleet from coal to oil-powered vessels because of the advantages in speed and distance afforded by the use of oil (Dahl 2001). After this came the invention of automobiles, diesel locomotives, airplanes, tanks and trucks, and a vital need to access oil to fuel the new Transportation Revolution. Daniel Yergin’s Pulitzer-winning book *The Prize* (2008) and his follow-on *The Quest* (2012) brilliantly document the “epic quest for oil, money & power.”

The previous section serves as a useful segue to some key concepts that underpin this paper: chief among them is that of energy security. The International Energy



Agency (IEA) “defines energy security as the uninterrupted availability of energy sources at an affordable price” (IEA 2019). Two subsidiary concepts follow: the first pertains to states that do not have domestic sources of, say, oil, and therefore require uninterrupted availability of oil from foreign sources. States in this predicament seek security of energy supply and use their diplomatic, commercial and, when required, military assets to secure the energy they need to achieve national objectives. States endowed with energy resources can become exporters and therefore seek foreign buyers to earn precious foreign currency; these states are likely to be more concerned with the security of market access, continued demand and stable commodity prices. The interplay between states seeking stable sources of energy supply and those that seek to position their energy endowment to their greatest advantage drives the geopolitics of energy and much of global politics (Bridge and Le Billon 2017).

States that possess enough energy in the form of oil or gas to become exporters have sometimes used their resource endowment as both carrots and sticks. Russia has used its position as an important exporter of hydrocarbons both to secure friends (Cuba, Central and Eastern Europe, and most recently China) and to threaten recalcitrant neighbours (Ukraine). More generally, Russia demonstrates “a proclivity to use its empowered energy position to either grab more resource rents from its immediate neighbours, or to wrest geopolitical or political benefits using energy as a lever” (Jaffe and Soligo 2009, 122). Venezuela under the late president Hugo Chavez also used its oil wealth to build coalitions of states that opposed U.S. policies in Latin America – he claimed to have helped get Evo Morales elected in Bolivia and Daniel Ortega in Nicaragua (Trinkunas 2009).

In sum, energy – particularly in the form of hydrocarbons which currently fuel 85 per cent of global energy demand (BP 2018, 11) – is one of the main natural resource

attributes that contributes to a state’s relative level of power, influence and diplomatic weight in international relations and foreign policy (Hudson 2007; Morin and Paquin 2018). Canada has world-class deposits of these forms of energy and should be a global supplier, satisfying our allies’ thirst for energy security.

### **Canada’s Supply vs. The World’s Demand**

Canada’s proven oil reserves comprise 168 billion barrels of recoverable resource using current technologies and represent the third largest in the world, ranking behind only Venezuela and Saudi Arabia (NRCan 2019). Canada also possesses enormous natural gas reserves and ranks as the fourth largest natural gas producer in the world (NRCan 2019). Canada’s proven reserves amount to 73 trillion cubic feet and even those volumes vastly exceed Canada’s own needs, so most of it can be exported. Western Canadian natural gas plays in the Montney, Duvernay, Horn River and Liard basins are world-class resources that are cost competitive for both North American pipeline and global LNG markets.

According to Natural Resources Canada (NRCan), we produce about 16.1 billion cubic feet per day (Bcf/d) of natural gas and export just over half of our production to one country – all of Canada’s 8.2 Bcf/d of natural gas exports go to the United States. We also know that shale gas resources exist in vast quantities in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia and the Territories. Canadian production could increase significantly if the proper gathering systems and infrastructure existed.

IEA (2018) data show that natural gas supplies 22 per cent of global energy use and 24 per cent of electricity generation, and that global demand for natural gas will increase 44 per cent by 2040, driven primarily by the rapidly expanding Asian economies. Most of the increase in natural gas use will be from liquefied natural gas (LNG) exports from the U.S., Australia and Russia.

According to data from the U.S. Energy Information Administration (2017), Japan's LNG imports come from Australia (27 per cent), Malaysia (18 per cent), Qatar (15 per cent), Russia (nine per cent) and Indonesia (eight per cent). South Korea's LNG imports come from Qatar (31 per cent), Australia (18 per cent), Oman (11 per cent), Malaysia (10 per cent) and Indonesia (nine per cent) (EIA 2018). Canada's competitive advantage in shipping distance to these two countries is striking. A round trip from Kitimat, British Columbia to Shanghai, China involves 8,082 nautical miles. By comparison, a return trip from the Arabian Gulf to Shanghai is 13,277 nautical miles and from Nigeria, 21,931 miles. Ironically, we think of Australia, rather than Canada, as an Asia-Pacific country and yet the distance between Prince Rupert, B.C. and Tokyo is 3,700 nautical miles, compared to 3,900 nautical miles between the natural gas fields of Carnarvon in northwestern Australia and Tokyo. Seoul, South Korea is also closer to Prince Rupert (4,000 nm) than to Brisbane, on Australia's East Coast (4,170 nm).

### **LNG in Canada's Foreign Policy: Missed and Missing Opportunities**

Canada recently ratified the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) with 10 other countries: Australia, Brunei, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam. Moreover, Canada has had a free trade agreement with South Korea – the Canada-Korea Free Trade Agreement – since 2015. In addition, in 2018 Canada ratified the Canada-EU Comprehensive Economic and Trade Agreement, or CETA. I mention these three specific trade agreements because the world's largest importer of dry natural gas is Germany, and the two largest importers of liquefied natural gas (LNG) are Japan and South Korea, all three of which are now free-trade partners with Canada. Germany is currently working to increase its security of gas supply by improving regulations, and up to three LNG import terminals are being proposed to achieve this aim (LNG World News 2019). Japan's Osaka Gas is building a new LNG

receiving facility to be online by 2022 (LNG World News 2018), while South Korea's Kogas is building another LNG import terminal to meet its demand for the fuel (LNG World News 2017). In summary, Canada has an excess of gas supply and some of our newest free-trade partners are demonstrating their desire to secure more LNG import capacity.

Some of Canada's new trading partners have expressed strong interest in Canada being a stable and reliable supplier of energy for their needs. For example, in the aftermath of the Fukushima nuclear disaster in 2011, Japan would have been an ideal market for Canadian natural gas, and Japan viewed Canada as a favoured source for supplying the energy it required in the aftermath (Vanderklippe 2014). About five years ago, there were 19 proposals to build LNG terminals along the coast of British Columbia to export energy to Asia and other markets (Prentice and Rioux 2017). Plans for Western Canadian gas to supply countries in the Asia-Pacific were driving a lot of commercial activity in British Columbia a few short years ago.

However, opposition from environmental and Indigenous groups, as well as regulatory and political uncertainty, created barriers and constraints to building LNG facilities, and halted the natural gas pipelines that would deliver the needed natural gas from the Montney and Horn River basins. The emerging potential energy relationship with Asian countries was quickly stillborn. By 2016, Japan's then-ambassador to Canada, Kenjiro Monji, stated that "[i]f the approval of the environmental assessment [of the Pacific Northwest LNG project proposed by Petronas] is delayed further, Canada may run the risk of missing the chance to export LNG to the growing Asian market for a long time" (Bennett 2016). Former senior Alberta official and diplomat Jeff Kucharski (2015) at the time expressed frustration that "Canada's credibility is at risk in Asia in light of the inability to complete necessary export infrastructure that would make good on the political rhetoric about Asia being a priority for Canada. Competitors such as Russia, Central Asia, East Africa and Australia are

moving far more quickly and tangibly to meet Asia's growing energy demand."

The demand for energy from Asian economies continues to grow; however, absent a coherent plan that allows energy exports in significant quantities from the West Coast, Canada will not become a key supplier to those regions. And most unfortunately, this comes at a time when Southeast Asian countries are turning to lower-cost coal to satisfy their increasing demand for electricity, forecast to increase by 70 per cent between now and 2030. As reported in *Nikkei Asian Review*, "Indonesia is on track for the third-largest coal-fired power capacity [...] behind China and India. Vietnam follows in fourth place, while the Philippines and Thailand will be home to multiple new coal power stations" (Hanada et. al. 2019). As it turns out, Indonesia, Vietnam, the Philippines and Thailand are all in the Association of Southeast Asian Nations (ASEAN), a regional organization of 10 countries with which Canada is exploring the possibility of negotiating a trade agreement (Global Affairs Canada 2019). Shipping Canadian LNG to offset the growing use of coal in these emerging economies would be beneficial for Canadian exports.

