



# CITIZEN'S GUIDE TO Liquefied Natural Gas in British Columbia



# Acknowledgements

This Citizen's Guide is intended for broad public consumption. It was written to inform affected First Nations and other communities about the proposed LNG facilities in British Columbia and in particular on Texada Island. The Guide is designed to provide information regarding the impacts of LNG facilities; enable citizens to intervene in the approval process to ensure their interests are protected; and identify opportunities for the reform of specific laws to better protect the interests of the public in the long term.

This guide is the product of Dogwood Initiative's staff, volunteers and contractors. Many people played an important role in its completion. It was primarily written by Laura Atkinson and Will Horter, with assistance from Matt Takach and Amanda Leslie Spinks. The Environmental Law Centre at the University of Victoria, particularly Lia Preyde, contributed research. We would also like to thank Calvin Sandborn, the Legal Director of the Environmental Law Centre, for his enthusiasm and support.

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As with any major research project, some errors and omissions are almost inevitable. We used the best available data and attempted to be as accurate as possible. Any mistakes are mine as the lead author.

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#### Above

Aleutian Moon Snail, Davie Bay, Texada Island. Photo: Tom Scott

Liquid natural gas terminal, Mispec, New Brunswick. Photo: Bill Lapp, Flickr

Cover

LNG Tanker leaving liquefaction plant to deliver natural gas to consumers. Photo: iStockphoto

Texada Island sunrise. Photo: ToddBF, Flickr



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An LNG tanker is the size of three football fields. Photo: Chablis, Flickr

Davie Bay, Texada Island. Proposed location of barge loading terminal towards left in distance. Photo: Tom Scott

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# Why this Guide?

Over the last few years three separate LNG projects have been proposed in British Columbia: Kitimat LNG, Westpac's cancelled proposal for Prince Rupert, and Westpac's new proposal for Texada Island.

The proximity to U.S. markets, the Province's lax regulatory environment, substantial pipeline capacity connected to southern markets, and advantageous shipping costs have combined to make British Columbia a target for LNG proposals. Investor interest in these projects fluctuates with natural gas prices; whenever natural gas is significantly cheaper in overseas markets than in North America, interest in LNG projects resurges.

However, the people living on British Columbia's coast have little familiarity with LNG or the oil and gas industry.

This Citizen's Guide is designed help people affected by proposed LNG projects understand the potential impacts on their communities, and to help individuals, communities, and First Nations to participate more effectively in the approval process to ensure their interests are protected. In addition, this guide identifies opportunities for the reform of specific laws to more broadly protect the interests of the public in the future.



Above: Davie Bay, Texada Island. Photo: Tom Scott

Locations where LNG facilities have been proposed in British Columbia. Image: Google Maps



#### LNG Akwa Ibom, en route to the Bonny Island LNG plant in Finima, Nigeria. Photo: Mike at Sea, Flickr

# What is Liquefied Natural Gas?

Liquefied natural gas or LNG is natural gas (predominantly methane, CH4) that has been converted temporarily to liquid form for ease of storage or transport.

Liquefied natural gas takes up about 1/600th the volume of natural gas at room temperature. It is odourless, colorless, non-toxic, non-corrosive and hazardous. Its dangers include combustibility, the freezing effect of its low temperature, and asphyxia from its vapours.

The process of turning natural gas into liquid begins with the removal of certain components, such as dust, helium, water, and heavy hydrocarbons, which could cause difficulty downstream. The natural gas is then cooled to approximately -163°C (260°F) to condense it into a liquid at close to atmospheric pressure (maximum transport pressure at around 25 kPa (3.6 psi)).

The reduction in volume to 1/600th makes the gas much more cost-efficient to transport over long distances when a gas pipeline is not available—for example, across the ocean. Liquefied natural gas can be transported by specially designed cryogenic sea vessels (LNG carriers), or cryogenic road tankers.

You may ask, why do we need to ship liquefied natural gas across the ocean at all? The premise behind transporting LNG across the world is to exploit the price differential between the high cost of natural gas in North America compared with the low cost of foreign natural gas. There is a lot of "stranded" natural gas in the world with no nearby markets, in places such as Algeria, Australia, Brunei, Indonesia, Libya, Malaysia, Nigeria, Oman, Qatar, and Trinidad and Tobago. This stranded gas is what investors seek to liquefy and ship. Whether or not there is a price differential between domestic and foreign natural gas for investors to take advantage of depends on fluctuating domestic and international markets.

Until recently experts had benn projecting that the increasing demand of natural gas in North America, combined with a shrinking supply, would make importing LNG into North America lucrative. However, the discovery and development of domestic unconventional gas and the economic downturn have caused a decrease in the price of domestic natural gas, which makes importing LNG less profitable.

LNG is shipped in double-hulled seagoing vessels known as LNG carriers designed specifically to handle the low temperature of LNG. There are currently more than 130 of these ocean carriers in operation worldwide.

Once the LNG arrives at its destination, the shipper must return it to a gaseous state. "Receiving" or "re-gasification" terminals are usually proposed for areas with easy access to an existing pipeline network. At re-gasification facilities LNG is stored in insulated tanks built specifically to hold LNG. When there is demand for fuel, the LNG is heated to turn it back into gas, and delivered to customers via pipelines.



Liquid Natural Gas tanker at port with LNG liquefaction plant in background. Photo: iStockphoto



# LNG Proposals in BC

## Kitimat LNG's proposal for Kitimat

After originally proposing an import facility, Kitimat LNG Inc. is now proposing to construct and operate an LNG export terminal at Bish Cove, near the Port of Kitimat at the northern tip of Douglas Channel.<sup>1</sup> The proposed project would bring large LNG tankers to BC for the first time in order to export BC-produced gas to Japan, South Korea, and China.

The new proposal by Kitimat LNG would export 5 million metric tonnes of LNG from BC's coast each year. The operation would bring in gas from other parts of British Columbia via pipeline, liquefy it, and ship it to export markets in tankers. The proposed facility includes marine on-loading, LNG storage, pipelines, and liquefaction facilities. The proposed terminal would get its gas supply via a new 15 kilometre pipeline that would connect to the proposed Pacific Trail Pipelines system (PTP). If built, the PTP pipeline would in turn connect to Spectra Energy's existing Westcoast Pipeline system.<sup>2</sup>

This proposal is Kitimat LNG's third different attempt to build an LNG facility in Kitimat. To date the company has been unable to acquire sufficient financing to move forward with any of the versions of the project.

The company's original proposal was to import LNG into Kitimat. This project was abandoned and later replaced by a proposal to build a gas-fired power plant that would convert imported gas into electricity. This second proposal also fell through due to lack of financing. In September 2008, it was abandoned, only to be replaced by the new proposal to export North American LNG to foreign markets.

## **Challenges for the Kitimat project**

The project as currently proposed faces numerous challenges beyond its inability to attract financing. Significant questions remain about the validity of the Environmental Assessment approvals Kitimat LNG received for its original proposal, due to the major change in the project from an import facility to an export facility.

In addition, the LNG project is only viable if the PTP pipeline project receives all the necessary approvals and financing. Without this pipeline, Kitimat LNG's facility would not have a source of gas. As of spring 2009, there are rumours that affected First Nations along the pipeline route (with strong evidence of Aboriginal title) have retained legal counsel to challenge the PTP pipeline.

BC killer whale. Tanker traffic and associated risk of oil spills are a threat to the whales and their critical habitat. Photo: Aldea Wood Finally, Kitimat LNG now plans to export 5 million metric tonnes of LNG per year. This amounts to 24% of British Columbia's existing natural gas production.<sup>3</sup> Most of the natural gas BC is producing is already purchased by customers in the United States and Alberta. As a result, there is not sufficient unallocated gas in BC to make the proposed terminal viable as an export facility. Perhaps in the future, if new shale gas projects in northeastern BC move forward, there may be sufficient gas for export, but at the moment there isn't enough gas for the project.

#### Timing and Status of LNG facilities in Kitimat

The Kitimat project claims to have received its environmental assessment certificate from the BC Environmental Assessment Agency in 2006 and more recently a federal environmental approval for a re-gasification terminal. However, both of these approvals were for the LNG import facility originally proposed, not the LNG export facility now being promoted by the company.

Recent conversations with senior staff of the Ministry of Energy, Mines and Petroleum Resources indicate that the government has not yet decided whether to require a new assessment.

The regulatory uncertainty created by the major overhaul of the project, which could attract litigation from First Nations and community groups in opposition to the project, could cause substantial delays.

Thus, Kitimat LNG's claim that they will "begin construction on the Kitimat LNG Terminal in 2009, with commercial operation beginning at the end of 2013" is highly suspect.

In addition to the challenges noted above, crashing natural gas prices and tightening credit both undermine the economic viability of the project.

#### Who would be affected by the Kitimat project

Commercial fishers, recreational fishers and kayakers, resort owners, and many others will be affected if the LNG project in Kitimat is built. However, those most affected will be the residents of Kitimat and Kitimat Village, and First Nations communities such as the Gitga'at Nation in Hartley Bay that live near the proposed tanker route.

#### **Affected First Nations**

The Haisla First Nation is based in Kitimat very close to the location of the proposed marine terminal. In fact, a portion of the Kitimat LNG facility will be on Haisla lands. The Haisla have signed an Agreement in Principle with the company for the proposed LNG terminal.

The agreement provides the Haisla the opportunity to purchase equity in the company; minimum standards of employment during construction and operations; employment training; and procurement opportunities. As part of the land-lease agreement between the federal government and Kitimat LNG, the Haisla will receive annual tax revenue and lease payments through Indian and Northern Affairs Canada, a federal government ministry. The land is already designated for industrial use.<sup>4</sup>

Along the tanker route about 90 miles southeast of Prince Rupert and 50 miles southwest of Kitimat (at the confluence of the Grenville and Douglas Channels) lies Hartley Bay and the Gitga'at First Nation. About 180 Gitga'at members live in Hartley Bay year round (another 450 members live off-reserve, mostly in Prince Rupert, Vancouver, and on Vancouver Island).

The Gitga'at Nation has a dual governance system—traditional Aboriginal laws, customs, and structures woven together with modern laws, policies, and structures.

Affairs related to cultural practices and Gitga'at rights and title to territorial lands and waters fall within the domain of traditional governance. Decisions affecting Gitga'at lands and resources are made by Hereditary Chiefs and elders following traditional community consultation processes.

Affairs related to the community of Hartley Bay, Band administration, and delivery of social programs and services are governed by a Village Council, which is elected by members of the Nation. Village administration and maintenance is handled by community administrative and technical staff.

Still reeling from the residual impacts of the leaking diesel from the Queen of the North ferry accident near the proposed tanker route, the residents of Hartley Bay have consistently opposed large oil and gas tankers plying the waters in front of their village. They are concerned that a spill will devastate their culture, and disrupt salmon stocks and fishing practices.<sup>5</sup>

In April 2009, fifteen First Nations in northern BC signed a deal with the Province to take up to a 30% stake in the Pacific Trail Pipeline (PTP). The agreement gives the First Nations access to \$35 million in provincial money to invest in the pipeline. The Nations which joined the pipeline project are the Haisla Indian Band, Lax Kw'alaams Indian Band, Kitselas Indian Band, Moricetown Indian Band, Nee-Thai-Buhn Indian Band, Ts'il Kaz Koh Indian Band (Burns Lake Indian Band), Stellat'en Indian Band, Nadleh Whut'en Indian



White-spotted anemone, Eddershank Island, between Kitimat and Prince Rupert. Photo: Caranx latus, Flickr Band, Saik'uz Indian Band, Nak'axdli Indian Band, Lheidli T'enneh Indian Band, McLeod Lake Indian Band, West Moberly Indian Band.

However, not all First Nations along the pipeline route support the project. The Wet'suwet'en, who represent two nations, refused to sign on to the PTP agreement. In addition, other First Nations whose land is not part of the overland pipeline route but who would still be affected by the Kitimat LNG facilities, such as the coastal Gitga'at First Nation, continue to oppose the project.

#### Affected Communities

The people most directly affected by the Kitimat LNG proposal are residents of the municipality of Kitimat. Most of the jobs in this industrial town are in Alcan's aluminum smelter, a local pulp mill, and commercial fishing. Because of the downsizing of its three industries, Kitimat has been losing its population base. It was reportedly the fastest shrinking community in Canada in the 2008 census.

The current mayor of Kitimat is supportive of the LNG project.

## Westpac's LNG proposals for Prince Rupert and Texada Island

WestPac LNG Corporation, based in Alberta, originally proposed an LNG import facility in Prince Rupert. In 2008 WestPac cancelled the Prince Rupert proposal and instead proposed the construction of an LNG import facility near Kiddie Point on Texada Island in the Strait of Georgia, approximately 120 km northwest of Vancouver.

Westpac's Texada proposal is to import 141,584 cubic metres (500 million cubic feet) of natural gas per day from Australia, South East Asia and the Middle East. It would be shipped in LNG tankers to a re-gasification plant on the Northern tip of Texada Island.

The proposed project would include an offshore marine jetty, transfer piping, and two onshore LNG storage tanks with a capacity of 165,000 m<sup>3</sup>. If the terminal is built, about 36 LNG carriers a year would use it—one every ten days.<sup>6</sup>

Onshore, the proposal includes an LNG re-gasification plant with a capacity of up to 500 million cubic feet per day. The proposed power generation facility would also entail a new transmission line bisecting the island before connecting to an existing transmission line that delivers electricity from the BC mainland to Vancouver Island.

An artist's conception of the deforestation from the proposed LNG facility at Kiddie Point. Image: Studio on Dogwood



After the compressed and super cooled gas has been pumped off the tanker and re-gasified, the natural gas is likely to be exported into the United States or converted into electricity in a proposed gas-fired plant also on the Island.<sup>7</sup>

#### Challenges for the Texada proposal

Westpac's Texada Island proposal faces significant economic and political challenges. The economics of the project are suspect, because the gas-fired generation component is not likely to win regulatory approval. BC Hydro has categorically stated that it has no intention of buying electricity from any new natural-gas-fired generation plants in BC.

Furthermore, converting imported LNG into electricity runs contrary to the government's 2007 Energy Plan commitments to achieve electrical selfsufficiency. The Energy Plan states that the Province wants to ensure that BC Hydro has enough BC-based power at all times. Using imported LNG to generate electricity undermines the government's self-sufficiency goals through a direct reliance on foreign energy markets to meet BC's electricity demand. In addition, electricity generated in Westpac's gas-fired plant would be expensive, because WestPac would have to buy a large amount of carbon offsets to meet the Energy Plan requirements that all new electricity generation projects will have zero net greenhouse gas emissions.<sup>8</sup>

Despite Westpac's attempt to position their project as enhancing British Columbia's energy self-sufficiency, there is no domestic need for additional natural gas in the province. In fact, BC uses only 20% of its own natural gas, exporting 40% to the United States and 40% to Alberta.<sup>9</sup> And the percentage of gas BC exports is likely to increase if Kitimat LNG is able to export 24% of BC's natural gas to Asia.

Finally, Westpac's proposal has generated significant organized opposition by concerned citizens, environmental groups, municipalities, and regional districts. The opposition has rallied around the additional heat-trapping greenhouse gas emissions that would be produced by the project, and around the risks posed by large tankers.<sup>10</sup>

#### For example:

- In May of this year, the Powell River Regional District unanimously passed a resolution calling for the banning of ocean-going tankers carrying liquefied natural gas from the waters of Georgia, Haro, and Malaspina Straits.
- In August the Capital Regional District in Victoria backed the Powell River resolution and called on the federal government to ban tankers travelling through BC's Inside Passage.
- To top it all off the Union of BC Municipalities, which is the collective voice of all municipal governments in BC, passed the same resolution banning tankers from the Straits. This move increases the pressure on the provincial government to step into line with the vast majority of British Columbians who oppose this development and LNG tankers on our coast.

Although these resolutions do not specifically mention WestPac, they endorse

a set of principles that make it impossible for the project to proceed. One such principle found in all these resolutions requires zero greenhouse gas emissions from any future LNG projects (or related power projects). Buying offsets to make the project completely carbon-free makes the project economically unviable.

## Timing and Status of LNG proposal for Texada Island

Westpac's proposal for the LNG facilities on Texada Island was released in 2007. WestPac plans to file a detailed project description with the BC Environmental Assessment Office and the Canadian Environmental Assessment Agency in 2009.<sup>11</sup> After the environmental assessments are completed, WestPac expects to finish construction within three years and start operating in 2013; however, these timelines are ambitious.<sup>12</sup>

As of spring 2009 Westpac has not registered any applications for environmental assessment in the provincial or federal online registry. Rumours have it that the project is inactive because of public opposition, lack of investor interest, and potential regulatory hurdles.

## Who would be affected by Westpac's proposal?

Numerous groups will be affected if the LNG project on Texada Island goes ahead. These include fishers, recreational boaters, and residents of all the coastal communities passed by LNG tankers. But the most affected will be the local communities and First Nations living near the project.

#### Affected First Nations

The Sliammon First Nation is likely to be affected by Westpac's LNG proposal. The Sliammon people live along both sides of the Strait of Georgia. They may have the right to challenge the proposals and demand consultation, including appropriate accommodation regarding the potential negative impacts on fisheries, hunting and gathering, and other aspects of their Aboriginal rights.<sup>13</sup>



Proposed LNG tanker route to Texada Island. Image: Google Maps The Sliammon First Nation has a long-standing tradition of fishing for salmon and have enjoyed decades of unfettered fishing rights. This tradition would be undermined if LNG facilities and tanker traffic disrupt salmon stocks and fishing practices.

#### **Affected Communities**

Texada Island residents have rejected Westpac's proposal for an LNG tanker terminal and power plant on the Island. A local community association, Texada Action Now (TAN), has collected signatures from 84% of the adult population of Texada Island, all opposing the LNG facilities. Other communities and regional districts have also supported bans on LNG tankers. The Sunshine Coast Regional District, Cowichan Valley Regional District, Regional District of Nanaimo, Capital Regional District, Comox Valley Regional District, Powell River Regional District, and Islands Trust Council have all supported bans on LNG tankers.<sup>14</sup> In addition, as noted above, the Union of BC Municipalities passed a resolution to ban LNG tankers in the Georgia Strait.



#### Flaring off at a Natural Gas Liquids Plant lights up the sky. Photo: Paulus Maximus!, Flickr

Harbour Seal resting on a rock, BC Coast. Photo: Aldea Wood

# **Issues for LNG Projects in BC**

There are a number of issues raised by proposals to import and export LNG to and from British Columbia. These include myriad safety hazards, and concerns about the economics of these projects and their potential impacts on local economies and the environment. This section first addresses the safety hazards, which involve the facilities themselves, the large tankers that transport the super cooled gas, the environmental and climate impacts of the tankers, and the risk of disasters at re-gasification facilities and adjoining gas-fired power plants.

## Safety Concerns

#### Lessons from other jurisdictions

Because of the risk of devastating explosions on LNG tankers, many jurisdictions in the United States have not allowed LNG facilities along their coasts, citing concerns over safety, security, and the environment.

A report by the Congressional Research Service for Members of Congress in the United States found "potential terrorist attacks on LNG tankers in U.S. waters have been a key concern of policy makers in ports with LNG facilities because such attacks could cause catastrophic fires in port and nearby populated areas." The Department of Homeland Security in the United States stated that "the risks associated with LNG shipment are real, and they can never be entirely eliminated.<sup>1</sup>

Jurisdictions which do allow LNG tankers require buffer zones around them. For example, in Boston, when LNG tankers enter the port, they must have a safety and security zone extending 915 metres (1,000 yards) in front and behind the tanker and 91 metres (100 yards) on each side of the tanker. In addition, all other transportation in the area is restricted, overlying bridges are closed, and flight paths for aircraft approaches are adjusted. These measures are in addition to the U.S. Coast Guard's aerial and marine escort and surveillance through the harbour passage and port turnaround period.<sup>2</sup>

In 2006 the Coast Guard requested funding from Homeland Security in the United States for "additional boat crews and screening personnel at key LNG hubs."<sup>3</sup> The costs for the additional protection for LNG carriers are thus borne by taxpayers, while the LNG operators collect the benefits.

The need for security buffers around LNG tankers travelling to and from either Kitimat or Texada Island would pose serious difficulties to other maritime

traffic. En route to Texada, large tankers would have to navigate the crowded waters of the Juan de Fuca Strait, the Georgia Strait, and the narrow channels through the Gulf Islands. Leaving Kitimat, the heavy LNG tankers would have to transit waters filled with commercial and recreational fishers, resorts, and First Nations communities that are accessible only by boat.

Public safety concerns may require shipping channels to be closed or restricted during the passage of an LNG carrier, affecting other shipping traffic, including ferries, disrupting transportation routes and businesses frequently and regularly.

There are also major security challenges for LNG tankers travelling from Kitimat. The closest naval base is located at CFB Esquimalt near Victoria—approximately 800 km away, making it difficult to provide adequate security in northern waters. Closing shipping lanes while LNG tankers are in transit would have a major impact on commercial and recreational fisheries and ferry routes, as well as transit to and from boat-access-only communities.