Another opportunity exists with Canada's European trading partners. Many European countries receive significant imports of natural gas from Russia, but as mentioned previously, Russia has a habit of using its energy assets as a geopolitical tool to either entice new friends or punish behaviour it does not agree with. In January 2009, Russia cut gas exports to Ukraine in one of several such occurrences. Since Russia supplies 40 per cent of Europe's natural gas, this action left much of Western Europe shivering for almost two weeks in the dead of winter as collateral damage from Russia's deteriorating relationship with Ukraine (Kramer 2009).

To mitigate against these supply threats from Russia, many "European countries are looking to diversify their natural gas supply sources and are prioritizing geopolitically stable and environmentally responsible supplies...Canada is a world benchmark for

that kind of stability, thus making it a dependable, reliable supplier unshaken by whichever way the geopolitical winds are blowing" (Winter et al. 2018, 1-2). The authors also note that "Russia is likely to respond aggressively to attempts from competitors to obtain noticeable shares of the European natural gas market" (Winter et al. 2018, 39). This further highlights the tensions that can develop between energy-deficient states and energy-producing states when geopolitical interests collide. Canada likely will not develop the capacity to become an energy exporter to its European allies for at least three reasons. First, Canadian major energy project proponents have been stymied by domestic opposition to furthering hydrocarbon production and exports. Second, and closely related, two provinces nearest to the Atlantic Coast who could develop their known shale gas deposits have banned hydraulic fracturing, the method of accessing the resource. Finally, since any project currently in development would have to import Western Canadian gas, the added transport costs would make Canadian LNG over-priced.

### **Conclusion: Can Canada Co-ordinate its International Trade and Energy Policy Objectives?**

This article argues that LNG exports represent a significant opportunity for Canada in advancing its global interests in an era of geopolitical disruptions. Unfortunately, as the previous sections have shown, Canada has not demonstrated a political desire to use its vast energy endowments for geopolitical purposes even when many energy-deficient countries in Asia are increasing their energy imports – including coal – and seek energy security. As Prentice and Rioux (2017, 35) wrote, "[s]uccessive national governments have failed to view Canada's vast energy endowment as a strategic asset, or to consider the global geopolitical opportunities it confers on our country."

Moreover, Canada has faced significant obstacles in building the major energy infrastructure projects that would achieve

those objectives. Chief among these obstacles are, first, Canada's constitutional arrangement via section 92a of the 1982 Amendments to the Constitutional Act of 1867, whereby natural resources are owned and managed by the provinces and Territories. Given the country's vast geography and regional differences in history, language, culture and resource endowments, the federal government cannot impose a unified and centralized policy for national energy export projects that would support its national foreign policy objectives.

A second obstacle has been a recent lack of a national societal consensus on whether to develop major energy infrastructure projects, particularly oil and gas pipelines. Growing opposition to hydrocarbon projects of any kind have quashed two major pipeline projects designed to export Canadian oil to foreign markets: Enbridge's Northern Gateway project to the West Coast and TransCanada's Energy East to New Brunswick. The last pipeline project left standing, the Trans Mountain expansion to Burnaby, B.C., has faced such significant opposition that the private company eventually sold it to the government of Canada before it cancelled it altogether. It has become clear that better arrangements with First Nations in the form of enhanced consultations and equity participation are the first step in unlocking this opposition. One group of Indigenous leaders – the Indian Resource Council, representing the oil- and gas-producing First Nations – is currently proposing a bid to buy a 51-per-cent stake in the Trans Mountain oil pipeline (Neis 2019). A successful outcome could lead to more Indigenous participation in major projects, and help to ease endless challenges to major projects before it is too late to build the necessary infrastructure. The fate of the Mackenzie gas pipeline project offers a cautionary tale of missed opportunities.

The Mackenzie Gas Project (MGP) involved the construction of a \$16-billion, 1,196-kilometre pipeline system from the Beaufort Delta along the Mackenzie Valley to link the northern natural gas fields to southern markets. Natural gas was discovered as

early as the 1950s in the Beaufort, but the promise of the massive Taglu gas field in 1971 launched a proposal to build a pipeline to the south. However, a federal inquiry headed by Justice Thomas Berger from 1974 to 1979 concluded that the potential impacts to northerners and to the environment were significant enough that a 10-year moratorium was put in place until issues such as Aboriginal land claims and conservation areas could be settled.

In the years that followed, many comprehensive claims were settled in both the Northwest Territories and in Yukon. The project was re-launched in the early 2000s by a consortium comprised of TransCanada Pipelines, Imperial Oil, ExxonMobil, Shell, ConocoPhillips and the Aboriginal Pipeline Group – a first equity partnership of its kind with First Nations. From 2004 to 2010, the project undertook a joint review panel for a regulatory hearing. Finally recognizing the tremendous benefits to northerners in terms of jobs and economic opportunities, as well as the benefits of cleaner burning natural gas for the environment, the panel granted regulatory approval on Dec. 30, 2010 with a condition that work on the pipeline had to begin by Dec. 30, 2015 or the permit could expire.

A remarkable set of events occurred during that very long review process that undercut the project's commercial viability – the shale gas revolution in the U.S. brought about by advances in hydraulic fracturing and the resulting glut of natural gas throughout North America. As horizontal drilling and multi-stage fracking enabled natural gas to be produced in Pennsylvania and Ohio – close to the huge northeastern U.S. markets – and in British Columbia, as opposed to faraway Inuvik, prices for natural gas dropped from around \$14 per cubic metre in 2006 to around \$2 today.

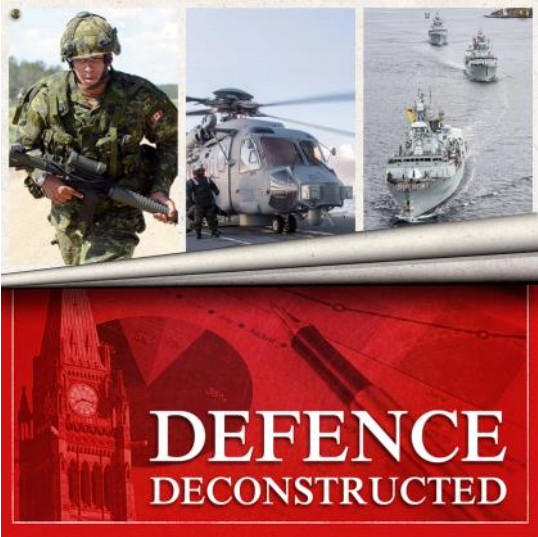
In summary, cleaner burning LNG could be used to offset new coal-fired electricity generating plants in Asia. Canadian political leaders at both the federal and provincial levels must work harder to co-ordinate Canada's federal international trade policy

with the provinces' energy development objectives. They must "sell" it to the public by tying it to an improved energy and trade co-ordination with our Paris Climate Accord commitments, by working with trade partners to reduce global GHG emissions. The mechanism could be Article 6.2 of the aforementioned Paris Agreement (2015) which encourages international co-operation and allows countries with higher emissions to acquire emission reductions via internationally transferable mitigation outcomes (ITMOs). As previously mentioned, some of our new trading partners are building new coal-fired electricity generating facilities. Canada can be a leader in the diplomatic effort to operationalize Article 6 in demonstrating a net reduction in global GHG emissions by moving our partners away from coal to cleaner burning natural gas. Canada is a top-five energy producing and exporting country, and should lead the way in developing LNG export markets using all available tools.

The window for co-ordinating Canada's energy-exporting ambitions to move away from our dependency on the U.S. and shifting towards our newest trading partners is fast closing. We should not let it happen.

**JEAN-SÉBASTIEN RIOUX** is the former-chief of staff of the late Jim Prentice and co-author of the national bestselling book, *Triple Crown: Winning Canada's Energy Future* (Toronto: HarperCollins, 2017). He now serves as the scientific director of International Policy and Trade at the University of Calgary's School of Public Policy.

Lead image: **Chris Wattie/REUTERS**



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# **China's LNG Market: Past, Present and Future**

by **WENRAN JIANG**

**C**hina, together with Japan, South Korea and other fast-growing Asian economies, has been the major driver for the growing world market for natural gas and liquefied natural gas (LNG) in recent years. Collectively, they led to the Asian market being responsible for about 75 per cent of global LNG imports, and pushed Asian LNG import prices to record levels in early 2014.

The past five years have witnessed a rapid decline in energy prices, which has brought volatility and uncertainty to the global gas and LNG markets. However, from a medium- to long-term perspective the appetite for more gas and LNG in Asian countries remains strong. The key player is China, which has been very active in pursuing a natural gas and LNG import strategy around

the world. China and Russia signed two historic gas deals in 2014 alone, moving the two countries closer in energy co-operation. China has also been aggressively pursuing gas and LNG projects in Central Asia, Australia, the Middle East, Southeast Asia and North America. Increasing tensions in the East China Sea and South China Sea between China and its neighbours are partly due to the fact that both areas are considered rich in oil and natural gas deposits.