#### LNG tanker spills and fires

Communities along the tanker route would be at risk of LNG spills and fires. For the LNG to reach Kiddie Point on the northern tip of Texada Island, the tankers would need to navigate past Victoria and the Gulf Islands, up the Strait of Georgia, past Vancouver and the lower mainland.<sup>4</sup>

ING tankers leaving Kitimat would have to transit the Douglas Channel, past Gill Island (where the Queen of the North ferry crashed and sank), through Camano Sound, into the treacherous waters of Hecate Strait (classified by Environment Canada as the fourth most dangerous waters in the world) into Queen Charlotte Sound. Gale force winds, fog, and 10-metre waves are not uncommon.

The LNG industry has a good safety record; nonetheless, accidents do happen and are always possible *(see Appendix 2: Chronology of LNG Accidents)*. Worldwide there have been eight marine incidents that have resulted in the spillage of LNG, and seven not involving spillage.<sup>5</sup> Although LNG accidents are rare, they are devastating when they occur.

Liquefied natural gas is considered a highly volatile substance. Fires can occur if LNG spills near an ignition source. LNG fires burn more hotly than oil or gas fires and can not be put out until all the combustible material has burned away. They spread quickly as fuel expands away from the source of the spill.<sup>6</sup> If such a circumstance arises, the rapid burn rate of LNG is devastating—temperatures can reach 2000 degrees Celsius, which can cause second degree burns 1.6 kilometres (I mile) away.<sup>7</sup>

Another safety concern is the potential for vapour clouds to form if LNG spills and does not ignite. Evaporating gas can form a vapour cloud that can drift from a spill site. When such a cloud encounters an ignition source, an explosion and airborne fire will result. Communities and municipalities along the coast will be at risk of explosions as a result of LNG spills.<sup>8</sup>

#### **Re-gasification plant accidents and fires**

Accidents at LNG facilities are infrequent, but when they occur they are also catastrophic. The very first commercial LNG facility built in the United States caused a major industrial accident. On October 20, 1944, the East Ohio Natural Gas Company experienced a failure of an LNG tank in Cleveland, Ohio. According to the report of the U.S. Bureau of Mines, the holding tanks at the facility failed and released their contents into the streets and sewers. As a result, 128 people perished in the explosion and fire, and 79 homes were destroyed, along with two factories, 217 cars, and seven trailers. In addition to the dead, over 680 people were made homeless, and 225 were injured.

The tank did not have a dike retaining wall, and due to World War II metal rationing, the steel of the tank had an extremely low amount of nickel. This caused the tank to be brittle when exposed to the extreme cold of LNG. It ruptured, spilling LNG into the city sewer system. The LNG vaporized and turn into gas, which exploded and burned. The resulting fire engulfed the nearby residents and commercial establishments, incinerating one square mile of Cleveland.

The LNG industry has made serious advances in safety since the Cleveland disaster, but even with modern technology disasters happen. In October, 1979 the Cove Point LNG facility, near Lusby, Maryland, had a major accident. A pump seal failed, releasing gas vapours, which entered and settled in an electrical conduit. A worker switched off a circuit breaker, igniting the gas vapours, killing



The East Ohio Gas Company explosion, one of worst disasters in Cleveland history, occurred on Friday, October 20, 1944 when a a tank of natural gas exploded on Cleveland's east side, destroying homes and businesses and killing 128 people. Photo: The Cleveland Press Collection a worker, severely injuring another, and causing heavy damage to the building. National fire codes were changed as a result of the accident.

In 2004 another accident occurred at an LNG facility in Algeria. An explosion at Sonatrach LNG liquefaction facility killed 27 workers and injured 56 people. The casualties were caused mainly by the blast, which was so powerful that it blew out windows and caused fires six miles away. The accident caused approximately \$I billion in damages. A steam boiler that was part of a liquefaction train exploded, triggering a massive hydrocarbon gas explosion. The explosion occurred where propane and ethane refrigeration storage were located.

Although rare, LNG accidents that cause pool or vapour fires are devastating. Since they can't be put out, if they were to occur near any inhabited area the resulting casualties would overwhelm the emergency response capacity of the municipality or regional district and local hospitals.

## **Economic Concerns**

## No demand for imported LNG

There is currently no demand for imported natural gas in British Columbia. With British Columbia currently exporting 80% of its natural gas, the logic of developing an import facility for LNG for domestic use is fundamentally flawed. Although companies promoting specific projects in BC, such as Westpac and Kitimat LNG's original proposal, use rhetoric that highlights the goal of making British Columbia energy-independent, the real motivation for these projects is to serve the United States.<sup>9</sup>

In March 2008, in his role as the Assistant Deputy Minister of Energy and Mines, Doug Caul confirmed this motivation by stating that going forward with Westpac's proposal is "not about natural gas for BC, it's about BC playing its part as a gateway to North America."<sup>10</sup>

The business case for importing LNG is premised on exploiting price differentials between domestic natural gas and natural gas produced overseas. When domestically produced natural gas is expensive, it is cheaper to import LNG. The converse is also true: when domestically produced natural gas is cheaper there is no incentive to import LNG.

Currently, it is cheaper to use domestically produced natural gas than to import LNG. With natural gas exploration and extraction in North America on the rise, the supply of domestic natural gas has increased. In addition, with the economic downturn of 2008 and 2009, there is less natural gas being consumed, thus demand has decreased.<sup>11</sup> The increased supply and decreased demand for natural gas has caused the price to plummet. In recent months, natural gas in North America fell from US\$13.00 per thousand cubic feet to around US\$7.50.<sup>12</sup>

The LNG industry can no longer claim that LNG is a cheaper alternative to domestic natural gas. Its high infrastructure and production costs have inflated the price of LNG over domestic natural gas, which is being produced more inexpensively.<sup>13</sup>

In addition, relying on volatile foreign sources of natural gas creates instability over the price and delivery of natural gas.<sup>14</sup> Depending on the political circumstances and domestic demand of the country exporting LNG to British Columbia, the supply of LNG could be interrupted. For example, in 2006 Indonesia cut its exports to Japan by 50 per cent, because Indonesia needed to use the natural gas domestically.<sup>15</sup> British Columbia, like Japan, would be vulnerable to instability overseas if it began importing LNG.

The economic realities surrounding the import of LNG show that it doesn't make sense for British Columbia. Using imported LNG will undermine the renewable energy and energy efficiency programs of the BC government.<sup>16</sup> Further, there would be little investment benefit for BC. Based on the precedent of LNG projects elsewhere, most of the investment will occur offshore, with only 10% of investment going to re-gasification facilities like the one proposed on Texada Island.<sup>17</sup> Creating an economy that remains dependent on foreign fossil fuel is a step backwards for British Columbia, and a move away from an economy based on the long-term sustainability of renewable energy.

With no need for imported natural gas and little investment in BC, the proposed LNG import facilities would provide British Columbia with few benefits, while forcing the Province to shoulder the considerable environmental and safety costs generated by the projects.

#### Competing supply for exporting LNG

Proposals to export LNG from BC will face significant challenges acquiring sufficient long-term commitments of North American natural gas to make their projects viable. Alberta already has peaked in natural gas production, and BC's supply of conventional gas is expected to peak sometime this decade.

Most LNG export projects are taking advantage of low prices created by stranded gas that unable to reach major markets due to the lack of access to a pipeline. Liquefied natural gas export projects in BC would not have that advantage. A BC-based LNG export project would therefore have to compete for its natural gas supply against customers that traditionally have paid above average world prices.

Currently, approximately 80% of BC natural gas production is exported to Alberta and the United States. A massive pipeline infrastructure has been built to carry natural gas south, where demand for gas continues to increase. Any LNG export facility in BC will have to compete with existing consumers for available gas. Simply put, there is insufficient unallocated gas to make LNG export financially viable.

Perhaps in the future, if new shale gas projects in northeastern BC and the Rocky Mountain belt of the United States start producing, there may be additional gas available, but it is likely this gas would also have eager North American buyers.

These factors plus dropping natural gas prices and tight credit make Kitimat LNG plans to export 5 million metric tonnes of LNG a year risky for investors and producers.

#### Impact on local economies

The "no go" zones that surround LNG tankers for security reasons in other jurisdictions only heighten the negative impact of LNG projects on local businesses such as tourism and fishing.

It is currently estimated that 36 tankers would dock at the proposed marine terminal on Texada Island every year.<sup>18</sup> However, this is a conservative estimate, and if demand increases as expected, the traffic could increase to one 300-metre (950-foot) tanker—the size of three football fields—passing through fragile waterways every five days, or 72 tankers per year making the round trip.<sup>19</sup> The route proposed for the LNG tankers passes through extremely busy shipping lanes: over 1320 ships transit these waters per month. The buffer zones needed for LNG tankers would necessarily restrict these uses of the Georgia Strait.<sup>20</sup>

In addition to curbing shipping traffic, tankers in the water around Texada would also affect the sport fishing economy, which thrives because of rich and currently undisturbed local fish habitats.<sup>21</sup>

Westpac's proposal would also have a significant impact on the tourism industry. The Strait of Georgia is considered to be one of the most beautiful spots on earth, but its picturesque landscape would be changed with LNG tankers passing by and moored at nearby harbours. The gas-fired power plant and power lines would be seen as a blight on the landscape that impairs the area's value for tourists and residents.<sup>22</sup>

The Kitimat LNG project could have a similarly damaging effect on the northern commercial fisheries, native fishing activities, and wilderness tourism. Tankers



Kitimat. Photo: j.lee43, Flickr

bound to and from Kitimat would transit past and through large fisheries and along the shores of the recently designated protected areas of the Great Bear Rainforest. Wilderness tourism such as multi-day kayaking adventures and bear watching are just gaining momentum here. Eco-tourism in Northern BC is essential to local economies: 47% of British Columbia's guide outfitters are in Northern BC. In Kitimat, the econony benefitted from \$11,164,000 of revenue from tourist accomodation in 2007.<sup>23</sup> The Kitimat project could cause irreparable harm to this young eco-tourism industry.

## **Environmental Concerns**

## **Greenhouse gases**

LNG produces 140% more greenhouse gases than regular natural gas. This is because of the energy inputs required to liquefy and ship LNG.<sup>24</sup> The gas is liquefied by cooling it to  $-163^{\circ}$  Celsius, which reduces its volume by 600 times.<sup>25</sup> Once in its liquid state, a greater volume of gas can be transported. When LNG reaches its destination it must be re-gasified in order to be shipped through pipelines to its final destination.