This article will focus on China's thirst for LNG in the global and historical context, analyze China's current LNG development and trade strategies, identify the key players and newcomers in both the import and export spectrum, and draw policy implications for Canada in the prospects of China's LNG market in the coming years.

## **China's Thirst for Natural Gas and LNG**

For much of the past decades, China has led the world in economic growth. Japan, South Korea, Taiwan, the Southeast Asian countries and then China have successively gone through rapid industrialization and

urbanization. The economic boom and the export-driven development model known as the “East Asian Miracle” have sustained the global demand for energy and resources. Asian economies have become the world’s largest LNG importers. In 2017, China overtook South Korea to become the second largest LNG importer. For much of 2018, it imported more LNG than Japan, and is projected to become the largest LNG importer in the early 2020s.

China, although producing a good part of its own fossil fuel consumption, has been steadily increasing the share of its imported oil, gas and LNG since the mid-1990s. Since China became a World Trade Organization (WTO) member in the early 2000s, its economy has gone through another round of robust growth, with GDP growth averaging around 10 per cent. China’s demand for energy and other raw materials in this period was dubbed the “commodity super cycle”, meaning the demand from China was so strong that prices of oil, gas, coal, major metals and other key resources would sustain their high prices for a prolonged period of time. Even after the 2008 world financial crisis, the Chinese government’s stimulus package was so strong that the country underwent a V-shaped recovery, primarily due to infrastructure spending.

Such unprecedented growth put enormous pressure on China’s energy supply. The country depends on coal for close to 60 per cent of its total energy consumption, which translates into China alone using over 50 per cent of the global coal supply. It surpassed the United States several years ago as the largest importer of crude oil, with 70 per cent of its oil coming from foreign countries. Despite its efforts to increase production of domestic natural gas, it could not keep up with the double-digit growth it had been experiencing in natural gas consumption, averaging a 17.3 per cent increase per year between 2002 and 2013.

China’s LNG imports picked up speed a couple of years after the global energy price decline and posted a 41-per-cent increase last year. The appetite for more natural gas

and LNG is partly due to the government’s drive to reduce coal use, not only in combating pollution but also for meeting its Paris climate conference commitments. Natural gas and LNG are regarded as the transitional fuels, or a part of the fuel-switching policy, for the short to medium term in reducing the use of coal in China’s energy mix before alternative and renewable energy sources take over. It is projected that the gas and LNG share in China’s energy mix will increase from the current seven per cent to 12 per cent or more by 2040.

A recent study by the University of British Columbia’s School of Public Policy & Global Affairs, which was submitted to the B.C. government, noted that coal emissions have continued to rise, driven mostly by power generation in Asia. To date, coal emissions are responsible for around one-third of the increase in global temperatures since pre-industrial times and are the single largest source of this growth. In China and India, where coal currently dominates the energy mix and gas has a relatively small share, there are steady increases in the share of natural gas.

Multiple studies have authoritatively demonstrated that emissions from the combustion of natural gas show clear advantages relative to other fossil fuels. The combustion of natural gas emits 40- to 55 per cent less carbon dioxide than coal for each unit of energy output, and 20 per cent less carbon dioxide than crude oil. The International Energy Agency (IEA) projects that LNG will be part of the solution to displace more carbon-intensive energy sources and help to address global climate change and air pollution. The market’s emergence in the global energy mix has quickly made LNG one of the fastest growing internationally traded commodities. It has the potential to be a bridge fuel for significantly reducing the current consumption of coal in carbon-intensive economies such as China, and helping nations transition to renewable energy.

### **China’s Gas and LNG Strategies**

While key importers of gas and LNG in Asia are all actively pursuing stable supply

sources, often accompanied by overseas investments by large corporations in the respective countries, China is by far the most strategic and long-term player. China's projected gas demand in the coming years and decades far outpaces all other players.

To meet demand, Beijing has pursued land-based gas pipelines from Central Asia, Russia and Burma while adding more LNG receiving terminals along its eastern ports. This surge in demand has also pushed Chinese energy giants such as CNPC, Sinopec and CNOOC (known as China's "Big Three" national oil companies), to invest in overseas oil and gas assets in countries across Africa and the Middle East in the past two decades, and in Australia, Canada and the United States in recent years. Given China's status as the world's largest comprehensive energy consumer, its energy security concerns have been heightened in recent years. In order to increase the share of gas in China's energy consumption, Beijing has implemented a number of domestic and international strategies in the past few years.

First, the Chinese leadership calls for more domestic gas exploration and production in order to reduce the vulnerability of import dependence. According to 2018 BP statistics, China's proven gas reserve has almost quintupled to 195 trillion cubic feet. In both conventional and unconventional areas, domestic production has been prioritized. In the past decade, China's gas production has been growing at nine per cent per year. It is estimated that nearly 700 new shale production wells will come on stream between 2018 and 2020, but still shale gas production is only about 15 per cent of China's total gas output in contrast to the 85-per-cent share of shale in U.S. gas production. This is partly due to the very challenging nature of China's shale reserve locations and the complexities involved in development. However, shale exploration in China has accelerated in recent years, which makes China the third largest shale producer after the United States and Canada.

Second, China is speeding up construction of infrastructure for gas and LNG transportation. As Deputy Minister of the National Energy Administration Zhang Yuqing pointed out in late 2015, by international comparison, China's per capita gas consumption is only 29 per cent of the global average, its gas pipelines are only one-ninth those of the United States and its peak gas storage capacity is only two per cent of total annual consumption, much lower than the world's average of 10 per cent. The Chinese government is eager to change the situation. As set out in the 13th Five-Year Plan (2016-2020), a fourth line will be added to both the existing west-east gas pipeline and the existing Shanxi-Beijing gas pipeline. The China-Russia Eastern gas pipeline will be built, along with other gas pipelines from the regions of Xinjiang and Inner Mongolia. China plans to expand LNG terminals along its eastern coast, forming five major regional gas reserve groups designed to reach a capacity of 20 bcm by 2020. All these measures are in anticipation of China consuming up to 400 bcm of gas per year by the end of the decade. At the same time, China is planning for 34 coastal LNG receiving terminals, with an annual imported capacity of 247 million tonnes by 2035, triple the current capacity.

Third, the government has launched new policies to encourage more gas consumption. About 70 per cent of China's electricity comes from coal power plants, many of them burning with only limited pollution control. The Chinese government has been trying hard to either shut down the more polluting ones (most of them run by local private operators), or to make them cleaner. China has made remarkable progress in making coal burning more efficient and less polluting. But coal, with the market price very low, is still responsible for well over 70 per cent of China's CO<sub>2</sub> emissions. In an effort to use market incentive to displace coal with gas for electricity generation, the central government released a policy directive at the end of 2014 establishing a gas-electricity price linkage mechanism. According to the National Development and Reform

Commission's document, effective Jan. 1, 2015, local governments can provide as much as 0.35 yuan subsidy per kilowatt-hour generated from gas sources over the same amount produced by coal. The latest drive is to replace many coal-burning power plants with gas or LNG.

Fourth, Beijing is pursuing an active go-out strategy for security of the gas and LNG supply. While expanding domestic pipeline and storage infrastructure, China has also enhanced pipeline delivery capacities from Central Asia, Burma and Russia. In terms of LNG import, China has signed long-term contracts with countries such as Australia, Qatar, Malaysia, Indonesia and Russia. China's three largest national oil companies (NOCs), CNPC, Sinopec and CNOOC, were all working on West Coast LNG projects in Canada until a few years ago, but now only CNPC is a partner of the Shell-led LNG Canada project. China had also pursued key projects with the United States in the areas of shale and LNG before the start of the U.S. trade war with China in the middle of 2018. During President Donald Trump's China visit in late 2017, he signed \$250 billion worth of deals. Among those, four energy MOUs alone were worth more than \$160 billion, including a shale development agreement worth over \$80 billion and an Alaska-Sinopec LNG deal worth \$43 billion.

However, China has particularly emphasized its gas and LNG co-operation with Russia in recent years. In May 2014, Chinese President Xi Jinping and Russian President Vladimir Putin signed a \$400-billion agreement, with Russia supplying China 38 bcm a year by 2018. Later that year, the two countries signed another non-binding memorandum that will see top Russian gas producer Gazprom ship 30 bcm of gas annually to China over 30 years. The two gas deals, sealed only six months apart, have profound implications for China's quest for energy security, the volatile global energy market, China-Russia relations and broader geopolitical movements worldwide.

While the world media and expert opinion at the time focused mainly on the significance

of these deals for Putin and his confrontation with the West over the Ukrainian crisis, Beijing saw them primarily as a part of its long-term search for energy security and diversification of supply sources. China's attempt to diversify its primary energy sources from its heavy dependence on coal, thanks to Russian gas, clearly responds to a renewed emphasis Beijing has attached to the global climate change agenda. The China-Russia east route gas pipeline of nearly 8,000 kilometres, once complete, will supply China with 38 billion cubic metres of natural gas annually. With China's help, Russia was also able to develop the Yamal LNG project in the Arctic on budget and on time. CNPC has a 20-year off-take agreement in place to buy three million tonnes of Yamal LNG output per year. And only recently, two Chinese NOCs, CNPC and CNOOC, took a combined 20-per-cent share in Novatek's LNG 2 project, which will cover three production trains, each with 6.6 million tonnes annual capacity. The final investment decision on LNG 2 is expected later this year, and the delivery time is aggressively set for 2023.

### **Policy Implications for North America**

While the short-term market for oil and gas is volatile and unpredictable, the medium- to long-term trends for Asia's gas demands are clear. China, Japan, South Korea, India, Taiwan and other emerging Asian economies will remain the dominant global LNG outputs for much of the 21st century. In two decades, China's gas consumption will reach close to the level of all the EU countries combined. The share of oil and gas in China's energy mix will continue to grow, with both having an equal share in China's energy mix by 2025. While Russia, Australia and Qatar are current LNG suppliers, the United States and Canada are catching up in the race to being the lowest cost LNG producers. So far, Shell-led LNG Canada, Woodfibre and FortisBC projects are all showing price competitiveness.

The challenge for global gas and LNG producers, given the optimistic future demand scenario, remains the price range of these commodities in the coming years.



China will play a key role in this context, since in past years the high price for LNG in the region pushed the planning and implementation of multiple LNG projects. In the past few years, however, the declining price has affected the strategies of emerging producers. This is, for instance, the case for Canada: unless LNG price driven by Asian demand returns to the \$8-\$12 per MMBtu range, it would be difficult for the few remaining planned LNG projects to be profitable. LNG Canada's projections on cost look competitive, and the recent long-term contract by FortisBC to supply LNG to China, while small in quantity, indicates Canada's competitiveness and potential in the global LNG market.

In normal circumstances, in order to better co-ordinate the supply-and-demand situation of the gas and LNG markets, governments of both gas-producing and consuming states may adjust their policies. While not interfering with private sector investment decisions, Western producers in the United States, Canada and Australia may take a page from the China-Russia gas deals by facilitating medium- to long-term supply agreements with large Asian importers, especially China. While Russia enjoys geographical proximity to and shares geostrategic interests with China, it faces financial and technological challenges in its partnership projects. Western countries, on the other hand, have a much better and more open operational environment, and a clear edge on innovation and technology.

The start of a prolonged U.S.-China trade war in mid-2018 has cast a major shadow on the prospects for U.S. LNG exports to China. Instead of implementing strategies that better promote its market access to China's huge gas and LNG potential, the Trump administration's tariffs on Chinese goods have generated a tit-for-tat Chinese retaliation in every step. One victim was the U.S.'s LNG exports to China being subject to a 10-per-cent tariff beginning in September 2018. This led to the immediate slowdown of U.S. shipments of LNG to China despite the two major long-term supply agreements that U.S. Gulf-based Cheniere Energy Inc. signed

with CNPC and Sinopec. Now, with Trump's new tariff hike on Chinese goods in May 2019, Beijing has increased the import levy on U.S. LNG to 25 per cent, effective June 1 of this year.

Canada has experienced its own diplomatic difficulties with China in the past six months with the arrest of Huawei CFO Meng Wanzhou in Vancouver and the U.S.'s request for her extradition. Beijing has since arrested two Canadians on espionage charges, sentenced two Canadians to death for drug trafficking, and limited Canadian exports of canola and pork. Canada perceives these measures as retaliation for Meng's detention. There is little indication that Canada's potential LNG co-operation with China is in trouble, but with overall bilateral relations deteriorating without signs of a breakthrough in the near future, Canada is not in a position to take advantage of the opportunities provided by the U.S.-China trade war, which has clearly slowed the pace of Chinese interest in the U.S. LNG project.

Given the fact that China is pursuing an aggressive policy of supply diversification, it will likely be in a position to exercise its geopolitical muscle, as it has recently shown. The Canadian government and the private sector should be aware that Beijing is more than willing to use economic leverage in defending its perceived broader national interests, which could potentially leave Canadian producers with limited market options, and a particularly risky future. Therefore, Canadian policy-makers must be proactive in managing Canada's China policy, regardless of which party may form government in the next federal election. Meanwhile, a Canadian LNG export strategy, while realizing the importance of the China market, must include other key Asian importers for reduced risk prospects.

The global reduction of overall CO2 emission targets set at the Paris climate conference is a more serious long-term setback. As the IEA concludes, when it comes to controlling the rise of global temperature: "When China changes, everything changes." According to studies by LNG Canada, for countries that

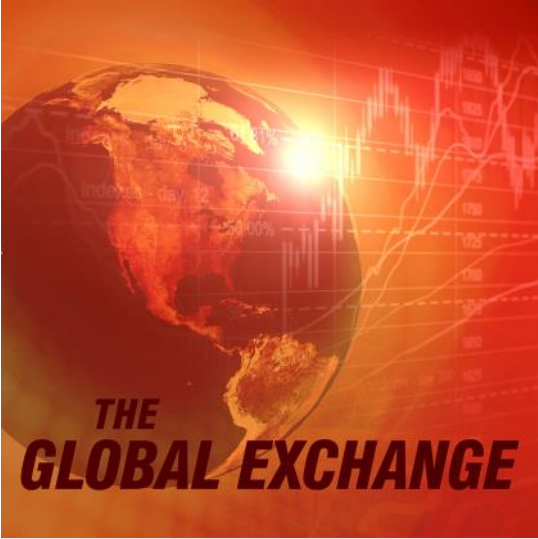


rely heavily on coal to produce electricity, the LNG from the B.C. project alone could reduce global CO2 emissions by 60 to 90 million tonnes per year, which is more than the total annual emissions of British Columbia and roughly 10 per cent of Canada's total annual emissions. Another study by Greenpeace shows that if China's planned coal-to-liquid and coal-to-gas conversion facilities (due to the lack of gas as petrochemical feed stocks) all go online by 2020, China would emit about 800 million more tonnes of CO2 from this sector alone. Even these conversions are designed to avoid lower atmosphere pollution. This amount is more than the entire Canadian national annual CO2 emission.

Canada should stop fighting internally about the carbon tax. Instead, it should take a leadership position, co-ordinate with the United States, Australia, Qatar, Russia and other LNG-producing countries in an international effort to export large quantities of LNG and gas to China to replace coal use there, thus leading to net global CO2 emissions reduction worldwide.

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Lead image: **Xu Congjun/China Daily**



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## The Case for Carbon Offsets and Trading in B.C. and Canada's Climate Framework

by **ROB SEELEY**

**B**ritish Columbia and Canada have set aggressive greenhouse gas (GHG) reduction goals of 40 per cent and 30 per cent respectively by 2030, with an 80-per-cent reduction by 2050. The B.C. and federal governments' core policy to date has been an economy-wide carbon tax on all combustion emissions, with complementary incentive and regulatory measures. The tax applies to all combusted fossil fuels and includes retail fuels, commercial fuels, home heating fuels and industrial fuel use. The carbon tax is about

sending a price signal to consumers for fossil energy use. It introduces the cost of carbon to industry and retail consumers, with the intention of influencing public and business choices for energy products and use and thereby lowering emissions. The tax is intended to be revenue neutral, meaning that the revenue collected should be offset by tax cuts. However, in B.C., both the personal and corporate income tax rates were raised in 2017, thereby moving away from the revenue-neutral concept. The effectiveness of carbon tax policy on energy use and CO<sub>2</sub> emissions in Canada is open for debate; however, the carbon tax's impact on the competitiveness of B.C. or Canadian export industries is a real concern. The carbon tax is an additional cost for these sectors, making their products less competitive with other global suppliers who do not have carbon regulation or carbon costs in place. This is of greatest concern in B.C., where the carbon tax applies to all combustion emissions from industrial

facilities, and not just those emissions above a performance benchmark.