The liquefying and re-gasifying of LNG generates a large volue of greenhouse gas emissions, equivalent to the greenhouse gas emissions produced by domestic coal.<sup>26</sup>

In addition to the re-gasification facilities, WestPac plans to put in place a 600 megawatt gas-fired power plant, which may be expanded to a 1200 megawatt plant.<sup>27</sup> The gas-fired power plant would further contribute to greenhouse gas emissions. The projected emission of carbon dioxide (CO<sub>2</sub>) from the plant and the re-gasification would be 2 million tones—the equivalent to the emissions from 500,000 cars.<sup>28</sup>

A similar proposal for a gas-fired plant at Duke Point near Nanaimo was rejected earlier this decade when it was discovered that the plant would have emitted



WestPac's proposed LNG project would be the largest emitter of greenhouse gases in British Columbia by 4 times. Photo: Alan Grinberg 800,000 tonnes of carbon dioxide (CO<sub>2</sub>) per year. The projected emissions from the Texada facilities are more than double the amount that had been proposed for Duke Point.<sup>29</sup>

Westpac's proposed project would emit four times as much waste gas as the largest emitter currently operating in BC. It would increase the province's greenhouse gas emissions by 7.6 per cent.<sup>30</sup> The increase in greenhouse gases runs against the provincial government's plan to reduce greenhouse gas levels by 20% by 2020.<sup>31</sup>

#### Land and water impacts

LNG projects can have significant impacts on both land and water. For example, Westpac's proposal could have considerable effects on marine life. The corporation plans to use a sea water cooling system, which would drain a large amount of water from sensitive marine ecosystems.<sup>32</sup>

To carry out the project, WestPac has estimated that it will need 420,873 square metres (104 acres) of land.<sup>33</sup> While some of the land at Kiddie point has already been deforested for industrial purposes, the company proposes to use additional undeveloped natural lands for the two storage facilities and gas-fired power plant. This development would devastate the surrounding natural environment.<sup>34</sup> It would also require a new cut for high-voltage power lines through 18 kilometres of dense forest. The power lines will be over 50 metres high and 150 metres wide, and will fragment the wilderness and wildlife habitat from Kiddie Point, past Van Anda, and on to Bob's Lake, necessitating extensive deforestation in addition to what will need to be cleared at the sire of the facility itself.<sup>35</sup>

The LNG proposal for Kitimat would have a similar footprint.



LNG import terminals require the deforestation of the surrounding landscape. Photo: JB Weir



Senate Chamber, Centre Block of the Parliament of Canada. Photo: Mightydrake, Wikimedia Commons

# What Government Approvals are Needed for LNG Projects?

## Who has jurisdiction?

The federal government has jurisdiction over trade, navigation, and shipping.<sup>1</sup> Therefore, LNG facilities are subject to a number of federal processes, including federal environmental assessment and the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL).

Provincial governments have jurisdiction over property and civil rights, which includes ports, harbours, and terminals.<sup>2</sup> Thus, any LNG project in BC will also be subject to a number of provincial regulatory processes, including provincial environmental assessment and potentially the BC Utilities Commission.

## Federal processes, laws, and approvals

A variety of federal departments and agencies are involved in regulation and approval of pipelines and marine terminals associated with LNG. These include:

- Transport Canada
- Environment Canada
- Department of Fisheries and Oceans

These federal departments and agencies oversee a number of processes. This guide will concentrate on three:

- I. National Energy Board (NEB)
- 2. Technical Review Process of Marine Terminal Systems and Transhipment Sites (TERMPOL)
- 3. Canadian Environmental Assessment Act

## National Energy Board approval

The National Energy Board (NEB) is an independent federal tribunal that has jurisdiction to regulate international and inter-provincial aspects of the oil, gas, and electricity industries in Canada.<sup>3</sup>

## Mandate of NEB

The purpose of the NEB is to promote safety, environmental protection, and economic efficiency in the Canadian public interest within the mandate set by

Parliament in the regulation of pipelines, energy development, and trade.<sup>4</sup> The NEB has jurisdiction over a number of aspects of LNG facilities.

The *National Energy Board Act* (NEB Act)<sup>5</sup> sets out the regulatory framework and powers of the NEB as they relate to oil and gas activities.<sup>6</sup> In accordance with the NEB Act, the NEB reviews applications for international and inter-provincial pipelines and issues "Certificates of Public Convenience and Necessity" for approved projects.

The Act also gives the NEB the authority to consider the environmental impacts of proposed projects and to attach appropriate terms and conditions to project certificates.<sup>7</sup>

Before the National Energy Board makes a decision on an application for a major project like an LNG facility, it usually holds a hearing.

#### **NEB** Authority over LNG

All liquefied natural gas imported into Canada requires an import licence or order from the NEB. Companies proposing LNG facilities may also need a couple of different types of Certificates of Public Convenience and Necessity (CPCN) or an exemption order from the NEB.

Sections 52 and 58 of the NEB Act require that:

- If the project involves the construction of marine terminals for import or export it will need a CPCN or exemption order.
- If the proposal requires the construction or operation of a pipeline that crosses a provincial or international boundary or is built by a company regulated by the NEB, a CPCN or exemption order is necessary.

Finally, the NEB has the power to set tolls and tariffs for LNG facilities.

#### What is the NEB process?

Generally, the NEB would have hearings before approving a major project like an LNG terminal. There are two types of hearings conducted by the NEB.

- 1. Some hearings are conducted solely in writing or through a combination of written and oral submissions.
- 2. Oral hearings.

A written hearing means the hearing participants provide all of their evidence in writing. When the NEB announces a hearing, it will also include information on how the hearing will be conducted and how people can participate.<sup>8</sup>

An oral hearing is what most people think of when they think of a hearing. However, even this hearing begins with a written process. Participants file their written evidence and then have the opportunity to ask questions in writing of each other. All of this information is usually available on the NEB website. This is followed by the oral portion of the hearing, in which participants may ask oral questions of witnesses and present their final arguments or the summary of their position based on the evidence.<sup>9</sup> If the NEB approves an application to construct a facility, the company has permission to construct, operate and maintain that facility. If it is an import or export licence hearing, the company may be granted a licence. Toll hearings may involve decisions on the amount of money a company is allowed to charge for the transportation of oil or gas or for access to the pipeline.<sup>10</sup>

#### **Regulatory issues with NEB hearings**

There are a number of legal issues related to the NEB that can be raised by First Nations, communities, or individuals concerned about specific LNG projects under review. The NEB can be legally challenged on its process, the scope of its review, and its structure.

# Technical Review Process of Marine Terminal Systems and Transhipment Sites (TERMPOL)

TERMPOL was created to give the federal government the opportunity to review the safety of marine terminals and the associated shipping traffic.

## History and mandate of TERMPOL

The Technical Review Process of Marine Terminal Systems and Transhipment Sites (TERMPOL) was created in 1977. Initially TERMPOL's objectives were to provide the federal government with a means of assessing navigational risks associated with marine terminals for oil tankers. In 1982, TERMPOL was extended to cover not only oil, but marine terminals receiving LNG and chemicals. TERMPOL is not an approval process; rather it is designed to give the federal government the opportunity to assess projects to inform its regulatory decisions.<sup>11</sup>

In 2001, Transport Canada Marine Safety (TCMS) issued a third edition of the TERMPOL Code.<sup>12</sup> The Code is maintained by Transport Canada.<sup>13</sup>

The Code outlines the purpose of the TERMPOL Review Process (TRP):

The intent of the TRP is to ameliorate, where possible, those elements of a proposal which could, in certain circumstances, threaten the integrity of the ship's hull and its cargo containment system and, consequently, the environment.<sup>14</sup>

#### Focus of TERMPOL process

According to the Code, TERMPOL is not a regulatory process, the provisions in the Code are not mandatory, and the recommendations are not binding on the government agencies or the proponent. Rather, the TRP is used by TCMS and other agencies to objectively appraise projects, to inform their regulatory decisions and determine the need for precautionary measures. It is a datagathering and operational review process for TCMS, Department of Fisheries and Oceans (DFO), and other government agencies, and is considered separate from the other regulatory roles those agencies may have, such as under the *Canadian Environmental Assessment Act*.

TERMPOL differs from an environmental and socio-economic assessment, which looks at all the environmental issues that are of concern, whereas the TERMPOL

process focuses on the "safe and efficient operation of ships".<sup>15</sup>

Specifically, TERMPOL focuses on: the safety of the routes ships would take within Canadian waters; the proposed terminals; transshipment facilities; and any changes to existing terminals or facilities for the shipment of oil, LNG, or chemicals.<sup>16</sup>

#### The TERMPOL Process

Generally, the proponent of an LNG project initiates a TERMPOL process by sending a request, in writing, to Transport Canada. However, there is no timing requirement for when a TERMPOL review must be initiated.

Following a formal request, the proponent and representatives from relevant federal departments meet informally to discuss submission requirements such as review process timelines, data availability, and scope of data requirements. Following that, the Director General of TCMs appoints a chairperson, who then convenes the TERMPOL Review Committee (TRC), which may include representatives from other federal or provincial departments.

The TRC has a number of responsibilities when carrying out TERMPOL reviews for proposed projects. For example, the TRC *must* determine whether a proponent's submission is complete, identify any information gaps, and submit requests to the proponent if further information is required. The committee also develops a comprehensive list of reports that the proponent must include in submissions.

To complete the process, the committee must be convinced that all potential hazards have been identified, evaluated, and mitigated. To demonstrate that all concerns have been addressed, TERMPOL requires that proponents consider a range of subject matters in their submission. These are:

- Potential impacts of new shipping operations on existing regional shipping operations and regional fishing activities;
- Environmental issues associated with transportation of pollutant cargoes;
- Risks to communities along potential routes to the terminal, such as threats to public health and safety;
- Navigational safety issues associated with proposed routes, including equipment and activities to ensure safe navigation such as fixed and floating aids, vessel traffic services, electronic positioning systems, radio communication, and pilotage requirements;
- Ship characteristics, such as maneuvering capabilities, navigational and communication equipment, and containment systems; and
- Pollution prevention measures, contingency plans, and emergency procedures.<sup>17</sup>

The Code details a variety of technical studies that can be required by the TRC.<sup>18</sup>

At the end of the process the recommendations of the TRC are compiled into a TERMPOL Review Report (TRR). According to the Code, the TRR is prepared by the TRC and then reviewed and approved by the senior managers at all participating

departments and agencies. Therefore, even if the TRC makes a recommendation, it may not be included in the final report unless it is approved by the relevant senior manager. The format of the TRR is at the discretion of the chair of the TRC. The structure of the TRR THEREFORE varies from project to project.<sup>19</sup>

#### **Timing of TERMPOL**

There is no mandated timing requirement for when a TERMPOL review must be conducted. Generally TERMPOL is initiated after the completion of the National Energy Board (NEB) and *Canadian Environmental Assessment Act* (CEAA) processes, right before the site is preparing to open.