For industries with limited technology options for CO<sub>2</sub> reduction, an increasing carbon tax makes their products less competitive, either driving them out of business, or driving investment to other countries or jurisdictions that do not have a carbon tax. This is called carbon leakage. The carbon emissions move to another country, along with the investment and jobs, and even though B.C. or Canadian emissions may go down as a result, there is no net reduction in emissions for the world. For industry in Canada and B.C., alternative mechanisms to the carbon tax must be considered in order to achieve real CO<sub>2</sub> reductions, attract investment, remain competitive and keep the jobs in place.

### **Carbon Offsets and Trading**

In order to assist B.C. and Canada to achieve their stated GHG reduction goals and allow for economic growth, carbon offsets and trading should be made available to industry as an alternative to the carbon tax for CO<sub>2</sub> compliance.

Including carbon offsets is a practical way of creating incentives for a broader set of potential emission reductions in the near and medium term, and broader participation in climate solutions from the overall economy. CO<sub>2</sub> offsets and carbon trading are proposed in the Pan-Canadian Framework for Clean Growth and Climate Change. However, B.C. also needs to include offsets and trading as an alternative compliance mechanism to the carbon tax, particularly for provincial resource sectors experiencing growth and continued global demand. This includes natural gas, liquefied natural gas

(LNG), mining, manufacturing and forestry. According to the sustainable development scenario in the International Energy Association's (IEA) Energy Outlook 2018, global demand for many B.C. resource-based products will continue as the world transitions toward lower carbon intensity. B.C. and Canada have the opportunity to meet the global demand for our natural resources, and provide global leadership by supplying the most sustainable resource products in the world. Our GHG policy needs to reflect this, to ensure we are not only low carbon, but remain globally competitive. By supplying the lowest carbon-intensity products to the world, we are contributing to the global CO<sub>2</sub> reduction. Carbon offsets and trading will provide a mechanism to reduce the CO<sub>2</sub> intensity and emissions of our export products, particularly for new economic activity, helping to lower compliance costs for industry, and assisting B.C. and Canada to achieve their CO<sub>2</sub> reduction goals.

Including CO<sub>2</sub> offsets and carbon trading in the climate change policy framework creates new business and trading opportunities across the country that could generate revenue for government beyond the carbon tax. According to an ÉcoRessources report for the B.C. government in December 2015, the province had invested \$53.4 million over six years for the purchase of CO<sub>2</sub> offsets. This resulted in a capital investment of \$327 million in the province and an increase in revenues to governments of \$76 million.

### **The Five Key Reasons for Including Carbon Offsets and Carbon Trading in a B.C./Canada Climate Change Policy Framework are:**

#### *1. Delivering Real Reductions toward GHG Reduction Goals and Allowing for Economic Growth*

Allowing B.C. offset projects to be used for

compliance against emissions of new industrial facilities instead of paying a carbon tax would mean the carbon tax revenue used for compliance would go to the purchase of B.C. offsets, delivering CO<sub>2</sub> reductions instead of directing carbon tax dollars to general revenue. This would lower the net increase in carbon emissions associated with economic growth in the industrial sector in the near and medium term. The policy could be phased in to allow the government to adjust from the decrease in carbon tax revenue to the increase in revenue generated through the offset project investment. The use of offsets for compliance in the near and medium term allows time for cost-effective carbon abatement technology to be developed.

### *2. Providing a Market Mechanism to Assist in the Finance of Clean Tech Industries*

Including B.C.- or Canadian-developed offsets as a carbon compliance mechanism for industry instead of paying carbon tax creates investment for a new sector that is involved in clean tech and green projects. The revenue stream provided by the purchase of offsets is often a secondary revenue for these clean tech projects and enables them to become economically viable. Also, there is a multiplier effect, as the offset credit revenue stream allows project developers to raise the capital needed for their projects, creating further investment and more jobs in the province and the country.

### *3. Creating an Opportunity for First Nations Participation in Clean Tech/Offset Industry*

Carbon offset opportunities often come with

a technology focus; however, they also include ecosystem management or nature-based solutions. Carbon offset projects developed around areas such as reforestation, forest management, tidal/wetlands restoration and biomass energy are largely remote, and include lands where First Nations have traditional activities or have asserted their claims. Terrestrial-based offset projects have been studied extensively, and the World Resource Institute, the California Air Resources Board, and the governments of Canada and Alberta, etc., have developed protocols for development and verification. Bluesource Canada has estimated the offset potential of forest-based projects in B.C. at up to 13 million tonnes/yr. of CO<sub>2</sub> by 2030. Offset projects on Crown land can create an opportunity for First Nations' participation in developing climate solutions that deliver real reductions, create jobs and education, and provide opportunity for economic participation in the overall climate program. The government could consider this another step toward reconciliation with First Nations.

### *4. An Alternative Compliance Tool for Industry. Remaining Competitive*

Increasing carbon taxes will impact the cost competitiveness of Canadian export sectors, and the resource sectors in particular. At the same time, the cost of industrial facility carbon abatement projects can be very high for some sectors, and could also increase as their emission intensities are reduced and the lowest cost carbon abatement opportunities are used up. Carbon offsets can effectively continue to lower emissions in the near and medium term for industrial facilities at a cost that is lower than both the cost of direct abatement and the carbon tax being applied. This could help address the

competitiveness issue for industry.

### *5. Staying Current with National and International Policy Development*

CO<sub>2</sub> offsets and carbon trading policies are being proposed within the Pan-Canadian Framework for Clean Growth and Climate Change, and a growing number of companies are considering them. Articles 6.2 and 6.4 of the Paris Accord allow for the transfer of internationally traded mitigation outcomes (ITMO) among countries. Keeping pace with the offset and carbon trading policies of other countries and the international framework creates a business opportunity for B.C. and Canada to acquire offsets in exchange for more sustainable products, or sell offsets or offset technology to other countries.

### **Carbon Offsets, the LNG Sector and Real Reductions**

As our industrial export sector grows, it is extremely important to find ways to remain competitive, keep the investment in Canada and continue to reduce our overall GHG footprint. Carbon offsets and trading are important policy tools which provide an alternative compliance mechanism for industry to deliver real reductions, particularly for new growth areas such as the LNG sector.

The emerging LNG sector in B.C. is forecast to produce roughly 14 million tonnes per year (mtpa) of LNG by 2025. This would result in roughly 2.0 million additional tonnes CO<sub>2</sub>/yr. in B.C. from the LNG facilities if they meet the province's new performance benchmark. The LNG facilities in B.C. are designed to be the lowest in GHG emissions intensity in the world and will be

approximately 25 per cent better than the new facilities being built on the U.S. Gulf Coast, and 50 per cent better than the global LNG facility intensity average. The facilities in B.C. presently being built will have little room for further improvement based on their chosen technology, which is a mix of highly efficient gas turbines and hydro-based electricity from the B.C. grid. LNG operators will pay a net carbon tax of \$30/tonne of CO<sub>2</sub> resulting in annual payments to the B.C. government of approximately \$60 million for their CO<sub>2</sub> emissions. This payment affects the competitiveness of these facilities, and will not result in additional CO<sub>2</sub> reductions for B.C., since these carbon tax dollars are proposed to go to general revenue.

If LNG operators were allowed to invest in projects outside their facility that reduce CO<sub>2</sub> emissions (biomass energy, fuel switching, reforestation, carbon capture and storage, etc.) they should then get a reduction in their carbon tax payment for every tonne of CO<sub>2</sub> emissions that was reduced through the offset projects. Their carbon abatement dollars would therefore be directed toward offset projects that result in real reductions in CO<sub>2</sub> emissions in the province and Canada. If the offsets are within the province, then the money remains in the province. The offset project developers use the money to improve their economic viability, allowing them to get financing for the capital dollars needed to build their facility or project. Constructing and operating the offset project creates jobs in the province, contributes to innovation and green technologies, and adds corporate and personal taxes for the government. A win-win-win!

There is a perception that offset projects are not real reductions. This is simply not true. Offset projects do contribute to real CO<sub>2</sub>



reductions. Examples of offset projects providing real reductions include: i) A biomass energy project replacing a diesel generator at an off-grid location. The offset purchaser pays for a good portion of the capital needed for the fuel switching project in exchange for a stream of CO<sub>2</sub> reduction credits over a number of years; ii) An investment in a carbon capture and storage project at an upstream gas, cement manufacturing or pulp and paper facility. Process CO<sub>2</sub> emissions, which are presently not regulated or taxed, would be captured and sequestered. The offset purchaser's investment in the facility would result in a stream of CO<sub>2</sub> offsets for an agreed number of years; and iii) A forest management project which uses additional resources for the selective harvesting, replanting, monitoring and maintenance of a forested area, resulting in a greater net carbon sequestration rate per hectare of forest.