However, two recent TERMPOL reviews for LNG projects in Quebec, Rabaska and Gros-Cacouna were completed and the report issued before the NEB/CEAA review was complete. Therefore, it is unclear when a TRP must be conducted in relation to the NEB and CEAA review. It can be started or even completed before the NEB/CEAA review is complete.

However, some legislation requires a certain order for the reviews. The CEAA and TERMPOL review are needed for a *Navigable Waters Protection Act* (NWPA) permit to be issued.

#### Limitations of TERMPOL

TERMPOL is not a public process. It is a technical process with a limited but important mandate.

While the TERMPOL process is useful for addressing a variety of issues with respect to proposed tanker routes and marine terminal systems, it is not an approval process. TERMPOL criteria, however, are used by TCMS in determining the need for making or revising specific regulations, or for implementing special precautionary measures that may affect a ship's operation within a particular marine terminal system or transshipment site.

While Fisheries and Oceans Canada and TCMs have specific roles with respect



Sunflower starfish, Coste Rock, Kitimat Arm. Photo: Caranx latus, Flickr to TERMPOL, such responsibilities are separate from the regulatory roles of both departments.

Notably, satisfying TERMPOL does not mean that a proponent has satisfied all requirements of federal and provincial legislation and regulations for marine safety and environmental protection.

Proposed projects may also have to meet requirements set by various other legislative documents, including the *Canada Shipping Act, Navigable Waters Protection Act, Canadian Environmental Protection Act, Canadian Environmental Assessment Act, Transportation of Dangerous Goods Act, Fisheries Act, Oceans Act,* and *Canada Marine Act.* 

#### Relationship between TERMPOL and other legislation

One of the primary purposes of TERMPOL is to inform the regulatory decisions of government agencies. The three main statutes that are relevant to TERMPOL are: *Navigable Waters Protection Act, Canada Shipping Act,* and the *Pilotage Act.* 

*Note:* The federal government has weakened laws that protect waterways and fisheries and require environmental assessment of many developments. In the Spring of 2009, two significant changes were introduced and passed with little debate:

- 1. Amendments that undermine the *Navigable Waters Protection Act* were rushed through Parliament as part of the 2009 budget.
- 2. As part of the "Building Canada" stimulus plan the federal government created exclusions that eliminate environmental assessments for 90 per cent of projects receiving federal stimulus money.

These unexpected changes came too late in the development of this guide to be fully evaluated.

#### Navigable Waters Protection Act

TERMPOL is described in the Code as a complement to the *Navigable Waters Protection Act* (NWPA).<sup>20</sup>

The purpose of the NWPA is to protect navigable waters. It is described as:

a federal law designed to protect the public right of navigation. It ensures that works constructed in navigable waterways are reviewed and regulated so as to minimize the overall impact upon navigation.

Any marine terminal, including any new LNG terminal proposed for BC, requires a permit under the NWPA. Section 5(1) of the NWPA requires that:

No work shall be built or placed in, on, over, under, through, or across any navigable water unless:

 (a) the work and the site and plans thereof have been approved by the Minister on such terms and conditions as the Minister deems fit, prior to the commencement of construction;

- (b) the construction of the work is commenced within six months and completed within three years after the approval referred to in paragraph(a) or within such further period as the Minister may fix; and
- (c) the work is built, placed and maintained in accordance with the plans, the regulations and the terms and conditions set out in the approval referred to in paragraph (a).

Section 9 of the NWPA outlines the application process for approval from the Minister of Transport. The proponent has to deposit plans and a description of the proposal with the Minister, and notice of the deposit is given in the Canada Gazette.

Transport Canada outlines two approval processes under the NWPA, a formal approval and a work assessment. A formal approval is required when work has the potential to substantially interfere with navigation. A work assessment requires less information. Given the nature of liquefied natural gas, LNG projects will generally require a formal approval.

If the proponent does not elect to follow the TERMPOL process, the Navigable Waters Protection Division of Transport Canada may require that the proponent carry out the relevant studies identified in TERMPOL as part of the navigational review process for the NWPA permit.

#### **Canada Shipping Act**

Any recommendations made in the TERMPOL Final Report can also inform regulatory decisions made by the Minister of Transport under the *Canada Shipping Act* (CSA).

The Minister of Transport has broad powers under the CSA, including the power to regulate:

- compulsory routes and recommended routes; and
- to prohibit the operation of vessels for the purpose of protecting persons, vessels, artificial islands, installations, structures, works, shore areas, or environmentally sensitive areas.

In addition, the Minister of Transport can establish a Vessel Traffic Services (vTs) Zone that includes safety restrictions or "no go" zones.

All of these powers would be important if an LNG facility were to move to the construction phase.

#### **Pilotage Act**

The recommendations made in the TERMPOL Report can also be directed at the Pacific Pilotage Authority. According to s. 18 of the *Pilotage Act*, "The objects of a [Pilotage] Authority are to establish, operate, maintain and administer in the interests of safety an efficient pilotage service within the region set out in respect of the Authority in the schedule."

Section 20 of the *Pilotage Act* grants the Pilotage Authority the power to make regulations, with the approval of the governor in council, to achieve its objects.

These powers include making regulations:

- (a) establishing compulsory pilotage areas; ...
- (f) prescribing the qualifications that a holder of any class of licence or any class of pilotage certificate shall meet; ...
- (m) prescribing the circumstances under which a licensed pilot or holder of a pilotage certificate shall be required to take further training to be enabled to meet any new qualifications prescribed under paragraph (f) since the pilot's licence or the pilotage certificate was issued.

Therefore any recommendations that the TRC makes regarding compulsory pilotage areas will be regulated by the Pilotage Authority.

The Pacific Pilotage Regulations apply specifically to the Pilotage Authority in charge on BC's coast. Section 3 of the regulations lists the compulsory pilotage areas for BC. Section 11(f) states that the Pacific Pilotage Authority can deem any geographic point to be a pilot boarding station to ensure safe pilotage service.

## Canadian Environmental Assessment Act

The Canadian Environmental Assessment Act (CEAA) was first passed in 1992, but the legislation was updated (and weakened) most recently in 2003.

The CEAA requires that environmental assessments determine whether or not a particular project will cause significant adverse environmental effects. The "responsible federal authority" (i.e. the permit-issuing departments or agencies) must ensure that all environmental effects of projects are considered, including impacts on the socioeconomic environment, aboriginal people, and cultural heritage. Furthermore, CEAA requires timely and appropriate public participation in the assessment process.

The CEAA is administered by the Canadian Environmental Assessment Agency, an independent federal organization that shepherds the federal environmental assessment process and promotes environmental policies and practices.

The Agency acts as the coordinator between the federal government and other jurisdictions. As part of this role, it negotiates environmental assessment harmonization agreements and promotes efficiency in environmental review processes. The Agency also manages funding programs for public participation in comprehensive studies and review panel assessments.

#### When is a federal environmental assessment required?

An environmental assessment is required if the federal government:

- proposes a physical project or activity;
- provides financial support to a physical project or activity;
- provides a license or permit to enable a physical project or activity to be carried out; or
- if a project is proposed on federal land.

#### Types of federal environmental assessments

There are four types of environmental assessments that may be carried out:

- 1. Screenings, which provide a brief analysis of environmental and cumulative effects of a project and are typically used for simple or routine projects.
- 2. Comprehensive studies, which are more detailed than screenings, since environmental and cumulative effects are considered in conjunction with project alternatives, monitoring systems, and other project characteristics.
- 3. Mediation.
- 4. Panel review.

The latter two methods are employed if a comprehensive study determines that a project may cause significant adverse environmental effects or if environmental impacts of a project are inconclusive. Due to the scale and impact of an LNG facility, one may expect comprehensive assessments for any proposed LNG project.

#### **Overlap between TERMPOL and CEAA**

There is a considerable amount of overlap in the requirements of CEAA and TERMPOL. The NWPA is also a trigger for a CEAA review, and the CEAA requires a review of the environmental effects of projects with marine and navigational safety issues, such as LNG terminals proposed for BC.

Some of the information that is provided to TERMPOL can also be used to meet a project's other regulatory requirements. The TERMPOL Code provides that although the TERMPOL REVIEW PROCESS does not relieve the proponent of any regulatory requirements, the TERMPOL proponent can use the information to help complete other stages. In reverse, if the proponent has already completed a similar study for NEB/CEAA review, the proponent may submit that information to TERMPOL.

#### Limitations of CEAA

David Boyd, Trudeau Scholar, environmental law expert, and former Executive Director of Ecojustice (formerly Sierra Legal Defence Fund), has criticized the federal environmental assessment process for its lack of clear decision-making criteria, inappropriate public consultation methods, and inadequate enforcement and monitoring provisions.

One significant weakness of the federal legislation is that the federal government can approve a project even when the environmental assessment concludes that the project will have significant adverse environmental effects.

Section 37 of the CEAA discusses the power of a responsible authority to permit a project to proceed even if the project will generate significant environmental effects. It says, "[if] the project is likely to cause significant adverse environmental effects that can be justified in the circumstances, the responsible authority may exercise any power or perform any duty or function that would permit the project to be carried out in whole or in part".

Therefore, even if a federal environmental assessment determines that a

particular LNG project, such as WestPac's proposal on Texada Island, should not be approved, the federal government can still approve the project.

Furthermore, history shows that almost all projects receive CEAA approval. Between 1995 and 2000, 99.9% of the approximately 25,000 environmental assessments that were carried out were screenings. A further 99.9% of all environmental assessments submitted led to the approval of the project. These figures suggest that either virtually all projects subject to federal environmental assessment are environmentally appropriate, or that the federal process favours development over the environment.

## Other Federal Approvals Needed for LNG

A number of other federal approvals and certificates are needed to construct, operate and maintain an LNG facility. In addition, certain factors, such as the potential impact on fish habitat, may trigger the need for even more federal approvals. Some of the potential approvals and certificates include:

- Transport Canada: Operational certificates for tanker safety
- Department of Fisheries and Oceans: *Fisheries Act* authorization to affect fish habitat
- Environment Canada: Emergency plan for certain substances stored
- Environment Canada: Permit related to sediments construction
- Canadian Transportation Agency: Orders for rail crossing (if any)
- Natural Resources Canada: Licences to import needed in some situations

For more detailed information on federal approvals, *see Appendix 1: LNG Regulatory Requirements*.



Ratfish, Bishop Bay, Kitimat Arm. Photo: Caranx latus, Flickr



Proposed location of the Barge Loading Terminal, Texada Island. Photo: Tom Scott

# Provincial Processes, Laws, and Approvals

Any LNG project proposed in British Columbia will be subject to a number of provincial regulatory processes, including provincial environmental assessment, the BC Utilities commission, the BC Oil and Gas Commission, and various ministerial approvals.