### **Availability of B.C. Offsets to Meet the LNG Sector's GHG Compliance Needs**

Demand for offsets in B.C. today is limited, as the province's climate regulations allow offsets only for emissions reduction by public sector agencies, and only the government purchases offsets. B.C. offsets developed and purchased over the past several years by the provincial government have averaged between 600,000 and 900,000 tonnes/yr., at an average price below the carbon tax price set by the government in the year of purchase. The 600,000 to 900,000 tonnes/yr. of offsets is a relatively small demand and offset project developers in B.C. have struggled in this business environment due to the low demand.

If the industrial sector were eligible to offset

roughly 20 per cent of its 25 million tonnes/yr. combustion emissions, the demand for offsets in B.C. would increase to approximately five million tonnes of CO<sub>2</sub>/yr.

Expanding the B.C. CO<sub>2</sub> offset program from the present state of 0.7 million tonnes of CO<sub>2</sub>/yr. to roughly five million tonnes of CO<sub>2</sub>/yr. by 2025 would be relatively straightforward. Although offset protocols in B.C. are presently under review, protocols have been developed over the past 10 years for most of the offset types. Certified verifiers and validation resources are in place as needed for verification of the B.C. government's carbon offset purchases to meet its carbon-neutral commitment. The B.C. carbon registry is also in place under the Greenhouse Gas Industrial Reporting and Compliance Act (GGIRCA) and the Ministry of Environment has been overseeing the regulatory aspects of offsets since 2010. A five-million-tonne/yr. reduction in CO<sub>2</sub> emissions by 2025 due to offset projects would contribute most of the remaining reductions that the CleanBC program needs to meet B.C.'s 2030 target. Furthermore, a five-million-tonne/yr. reduction from offsets is greater than the total emissions estimated from the LNG facilities that are under construction.

A recent study by Bluesource International has estimated that based on the B.C.-identified offset protocols either in place or under development, 5.8 million tonnes/yr. of CO<sub>2</sub> offsets could be available by 2025 and 19 million tonnes/yr. of CO<sub>2</sub> offsets could be available by 2030. The offset types included in the study were:

- *Fuel switching*
- *Pneumatic controllers*
- *Forest carbon*
- *Landfill gas capture*

- *Organic waste diversion*
- *Recovery/destruction of ozone*
- *Cement carbon sequestration*
- *Anaerobic digestion in wastewater management*
- *Agricultural – tillage and manure management*
- *Coastal/tidal wetland restoration*
- *Carbon capture utilization and storage*

## **Offset Contribution to GDP Outweighs Carbon Tax Revenue Loss to Government**

The B.C. government is concerned about losing carbon tax revenue if alternative policy tools such as carbon offsets and trading are implemented. However, if the carbon tax revenue were to go to offset project developers as an additional revenue stream instead of to carbon tax, then jobs, new investment and capital infrastructure would be created, and new revenues to the B.C. government from corporate and personal taxes would follow. And of course, there would be a net reduction in emissions for the province.

According to the ÉcoRessources report on B.C. carbon offset projects completed between 2010 and 2014, the province has invested \$53.4 million for the purchase of roughly 4.5 million tonnes of offsets (an average of 900,000 tonnes per year and an average price of \$12/tonne). This has resulted in total capital expenditures by offset project developers of \$327 million, GDP contribution of \$372 million, revenues to governments of \$76 million, and roughly 4,400 jobs measured in person-years. This analysis demonstrates the multiplier effect on the economy from investment in offset projects. The funds going to the offset project developers for offset purchases over a five-year period resulted in a multiplier of roughly six times for capital investment and 1.4 times for government revenues. In

particular, the purchase of CO2 credits from offset project developers is an enabler for the green and clean technology sector and provides these projects with another revenue stream, allowing them to secure financing and become financially viable.

If the industrial sector purchased offsets for the five mtpa of CO2 emission at a price of roughly \$25/tonne, this would contribute \$125 million/yr. to offset project developers. The revenue to offset project developers over a five-year period would total \$625 million. Assuming the same multiplier effect as the ÉcoRessources report, this could result in additional capital investment for green and/or clean technology projects in B.C. over the same five-year period of over \$3.5 billion, with a GDP impact of approximately \$4 billion, revenues to government of \$875 million and creation of over 50,000 jobs.

## **Keeping Pace with Other Provinces on Offset and Carbon Trading Policy Creates a Future Business Opportunity for British Columbia**

Without an offset program and carbon trading, B.C. offset project developers and buyers would likely not be able to take full advantage of developing and selling offsets to markets outside of B.C., and purchasing offsets outside of the province. This is an important requirement for the future. The Pan-Canadian Framework on Clean Growth and Climate Change has included offsets and carbon trading which will evolve in the provinces. As these programs expand, the market for offsets will become more liquid, and developers will be able to sell into the broader Canadian market more easily. Eventually, a liquid offset market in Canada would mean investment in offset projects

and clean technology across Canada, and likely lower compliance costs for those industries that cannot meet the performance target through internal abatement technology. If an offset and trading program does not evolve in British Columbia in step with the federal offset program for industry, B.C. will be missing out on a significant economic opportunity.

### **Offset and Carbon Trading Policy Provides the Mechanism for Future Clean Energy Export Credits**

Of particular interest for B.C. and Canada would be the acquisition of international credits for producing clean energy which is exported to other countries. Under article 6 of the Paris Accord, ITMOs can be traded between governments or sub-governments if the country has made a nationally determined contribution to CO2 reductions. This could be the case for LNG produced in B.C. and sold to China to replace coal-fired applications. According to the recent IEA report titled “The Case for Gas in the Energy Transition”, CO2 emission reductions are roughly 50 per cent when switching from coal to natural gas to produce power on a life-cycle basis. The CO2 emission reduction is roughly 33 per cent when switching from coal to natural gas for industrial heat applications on a life-cycle basis. According to a recent study by researchers from Johns Hopkins University, the Massachusetts Institute of Technology, the University of Calgary and Southern Methodist University, if 18 million tonnes of LNG per year from B.C. were sold to China to produce power, this could result in net global GHG reductions of 25- to 52 million tonnes of CO2/yr. due to the displacement of coal-fired power. This is roughly equal to between 40 per cent and 82 per cent of B.C.’s total annual GHG emissions. China may agree to transfer a small portion of these reductions (enough to cover B.C.’s emission increase for the production and liquefaction of the gas) back to B.C. or Canada at a

negotiated price. The process is unclear at this time, but would likely need a country-to-country agreement, and a commercial agreement between LNG seller and buyer. A trading system and verification process would need to be in place in each country to enable this type of transaction.

CO2 offsets and trading are important policy tools to be considered by B.C. and Canada to help lower their GHG emissions, enable innovation and broader participation in climate solutions, and create room for economic growth within the provincial and national climate goals.

CO2 offsets and trading can assist in lowering carbon compliance costs for industry, but do not fully address industry competitiveness, particularly for our resource export sectors. These emission-intensive and trade-exposed industries need to be protected from escalating carbon tax and other fiscal policies, which make them less competitive, and can lead to carbon and investment leakage. According to the recent British Columbia Business Council analysis of the GHG emissions of B.C.’s export industries, B.C. industries are achieving a level of CO2 intensity performance that is well below their competitors and is among the best in the world. This is a result of GHG policy and the availability of low carbon electricity from BC Hydro. The GHG and fiscal policies of Canada and B.C. need to include new tools to ensure these high-performing sectors remain competitive such that investment remains in Canada and B.C., and the global GHG advantage is sustained.

**ROB SEELEY**, *President, E3Merge Consulting*

Lead image: **Darryl Dyke/The Canadian Press**

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# Salvaging Canadian LNG Potential

by **DENNIS MCCONAGHY** and **RON WALLACE**

In the halcyon days of Canadian liquefied natural gas (LNG) development, brief as they were extending from 2010 to 2014, world-class LNG developers and substantial Asian LNG buyers were genuinely engaged in Canada. This interest was evidenced by at least seven major LNG project proposals that had progressed through the relevant regulatory processes, along with perhaps a dozen other projects that had been publicly announced as being under consideration. NRCAN reports that:

*Eighteen LNG export facilities have been proposed in Canada – 13 in British Columbia, 2 in Quebec and 3 in Nova Scotia – with a*

*total proposed export capacity of 216 Million tons per annum (mtpa) of LNG (approximately 29 Billion cubic feet per day (Bcf/d) of natural gas). Since 2011, 24 LNG projects have been issued long-term export licenses. Canada's only operational LNG terminal (an import terminal) is Canaport LNG's regasification import terminal located in Saint John, New Brunswick.*

*According to a Conference Board of Canada study, which estimates the potential contributions LNG exports may make to the Canadian economy, an LNG export industry equivalent to 30 mtpa in British Columbia could add roughly \$7.4 billion to Canada's annual economy over the next 30 years, and raise national employment by an annual average of 65,000 jobs.*

Following the 2017 cancellations of the Pacific NorthWest LNG and Aurora LNG projects, only LNG Canada, a project led by Shell with its various Asian LNG partners,



has progressed to an affirmative final investment decision in October of 2018. Most others have been abandoned or suspended. A few remain under serious consideration, most notably Chevron's Kitimat LNG project.

While Canada largely squandered the window of opportunity before the oil price collapse of late 2014, some of the market fundamentals that existed in 2010 to 2014 may now be re-asserting themselves. However, we contend that Canada should have no illusions about its competitive position in world LNG development as it first needs to overcome at least three fundamental disadvantages:

Gas from Canada's Western Sedimentary Basin (WCSB) has opportunity costs that must be evaluated relative to other competitive jurisdictions before Canada can be considered a potential supplier for Asian markets. Essentially, any WCSB production that would be committed to LNG development must be valued relative to what its sale to North American gas markets would otherwise realize. Significantly, Canadian gas production is fully integrated to the North American natural gas market, unlike many other potential LNG production sources in the world whose only means of capturing any value is the conversion to LNG. Unavoidably, a major gas transmission trunkline must first be constructed from the northwest extremities of TC Energy's NGTL system to West Coast tidewater – most logically, Prince Rupert or Kitimat – which involves roughly 700 kilometres of a challenging traverse across coastal mountains.

Canada's relative geography to Asian markets must compete with development

areas that are even closer to those markets, whether it is Russia's Sakhalin Island, the north coast of Australia or East Timor. A recent report by Clear Seas noted that as of 2018, there were 132 LNG import (regasification) terminals and 48 LNG export (liquefaction) terminals with more terminals in the planning and construction stages. As noted in the figure below, the majority of the import (regasification) terminals are located in the Orient and Europe.

Nonetheless, Canada has some relative advantages for LNG development compared to U.S. Gulf Coast greenfield sites. However, these assume that Asian buyers will consider greater diversification in their supply portfolio to include North American production, for these reasons:

- Compared with Gulf Coast production sites, the geographic proximity of the ports of Kitimat and Prince Rupert to Asian markets such as China, Korea and Japan provide shorter cycle times for tanker traffic and the avoidance of the Panama Canal.
- Western Canadian natural gas has a pricing advantage over U.S. Gulf Coast production for Asian buyers. It is discounted due to continental transportation considerations and the supply/demand dynamics within the western Canadian supply area itself.
- Currency considerations related to various construction and operational costs between Canada and the United States.

Significantly, the emergence of the massive, cost-competitive Montney shale gas reserves in northeast British Columbia and northwest Alberta represents a key opportunity for Canadian LNG potential developments.

Regrettably, in spite of the emergence of these abundant new natural gas reserves, Canada's reputation as having a reliable, predictable and efficient regulatory system has significantly eroded among industry and international investors.

Key elements contributing to this erosion of investor confidence include:

- Predictable and efficient regulatory processes required for LNG approvals have been compromised, especially at the federal level. One need only examine the history of Petronas' Pacific NorthWest LNG project as a case in point. The timelines for environmental approvals extended to almost five years instead of the 24-month period that the governing legislation anticipated.
- For numerous projects, fundamental issues related to specific production locations and initial project designs were not identified early in the regulatory process, only to emerge as being significant to regulators and assessors late in the licensing process.
- Even when apparent project approvals are in hand from both regulators and democratically elected governments, subsequent judicial reviews of basic procedural decisions taken years before have been revisited, based on deficiencies related to Indigenous consultation due entirely to the functions of government agencies. Worse, some authorities consider that Bill C-69 could potentially imperil much of the established jurisprudence on consultation.,
- The enforcement of regulatory approvals has become uncertain. Witness the continuing inability or unwillingness of governments to definitively deal with the

Unist'ot'en blockade on the right of way of the Coastal GasLink pipeline, the gas supply system for Shell's LNG Canada.

These circumstances have combined to erode respect for Canadian federal regulatory processes that were previously characterized by a history of competent and legally sustained decisions provided by the National Energy Board (NEB). They have also cast a pall over parallel provincial processes. The demonstrated inability of proponents and investors to gain an enforceable right to complete a project represents the greatest current impediment to Canadian LNG development.

The basic differentials between Asian LNG prices and western Canadian gas values at the plant gate have increased again to levels similar to those of 2010-2011. Also, most of the brownfield capacity on the U.S. Gulf Coast for future LNG production is committed. Sadly, these positive factors for economic development are being overwhelmed by the fundamental regulatory, political and judicial risks that combine to afflict Canadian resource development. Simply put, what private sector entity would enter into regulatory and assessment processes that risk hundreds of millions, if not billions, of dollars for a Canadian LNG project with these demonstrated uncertainties, notwithstanding improved international market fundamentals?

Investors recognize that prospects for material growth in Canadian natural gas production are highly dependent on enhanced access to Asian LNG markets. By addressing these impediments, Canada would not only be serving its own economic interests but could make a constructive contribution to mitigating the risk of global

climate change, particularly in China. Exports of Canadian LNG to China could contribute to a decrease in the rate of growth in global emissions. It seems incredible that potential opportunities for material, sustainable economic growth through enhanced Canadian LNG production have not been fully recognized as a national priority, especially as Canadian production continues to be subject to stringent regulatory reviews – inclusive of environmental assessments – that are equal to, or better than, any other competing jurisdiction.

What must be done to restore Canada as a legitimate location for LNG development for Asian markets?

- A requirement would be a clear statement of national policy from the federal government that Canada is unequivocally committed to the development of its natural gas resources for conversion to LNG to be exported to Asian markets. This commitment would consider LNG development to be in the Canadian national and public interest, full stop.
- The federal government could declare that Canada considers LNG development to have no negative net climate impacts. This consideration would take into account that regardless of any incremental GHG emissions within Canada that would arise from incremental natural gas production and subsequent liquefaction, it could be shown that those emissions would be offset by the reductions in Asian GHG emissions with the substitution of LNG for coal in electric generation or in other combustion applications.
- Regulatory approvals related to LNG

development could address legitimate incremental impacts directly attributable to specific developments, consistent with acceptable global engineering and risk-mitigation standards. However, it would not be necessary to determine in the case of each project whether LNG development itself was in the Canadian national public interest. Nevertheless, we include in this consideration the need to seek parallel, consultative economic development with local and affected Indigenous interests that could prosper from constructive participation in such projects.

## **The Canadian Regulatory System and LNG Development**

Numerous informed authors have reviewed recent judicial decisions in the Canadian energy sector, and some have increasingly highlighted the complexity of regulatory processes as negatively affecting resource development investment decisions:

*These confusions and contradictions are increasingly noted beyond our borders. Companies have plenty of options on where to invest their money around the world. They are doing so by investing elsewhere or, as Kinder-Morgan did, by giving up and selling the entire pipeline project to the government of Canada, netting a tidy profit in the process. Headlines are made when companies leave. Nothing is usually said when investments are not made.*

Church (2017) broadly observed the developing trend whereby Canada's public utility regulators were subjected to increasing attentions, especially from interest groups. He noted that utility decision-makers have been subjected to aggressive

commentary, hostility, disbelief, contempt and even disobedience. These tactics have tended to undermine public trust in the decision-makers' abilities and legitimacy. Such attentions have also been extended to national regulators in both Canada and the U.S.

A recent study from the C.D. Howe Institute warned that legislative initiatives under Bill C-69 are "likely to worsen Canada's present disease"; the "disease" being one of plummeting Canadian resource investment. The study found that planned investment in major resource projects declined by roughly \$100 billion between 2017 and 2018, including 37 projects worth \$77 billion that were cancelled, with the greatest proportional decline in planned investments for pipelines. Annual capital spending in energy projects was down \$50 billion in 2018, as compared with 2014.

Prior studies have confirmed that as a result of such attentive regulatory standards, Canada currently has one of the most expensive, time- and resource-consuming EA processes in the world, a fact that contributes to understandable concerns among the investment community. Thus, we consider that Bill C-69 presents fundamental risks to investments in Canadian hydrocarbon development. The legislation is intended to replace the Canadian Environmental Assessment Agency with the Impact Assessment Agency of Canada and the National Energy Board with the Canadian Energy Regulator. Remarkably, the federal government has plans to expend \$1 billion over five years to develop these new agencies that will have the effect, at great cost, of centralizing and diluting the expert, independent decision-making of the previous National Energy Board.