## Provincial Environmental Assessment

The BC Environmental Assessment Office (EAO) is an independent provincial agency that coordinates assessment of the impacts of major development proposals in British Columbia and reports to the Minister of Environment.<sup>1</sup>

The EAO is tasked with identifying and mitigating potential adverse impacts from development and operations such as pipeline construction. Powers and responsibilities of the EAO are set out in the BC *Environmental Assessment Act* (BCEAA).<sup>2</sup>

The Environmental Assessment Act is based on five main principles:

- Access to information by all interested parties
- Balanced decision-making by government
- Comprehensive environmental assessments
- · Consultation with all potentially affected parties
- Flexibility of assessment methods and procedures<sup>3</sup>

Provincial environmental assessments follow an eight-step approval process. A proposed project must first be considered "reviewable" before the provincial environmental assessment process may start. Projects are considered reviewable if:

- their type is listed in the Reviewable Projects Regulations;
- the responsible Minister determines the project is reviewable; or
- the proponent asks the EAO to consider the project as reviewable.<sup>4</sup>

However, the executive director of the EAO may exclude projects from the provincial EA process even if projects are included in the Reviewable Projects Regulation.<sup>5</sup>

The EAO was weakened in a major revision in 2002, giving the BC Cabinet and individual ministers extraordinary powers to overrule provincial or local government laws if they constrain development processes. Furthermore, other provincial statutes have changed the environmental assessment process in BC. In 2003, the *Significant Projects Streamlining Act* (SPSA) was passed by the provincial government. Essentially, that Act:

gives the B.C. Cabinet and individual ministers extraordinary powers to overrule provincial or local government laws, regulations or bylaws if they are perceived as being constraints to development projects that the government designates as provincially significant.<sup>6</sup>

In effect, even though the *Significant Projects Streamlining Act* states that the province must meet all requirements of the BC *Environmental Assessment Act*, provincially significant projects may be exempt from review processes.

When the BCEAA was amended in 2002, mandatory requirements for project committees and First Nations participation were eliminated. As a result, there is ambiguity regarding the amount of influence First Nations will have over regulatory processes for LNG projects such as Kitimat LNG and WestPac.

#### **Environmental Assessment Cooperation**

Federal and provincial EA processes are also characterized by jurisdictional overlap. To address this issue, governments have signed cooperation agreements to clarify roles and responsibilities.

Federal and provincial governments signed the *Canada-British Columbia Agreement on Environmental Assessment Cooperation* in 1997 and a new version in 2004. This agreement attempted to establish a single environmental assessment process. The agreement is somewhat ambiguous. However, both parties agree that, in accordance with the BC Environmental Assessment Act, a cooperative environmental assessment should be conducted by a commission or hearing panel.

#### The BC process

The two most important steps in the BC environmental assessment process are the "Project Terms of Reference" and a "Section 11 Order".

The first important process in the provincial environmental assessment is setting the project's terms of reference. Public participation in developing the terms of reference helps to ensure that community values and public goals for community development are considered in project planning and decision making. The terms of reference specify the:

- scope of the environmental and socio-economic studies necessary to assess the impact of the proposal on the environment and communities;
- consultation programs required to engage the public and First Nations;
- information that needs to be included in the environmental assessment application; and
- requirements for the mitigation of project impacts.<sup>7</sup>

The terms of reference will be used to identify the information that an LNG proponent like WestPac must include in its application for an Environmental

Assessment Certificate. Proponents are required to submit the draft terms of reference for regulatory review and approval.<sup>8</sup>

A provincial environmental assessment is likely to consider the project's potential effects on:

- aquatic species and habitat
- terrestrial ecosystems, vegetation, and wildlife
- land use and socio-economic/socio-community and cultural conditions
- visual landscape and recreational resources
- hydrology, soils, terrain, and natural hazards
- · First Nations' traditional knowledge and use
- heritage and archaeological resources
- navigation, transportation and utilities
- contaminated sites
- public health issues

Other topics may be added during the preparation of the terms of reference or the assessment itself. This is the first key opportunity for affected First Nations and communities to engage to ensure that issues important to them are studied, reported on, and included in the assessment.

The Section II Order defines the terms and procedures for conducting the required environmental assessment process, including the requirements for the public consultation process for the assessment. Ensuring that these Orders include real opportunities for public engagement should be an important priority for groups concerned about proposed LNG facilities.

## **BC Utilities Commission**

Various aspects of LNG projects will require orders from the BC Utilities Commission (BCUC), particularly projects like Westpac's proposal on Texada, which includes gas-fired generation as part of the facility. Unless it receives direction to do otherwise from Cabinet, the BCUC will review the need and justification for the project, alternatives, and costs.

The BCUC may also be involved in orders that set tolls or tariffs for processing facilities and for intraprovincial pipelines associated with proposed LNG facilities.

Further, if transmission lines are required for the LNG project, the BCUC will need to issue a *Certificate of Public Convenience and Necessity* (CPCN).

#### **Certificate of Public Convenience and Necessity**

It is up to the BCUC to decide whether it wishes to hold public hearings on the CPCN application. The Commission may arrange public hearings, or it may engage in an Alternative Dispute Resolution Process/Negotiated Settlement Process.

However, the government may intervene to give the BCUC direction, which could circumvent public hearings. A CPCN review is, nonetheless, worth fighting for, since it is a forum in which interested parties can bring evidence and cross-examine the evidence of the other parties. The process creates a public record,

and BCUC decisions will primarily be grounded on basic and well-established principles of utility policy, including concepts of cost-effectiveness and public interest. These hearings are preferable to a purely political process in which the government can move forward with poorly substantiated claims of benefits.

#### Other provincial approvals

The BC Minister of Lands, the Oil and Gas Commission, and the Ministry of Transportation all have jurisdiction over some aspect of LNG facilities in BC, as do provincial laws protecting archaeological sites.

The BC Lands Agency has some authority over the location of the facility, since it must issue a lease for the land. The Oil and Gas Commission also has authority over the choice of site, cutting of trees on the site and on rights of way to it, any connecting pipelines, waste disposal, contaminated sites, and air emissions. The Ministry of Transportation has jurisdiction over access roads and the transport of dangerous goods.

As part of the environmental assessment, an Archaeological Overview Assessment and Heritage Resources Inventory and Assessment must be undertaken by qualified specialists with the involvement of First Nations and various provincial ministries to identify historic sites affected by LNG facilities.

On the basis of these assessments, a Heritage Inspection Permit may be required prior to a more detailed Archaeological Impact Assessment (AIA). The AIA will confirm whether archaeological resources exist on the site, and if so recommend mitigation measures to avoid impacts on them. Such measures will be included in the application for an environmental assessment. First Nations have been successful in intervening at this stage to ensure that both the contractors hired to conduct the AIA and the scope of the assessment are acceptable to them.



An anti-LNG rally on the steps of a government building. Photo: Martin Evans

Citizens rally to protect forests from LNG pipeline deforestation. Photo: Martin Evans

# **Opportunities for Citizen Engagement in LNG**

Citizen engagement is critical. In cases where LNG projects have been rejected, the decision is mostly attributable to public concern and pressure inside various regulatory processes and through good old organizing and agitating.

However, none of the government approval processes are ideal. They each have limitations in scope or effectiveness in addressing certain types of issues. It is important, therefore, for citizens to be as informed as possible about the range of processes that could be an opportunity for affected communities, First Nations, groups, and individuals to intervene when LNG projects are proposed. Below we detail the better opportunities in some of the more important processes.

## Organizing and Agitating

Numerous LNG proposals throughout North America have been cancelled, abandoned, rejected, or substantially modified to address people's concerns because of organized opposition. Some of this organized opposition has been



directed within various regulatory processes, and some has been aimed directly at political representatives and decision makers.

Whether one wants to stop an LNG proposal or modify it to address specific concerns, organizing those sympathetic to your views, raising the profile of your concerns, and directing pressure towards key representatives and decision makers increases the chances of good outcomes. Holding LNG proponents to their commitments is also an important step.

Texada residents, led by a local organization, Texada Action Now (TAN), organized widespread opposition on Texada Island and throughout the region. They used a variety of tactics to become a formidable opponent to Westpac's project, including:

- a door-knocking campaign of all island residents to educate them on LNG issues;
- a survey of local residents that revealed that 85% of Texada residents oppose the WestPac LNG project, while just 3% approve of it;
- events that raise the profile of their concerns and garner media attention;
- briefings of key elected officials throughout the region and in Victoria;
- Alliances with other community groups, First Nations, and environmental groups that share their concerns;
- Organizing to ensure their local regional district passed a resolution against risks associated with LNG tankers and greenhouse gas emissions, and then working with other groups and communities to ensure this resolution was also passed by other municipalities, regional districts and the Union of BC Municipalities.

The efforts of Texada residents are a model for other communities concerned about LNG proposals.

However, organizing and agitating are effective for more trying to stop projects. Those who don't oppose LNG projects but have specific concerns—such as the size of the facility, access to land and waterways, or environmental safeguards— should also organize and agitate. Unfortunately, it is the squeaky wheel that gets the grease both in our political system and in most regulatory processes, whether the grease results in changes to the project or is the mere chance to participate in the process.

#### Holding Proponents to their Commitments

In response to strong public opposition, LNG proponents such as WestPac often make commitments. Those concerned about LNG proposals should ensure they live up to these commitments and that the various regulatory processes include requirements that are in line with them.

The following is a list of commitments that WestPac made to Texada Island residents. Concerned citizens should contact WestPac to ensure that the commitments are being implemented. (WestPac's contact information is available at: http://www.westpaclng.com/index.php?pageId=Contact+Us)

WestPac's responses to these concerns will be important once the various regulatory processes begin.

- 1. WestPac has promised to follow up with Terasen Gas to see when and how natural gas would be locally distributed to Texada Island residents.
- 2. After hearing the numerous complaints regarding the erection of hydro power lines, WestPac has promised to actively look into the feasibility of all options relating to power lines.
- 3. Given the popularity and aesthetic beauty of Kiddie Point, WestPac has also promised to thoroughly explore and assess alternative sites for the terminal and power generation facilities.
- 4. WestPac declared its intention to complete a risk assessment and consequence analysis that considers the likelihood of an accidental event and examines the potential impacts that could result.
- 5. WestPac has promised to carefully consider how an accident would affect the ferry system and what systems would be in place to evacuate residents.
- 6. WestPac has also promised a consequence analysis for the specific site on which the facilities would be built. They have promised to make the results of the analysis publicly available.
- 7. WestPac has openly recognized the need to comply with emission standards and regulations.
- 8. Finally, WestPac promised to work with the Canadian Coast Guard, Pacific Pilotage Authority, BC Coastal Pilots, the U.S. Coast Guard, BC Ferries, and other stakeholders regarding the potential for conflict between the LNG tankers and other marine users, and the safe transit and passage of LNG tankers generally.<sup>1</sup>

## BC and Canadian Environmental Assessment

As previous sections of this report indicate, environmental assessment law in Canada is complicated, making it difficult to be brief and comprehensive at the same time. In this guide we seek to provide a high-level overview of the challenges and opportunities for groups concerned with LNG projects.