Now that Bill C-69 has been enacted, we contend that private sector capital investors

will face greater hurdles in risk assessments for major project proposals associated with the Canadian regulatory assessment process. We argue that this process would profit from being restored to a technocratic process mediated by independent, expert tribunals, especially as LNG developers cannot be expected to rely entirely on provincial approvals for LNG development.

We note that high-profile announcements made in B.C. regarding LNG Canada implicitly assumed that proposed federal legislation to reform the energy regulatory system was working. Presumably, these assertions were made to reassure current and future investors in Canadian energy infrastructure projects. Regrettably, nothing could be further from the truth. In the joint federal-provincial announcements made Oct. 1, 2018, Prime Minister Justin Trudeau stated:

*Today's announcement by LNG Canada represents the single largest private sector investment project in Canadian history. It is a vote of confidence in a country that recognizes the need to develop our energy in a way that takes the environment into account, and that works in meaningful partnership with Indigenous communities.*

Parallel political statements that Canada couldn't "build energy projects like we could in the old days when the environment and the economy were seen as opposing forces" were more than just misleading. In fact, the B.C. projects had received regulatory approvals in 2014 from provincial regulators, with the NEB providing the export permit. This was well before the current federal government was sworn into office on Nov. 4, 2015 and proceeded with its proposed sweeping changes to the federal regulatory

system. Thus, any statements implying that current federal regulatory policies had achieved this welcome breakthrough in resource investment could be viewed as an attempt to conflate new federal initiatives under Bill C-69 with the investment announcements by Shell Canada and TC Energy.

Clearly, any presumptions that such investment decisions represent an endorsement of the regulatory reforms enabled by the current federal government are not only misleading but untrue. If anything, the lessons gained from the regulatory success of the LNG Canada and Coastal GasLink projects under existing provincial approval processes should have been used to better inform efforts by the federal government in its considerations of fundamental regulatory reform. However, any pretensions that these two B.C. projects, approved in 2014, signal the arrival of a new resource capital investment climate as a result of new regulatory proposals enacted under Bill C-69, are highly questionable.

Regrettably, the federal government's recent actions and intrusive legislative proposals are widely predicted to further disrupt the investment climate for the Canadian resource sector. Worse, the passage of Bill C-69 now allows cabinet to choose among major projects at the end of costly and increasingly undefined assessment processes. All these factors undermine the fact-based processes of regulators and expert tribunals whose decisions are crucial to major investors.

Prior to passage of the legislation, the Canada West Foundation summarily concluded that:

*Bill C-69 will have major consequences for our economy and for Indigenous economic reconciliation. Yet only one ministry – the Minister of the Environment – sponsored it, and only one committee – the Environment and Sustainable Development Committee – worked on it. There was no input from the Natural Resources Committee, the Finance Committee or the Indigenous and Northern Affairs Committee. It ignored the advice of an expert panel appointed by the Minister of Natural Resources to modernize the National Energy Board.*

The foundation further noted that the disruption to existing regulatory processes under the NEB would have unintended and negative consequences:

*Although we support the intentions of Bill C-69, this aspect would be a huge mistake. Not only is this approach unnecessary (the required improvements to the NEB can be accomplished separately) – the unintended consequences would be disastrous.*

It would appear that with the passage of Bill C-69, Canada has chosen to voluntarily subject itself to a significant regulatory and economic “experiment” while the warnings and predictions of industrial, financial and regulatory experts have largely been set aside.

### **LNG Development Approvals and the Rule of Law**

Another issue for urgent resolution is the subsequent unlawful obstruction of the Coastal GasLink pipeline. In their October 2018 final investment decision, the project sponsors of Coastal GasLink took into consideration a blockade by a small element within the Unist’ot’en along the proposed



right of way. Federal and provincial governments have been reluctant to clearly assert the primacy of the existing approvals these projects hold. There are several examples whereby protracted attempts to reach further accommodations with entities implacably opposed to the project have continued with highly undefined outcomes. While seeking meaningful and appropriate accommodation, it is nonetheless essential that Canadian governments re-assert the rule of law if Canada is to persuade serious capital investors to undertake major infrastructure projects that have been determined to be in the national interest. In spite of public announcements by the federal and provincial governments, LNG Canada has been jeopardized by protests that have tended to undermine or negate approvals with unlawful obstruction.

The federal government should seriously consider legislation to reduce the risk of dysfunctional litigation. The purpose of such legislation would be to provide judicial regulatory certainty for corporations and investors before they spend hundreds of millions of dollars on uncertain, and challengeable, regulatory approvals, as has been demonstrated recently. This could, at least in part, be addressed through considerations of legislation that would clarify the rules and procedures for affected parties and investors.

Further, specific legislative guidance is required on what constitutes adequate consultation with First Nations at various phases of regulatory approval for both proponents and the Crown itself. "Consultation" cannot be taken to mean that an obligation exists to accede to any terms demanded by certain interests, an approach that could lead to an erosion of

determinations of national interest.

Several legal experts have noted that the Canadian courts will probably increasingly emphasize the meaningfulness of consultation to be an "evolving standard". If so, this trend implies that proponents and governments will have to demonstrate meaningful and responsive engagements in order to reduce the number of issues ultimately required to be addressed by the Crown. This would mean ongoing considerations of the UNDRIP that includes "free, prior and informed consent" – a terminology which, if adopted, may yet engender further judicial challenges to regulatory decisions and potentially compromise the hard-won judicial clarity that has been attained.

Thus, current federal legislative initiatives further imperil the judicial certainty that has been achieved on regulatory decisions. The Canada West Foundation observed:

*Yet we have finally achieved a significant level of jurisprudential certainty and approval. Throwing out the NEB now, along with its well-established, extensively court reviewed process, will also throw out that hard-earned jurisprudential certainty. A new, untested process will take the whole system right back to square one in terms of court challenges. Opposition via the courts would start all over again, leading to years of additional and unnecessary delay for any major pipeline or any major electricity transmission line, and a whole new climate of uncertainty for investment."*

The remarkable Federal Court of Appeal decision rendered by Judge David Stratas on Sept. 4, 2019 regarding the Trans Mountain pipeline project provided further legal clarifications, but nonetheless reflects the complexity of issues that continue to be

evinced between the courts, project opponents and the government of Canada. These legal, regulatory issues are also of direct relevance to proponents who may be formulating project proposals for LNG export. The most recent remarkable series of events culminated with the Federal Court opining:

*The Court's standing practice is not to issue reasons in disposing of leave applications. However this is an exceptional case as the respondents, who have a direct interest in the project, took no position for or against the leave applications in all cases but one, thereby leaving the matter to the discretion of the Court. Taking no position on a motion is a common practice when dealing with procedural matters; it is not when issues of general importance are in play. (our emphasis).*

Bankes et al. (2019) further dissected the legal saga, one which has consequences for not just pipeline projects but for the future of Canadian resource development:

*In conclusion, six First Nations met the test for leave. Leave on the other six applications brought by other First Nations, Vancouver, two ENGOs and Adkin-Kaya et al was denied. We also now have a rare view into the test and reasoning the FCA uses in deciding whether to grant leave. It is worth noting that this FCA leave decision may be appealed to the Supreme Court of Canada; however, it is also the practice of that court to not give reasons (see for example City of Burnaby v Attorney General of Canada et al, May 2, 2019). In the meantime, as these latest legal challenges to TMX proceed, the CPCN remains valid and the government has indicated that construction will proceed.*

## Conclusion

Will Canada and the provinces demonstrate the political will to contemplate and deal with

these fundamental issues? Clearly, Canadians are struggling to forge a national consensus on how best to proceed with hydrocarbon development while enunciating either an appropriate and proportionate national carbon policy or a credible climate policy.

Many consider it ironic that whether or not Canada cultivates potential LNG project investment, it will have little or no overall effect on global LNG demand., LNG that Canada could have supplied to global markets will instead be captured by others, most of whom do not have comparable environmental standards or respect for human rights, nor Indigenous or socioeconomic interests. Canada must choose if it wants to participate in supplying the global trade of LNG. Certainly, the global LNG marketplace will largely evolve with or without Canadian participation.

However, it seems certain that if current policies for resource development and regulation persist, Canadians can be assured that their nation will be economically poorer.

**DENNIS MCCONAGHY** is the former Executive Vice-President of Corporate Development at TransCanada Corporation. Previously, he was Executive Vice-President, Pipeline Strategy and Development. Dennis joined TransCanada in 1998, and has held senior positions in Corporate Strategy & Development, Midstream/Divestments, and Business Development. He has more than 25 years experience in oil and gas, including responsibility for Keystone XL.

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Lead image: **The Government of Canada**



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