In BC the environmental assessment process is supposed "to ensure that community values and public goals for community development are considered in project planning and decision-making." Unfortunately, the BC *Environmental Assessment Act* makes public participation in the development of terms of reference discretionary, guided by the policies of the Environmental Assessment Office.

In 2006 the Kitimat LNG Terminal received its environmental assessment certificate from the BC EAO and was granted federal environmental approval for a re-gasification terminal. Generally this would foreclose future opportunities for participation in assessments. However, significant questions remain about whether the massive re-scoping of the project from an LNG import facility to an export facility requires a new environmental assessment. Unless our governments require a new environmental assessment or are forced to

undertake one by litigation by an affected party such as a First Nation, there are limited future opportunities for public engagement in environmental assessments on the Kitimat proposal. Litigation is not the only means to gain a new environmental assessment. Aggressive, strategic demands from affected individuals and communities could encourage both levels of government to require new assessments.

By contrast, Westpac's LNG proposal for Texada Island is a long way from entering the environmental assessment process.

As a general rule, it will be important for groups facing LNG proposals in their communities to ensure the participation in the assessment process of well-prepared "intervenors" representing key constituencies.

In the pre-application phase, consultations are required among federal,



Citizens are concerned about the threat of LNG tankers. Photo: Martin Evans provincial and municipal agencies, the public, and First Nations on the issues and content of the Terms of Reference (TOR) for the environmental assessment. This phase starts with the formulation of a draft TOR by the LNG proponent and the publication of this draft for a public comment period, inviting input from interested parties. Early engagement, particularly by affected First Nations, in defining the TOR for the environmental assessment of LNG projects should be a priority for any group with concerns about specific LNG projects. Ensuring a good TOR does not ensure a positive outcome, but a bad TOR that does not include the full scope of the proposed project or that leaves out relevant information makes it difficult to achieve good outcomes.

Additional consultations occur during the review of the application for an Environmental Assessment Certificate, during the preparation of the draft assessment report, and thereafter where deemed appropriate. Reports on all consultations are forwarded to those consulted. The proponent must respond to all issues relevant to the LNG project that are identified in the consultations.

Under a federal environmental assessment the public has a greater opportunity to participate if there is a comprehensive study or review panel for the decision.

Those concerned about proposals to construct LNG facilities should demand that the proposed project be subject to a comprehensive study. Ultimately it is the federal Minister of the Environment that makes this decision. A comprehensive review provides additional opportunities for citizen involvement, including pressure for a review panel.<sup>2</sup>

To ensure key issues are addressed adequately, concerned groups should request that the Minister of the Environment submit the assessment to a review panel. A review panel allows the public and local experts to be appointed to give recommendations on the ultimate viability of the project.<sup>3</sup>

To be involved in a comprehensive study or review panel, follow these steps:

- Check http://www.ceaa.gc.ca/050/index\_e.cfm to find out whether the environmental assessment is under way. If Westpac's LNG project is listed, contact the responsible authority. The contact information will be provided at the above link.
- 2. Write or present your concerns to the Minister of the Environment, currently Hon. Jim Prentice, asking that Westpac's LNG project be subject to a public review panel. Contact information for the Minister is available at: http:// www.ec.gc.ca/default.asp?lang=En&n=B6832638-I.
- 3. Apply to the government for public funding.

Although the environmental assessment is intended to be a comprehensive review process, historically many First Nations and communities have been frustrated by the results of their engagement with the process.

Over the last few years First Nations have won a number of influential court cases that have an impact on environmental assessment. The *Haida* ruling by the Supreme Court of Canada in November 2004 held that First Nations must be involved in "strategic decisions" regarding licences for land use and

resource exploitation on their territories. This means they must be consulted and accommodated before a new project like LNG is approved.

However, disputes frequently arise between governments and affected First Nations over the scope and depth of these consultations, and the degree to which First Nations' input is integrated into the assessment process. Arguably, consultation with affected First Nations should occur before any terms of reference are set for major projects like Westpac's LNG proposal for Texada Island. The failure to consult at this early stage creates the potential for a legal challenge.

First Nations and other affected groups should consider applying for an Environmental Dispute Resolution Fund grant (administered by West Coast Environmental Law with funds provided by the Law Foundation of BC) to help them engage in the environmental assessment process (see box on next page).

#### What Will Be Done With the Results of the Consultations?

#### **Provincial Environmental Assessment**

The results of the consultation and studies undertaken during the environmental assessment will become part of the Environmental Assessment Certificate application to the BC Environmental Assessment Office. They will also be used to design mitigation measures which may be recommended "where appropriate" to be written into the project's design to counter potential adverse effects of the project.<sup>4</sup>

WestPac will submit the Environmental Assessment Certificate Application to the BC Environmental Assessment Office. The EAO will then make recommendations to Ministers, who have 45 days either to issue the Environmental Assessment Certificate, issue a Certificate with conditions, reject the application, or request further information or studies.<sup>5</sup>

Any decision by Ministers or the Executive Director of the BC Environmental Assessment Office is potentially subject to judicial review, though the scope for such review is limited under the Act due to the highly discretionary nature of the provincial environmental assessment process. All documentation, including submissions by the public, is posted on the EAO's website (www.eao.gov.bc.ca).

#### Federal Environmental Assessment

At the federal level, results of public consultations, specific studies and proposed mitigation measures are included in a report by the Canadian Environmental Assessment Agency to the federal Minister of the Environment, along with a recommendation to permit the project, continue with the environmental assessment (by way of a comprehensive study), or refer the project to a mediator or review panel.<sup>6</sup>

The Canadian Environmental Assessment Agency provides for further public consultation where the assessment goes to comprehensive study, a mediator, or a review panel. All reports produced by these processes shall be made public and be approved by the responsible Minister or Governor in Council (the Canadian Cabinet). All such decisions are potentially subject to judicial review. Canadian Environmental Assessment Agency procedures are more rigid than those of the BC *Environmental Assessment Act*. The consequence is that a judicial

review will be more legally rigorous. Therefore, communities without funds for legal representation or studies may be at a disadvantage.<sup>7</sup>

## Applying for Public Funding for Federal Environmental Assessments

Parties who are eligible for public funding include: individuals, Aboriginal groups, and incorporated not-for-profit organizations. Parties must:

- have a direct, local interest in the project, such as living or owning property in the project area;
- 2. have community knowledge or Aboriginal traditional knowledge relevant to the environmental assessment; or
- 3. plan to provide expert information relevant to the anticipated environmental effects of the project in order to apply for public funding.<sup>8</sup>

Participant funding in the comprehensive study is available from the time the Minister issues a decision that the assessment will continue by way of a comprehensive study through the period of public comment on the completed comprehensive study report.

If a review panel is convened, public funding is available to help participants prepare for scoping meetings. These are meetings to consider the primary environmental issues that need to be addressed. Funding is also available to help participants draft guidelines outlining the issues to be addressed by the project proponent in the environmental impact statement.

In addition to the standard public funding available, there is funding specifically available to Aboriginal groups to assist them in participating in Aboriginal consultation activities.

## **Environmental Dispute Resolution Fund**

Another source of funding for concerned citizens is the West Coast Environmental Dispute Resolution Fund. This fund is designed to help environmental and community groups use the law to better protect the environment.

Established in 1989 with the generous support of the Law Foundation of British Columbia, the Fund has helped groups across the province on diverse issues ranging from stopping helicopter logging in watersheds, to advocating better airquality regulations for crematorium emissions.

Through the Fund, groups can retain private lawyers who may provide a legal opinion on an issue, represent the group in negotiating a solution to an environmental dispute, or argue a case in court or before a tribunal. The Fund provides financial assistance to concerned citizens and groups for three purposes:

- 1. Litigation or participation in administrative tribunals.
- 2. Participation in alternative methods of dispute resolution such as negotiation, mediation, or multi-stakeholder consultation.
- 3. Providing experts' fees to hire scientific experts such as fisheries biologists or hydrologists to provide an expert opinion in relation to a case supported by the Fund.<sup>9</sup>

## ENVIRONMENTAL DISPUTE RESOLUTION FUND

"...designed to help environmental and community groups use the law to better protect the environment."

## Engaging TERMPOL

For concerned citizens, activist groups, municipalities, or First Nations, the TERMPOL process is seriously flawed.

Not only is the TERMPOL process optional, the rules for who participates are vague. Furthermore, LNG proponents are not required to implement the recommendations of the TERMPOL Review Committee (TRC). Similarly, the government is not required to implement the recommendations made in the TERMPOL report, even though these are intended to inform regulatory decisions.

Although TERMPOL is not a public process, there are some potential opportunities for citizens to influence its recommendations.

One of the keys to influencing the recommendations of the TRC is to have a member of an environmental non-profit group or a member of a First Nation concerned about the project appointed to the Committee. However, being invited onto this committee is at the chair's discretion and would involve a serious commitment. Anyone putting themselves forward would have to commit to participating in the process for approximately two years. Participation is not a full-time job, but appointees should be aware of the long duration of the process.

The TERMPOL Code also specifies that the Review Committee may include specialized consultants. Therefore the chair may invite non-government experts to participate. Having an expert appointed is another tactic to ensure affected groups and individuals can monitor and steer the process to ensure their concerns are addressed.

Since much of TERMPOL'S work involves assessing risks, if possible an expert on risk assessment models should be identified to either sit on the Committee or to evaluate the TRC'S work and provide expert submissions on this subject.

Specifically, groups facing LNG projects involved in TERMPOL should<sup>10</sup>:

- 1. Advocate for the inclusion of members from affected communities on the TERMPOL Review Committee. First Nations should insist on representation on the Committee and funding to offset the costs of effective participation.
- 2. Identify sympathetic members of the Committee and lobby them to advocate for the use of the precautionary principle when the Committee is evaluating various risks.
- 3. Find sympathetic experts in any of the areas of information required by the process and advocate for their inclusion on the Committee.
- 4. Pressure all the members of Committee to make strict recommendations aimed at the government rather than the proponent, and then pressure the government to implement those recommendations.
- 5. Identify sympathetic people who have expertise not covered by the members of the Committee and advocate for their inclusion on the Committee or for the Committee to use their expertise to supplement the information provided by the proponent.

- 6. If expert opinion is accepted by the Chair, supplement the information provided by the proponent with independent expertise. If the information provided is not consistent with information given by the proponent, the proponent will have to provide more information.
- 7. Try to persuade the Committee to recommend that an NWPA permit not be issued for tankers, or that strict conditions be imposed on tanker routes and the construction of LNG marine terminal.
- 8. Convince the Committee to recommend that LNG tankers cannot safely enter the waters around the proposed facility for the purpose of protecting people, shore areas, and environmentally sensitive areas under s. 120(I)(k) of the *Canada Shipping Act*.
- 9. Convince the Committee that under s. 136(f) of the *Canada Shipping Act* the Minister of Transport should impose an LNG tanker moratorium.
- 10. Persuade the Committee to recommend that a pollution prevention officer and a pollution response officer are required for the LNG marine terminal.
- 11. Convince the Committee to recommend that an advisory council be formed for the LNG marine terminal and its associated tanker routes.
- 12. Once the TERMPOL report is published, demand access to the studies, since at that point they are no longer confidential. If there are flaws in the findings, contact the relevant government department to share your views before the department implements flawed recommendations.

## Certificate of Public Convenience and Necessity (CPCN)

We suggest that, if Westpac 's LNG import-gas-fired power facility is revived, or if any other such projects are proposed, affected groups immediately call for a CPCN review.

Since Westpac has not yet submitted its Texada project to the BC Utilities Commission—and may never do so, given the municipal opposition, regulatory hurdles, and lack of investors—the form and timing of the Utility Commission's consultation process is an unknown. Although it is unlikely the provincial government would intervene to circumvent the requirement for a CPCN, if the project becomes active again, affected First Nations, communities, and stakeholders will need to begin lobbying the BCUC forcefully to demand public hearings.

Typically the Commission will listen to intervenors regarding the process. Even if a public hearing is not held a Negotiated Settlement Process could be implemented if people think there is a reasonable chance of an agreement. In some situations, where the issues are small or the project is relatively uncontroversial, a written hearing could be used. However, for projects the size of LNG gas-fired power projects, especially projects with strong opposition like Westpac's, an oral public hearing would be appropriate, and would provide the best opportunity for affected First Nations and communities to intervene in the project approval.

The BCUC website says "The Commission's public hearing process is relatively

formal and is similar to that of a court. Testimony is provided by witnesses under oath or affirmation. Witnesses are subject to cross-examination. While most intervenors are represented by counsel, it is by no means essential for participants to have their own lawyer."<sup>11</sup> However, without a lawyer who is well versed in regulatory procedure, it would be very difficult for communities, First Nations, or affected individuals or groups to engage in the complex process and participate effectively.

The *Utilities Commission Act* states that intervenors can apply for awards to cover the costs of their interventions through the Participant Assistance Cost Award system. Once approved, intervenor costs would be borne by the applicant, like Westpac or a future LNG gas fired power proponent. This allows intervenors to hire lawyers and expert witnesses in order to challenge the economic assumptions of claimed benefits to the public. As well, if public hearings are held, there is a fair chance that some important regular intervenors in BCUC hearings might weigh in against the project. For example, the Joint Industry Electricity Steering Committee intervenes regularly in BCUC proceedings and regularly opposes anything that could affect their rates. The Joint Industry Electricity Streering Committee represents the major industrial users of purchased electric power in BC, such as forestry, pulp and paper, mining and mineral processing, and electro-chemical industries. Together these industries are BC Hydro's biggest customers, and their needs and concerns are given serious consideration by BC Hydro.

The public hearing would provide additional benefits. While Westpac's Texada project has attracted public attention in the region, a BCUC hearing would provide an event to broaden public awareness of the potential issues related to the project. While it is usually hard to get the media interested in such a technical forum, the proceedings are public, and there is some chance of developing media coverage.

The hearings would also provide a forum for other stakeholders to voice their concerns. The BC Public Interest Advocacy Centre often represents groups that would likely oppose a new LNG gas-fired power facility. The BC Sustainable Energy Association, the Sierra Club of Canada–BC Chapter, and Dogwood Initiative may also wish to intervene.

We therefore suggest that affected First Nations, communities, groups, and individuals immediately begin calling for a public hearing if the Kitimat LNG proposal for gas-powered generation is resurrected, or if Westpac proceeds.

Affected First Nations and other communities have powerful arguments to justify the need for public hearings. Over the last few years, the BC government has gone out of its way to revitalize the BCuc. The principles of ratepayer accountability underlying the Commission argue strongly in favour of public hearings on any new gas-fired power/transmission line proposals, including consideration of the massive scope and impact of the project on the region. Moving forward without a public process under a government directive would undermine the reputation and legitimacy of the BCuc.

The best way to ensure that public hearings are required is for affected groups to apply to West Coast Environmental Law for an Environmental Dispute

Resolution Fund grant *(see page 39)* for representation to effectively engage the BCUC.

If they succeed in getting public hearings, affected communities and First Nations should quickly apply for a Participant Assistance Cost Award to offset the cost of participating in the process.

#### **Other Opportunities Citizen to Engage**

The *Species at Risk Act* (SARA) is the federal law that protects species considered threatened, endangered, or extirpated in Canada. The orca or killer whale populations in BC are divided into two groups, "Southern Residents" and "Northern Residents". SARA lists the Southern Residents as an endangered species and the Northern Residents as a threatened species. In early 2009 the federal government issued an order under SARA protecting resident orca habitat from destruction.

Under SARA, "critical habitat" is the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species. The critical habitat of the Southern Resident orca population includes the waters around the San Juan and Gulf Islands and up the Georgia Strait to the mid-point of Vancouver Island *(see maps on following pages)*. The occurrence of Southern Residents in this area is strongly correlated with the timing of salmon migration through these waters. Within this area, locations that are particularly important for foraging are the near shore waters along the west and southwest sides of San Juan Island, the southern tip of Vancouver Island, Swanson Channel off North Pender Island, and off the mouth of the Fraser River. These are on the exact route for LNG tankers transiting to Texada Island.

Tanker traffic and associated risk of oil spills was identified in the Recovery Strategy for the Southern Resident killer whales as a threat both to the whales and their critical habitat. The threat of oil spills within critical habitat poses not



Killer whales off the BC Coast. Tanker traffic and associated risk of oil spills are a threat to the whales and their critical habitat. Photo: Aldea Wood only an immediate and acute risk to the health of Resident orca whales, but also has the potential to make critical habitat uninhabitable for an extended period. According to the Recovery Strategy, Southern Resident orca populations are at risk of an oil spill because of the large volume of tanker traffic that travels in and out of Puget Sound and the Strait of Georgia. The proposed expansion of tanker traffic for proposed LNG facilities such as Westpac's Texada project would greatly increase this risk.

Previous drafts of the Recovery Strategy included areas around Caamano Sound, where LNG tankers leaving Kitimat would travel within the Northern Residents Critical Habitat. However, these areas were excluded from the final draft and thus are vulnerable. Scientists believe these areas need to be added to the critical habitat protected by the recent SARA order.

Pressuring DFO, Parks Canada, and the Ministry of Environment to use some of the tools available to them to ensure that the southern pods' critical habitat is off limits to oil and LNG tankers could create additional hurdles for LNG projects in southern BC. Similar pressure is needed to convince the federal government to amend the order to include the Northern Residents' critical habitat, which is vulnerable to LNG tankers out of Kitimat.



The critical habitat for northern resident killer whales in summer and fall in British Columbia. Map produced by BC Cetacean Sitings Network



Critical habitat for southern resident killer whales. The hatched area in US waters shows the approximate areas designated as southern resident critical habitat under the US *Endangered Species Act* (ESA). Map produced by BC Cetacean Sitings Network



Liquid Natural Gas tanker at port with LNG liquefaction plant in background. Photo: iStockphoto

Humpback whale fluke off the BC Coast. Photo: Aldea Wood

# Public Participation Summary for LNG Projects in BC

- I. Contact the BC Environmental Assessment Office to monitor whether the company proposing the LNG project has submitted a provincial environmental assessment, and have your concerns included in the terms of reference. The BC Environmental Assessment Office website is: http://www.eao.gov.bc.ca/
- Contact the federal Minister of the Environment Hon. Jim Prentice to request that all LNG projects be subject to a comprehensive assessment and a review panel. The Minister of the Environment's website is: http://www.ec.gc.ca/default.asp?lang=En&n=B6832638-I
- 3. Contact both the federal and provincial environmental assessment offices and demand that Kitimat LNG undergo a new assessment, since the project has been changed from LNG import project to an LNG export facility
- 4. Contact WestPac to find out what progress has been made on the issues they promised to follow up on. Westpac's website is: www.westpaclng.com
- 5. Once a federal environmental assessment is under way, apply for public funding to participate in it. The federal environmental assessment website is: http://www.ceaa-acee.gc.ca/default.asp?lang=En&n=E33AE9FB-I. In addition, if funding is needed to retain a lawyer to participate in the environmental assessment process, you can apply for an Environmental Dispute Resolution Fund grant: http://www.wcel.org/services/edrf/
- 6. Contact the Environmental Assessment Office if you are an affected First Nation, to ensure that you are comfortable with the terms of reference, and to ensure that your Aboriginal rights and title are recognized and that meaningful consultation occurs. The BC Environmental Assessment Office website is: http://www.eao.gov.bc.ca/. In addition, you can apply for Aboriginal Public Funding to participate in federal Aboriginal consultation activities, at: http://www.ceaa-acee.gc.ca/default. asp?lang=En&n=E33AE9FB-I



# **Opportunities for Law Reform**

## BC's Environmental Regulations

In 2002 a new *Environmental Assessment Act* was released in British Columbia. As noted above, the new Act substantially reduced the enforceability of environmental assessment legislation and regulation. The new *Environmental Assessment Act* discards protections that existed in the previous Act in favour of leaving environmental assessments to the discretion of the Minister. In particular, it deregulates and decreases funding for environmental assessment, leaving a process with "no independence and no neutrality".<sup>1</sup> Many people feel the current *Environmental Assessment Act* is "a ticket for environmental degradation, and clearly ranks short-term economic development above long-term environmental protection."<sup>2</sup>

Since environmental assessments are discretionary, there is no guarantee that they will be conducted on reviewable projects.<sup>3</sup> Under BC's *Reviewable Project Regulation*, when an activity meets the threshold for review, it does not actually trigger an environmental assessment; it merely triggers a decision by the Executive Director of the Environmental Assessment Office about whether an assessment will go forward. Under this legislation it is possible that certain reviewable projects will not have any public review or any formal assessment process.<sup>4</sup> This needs to be changed.

Fewer projects are now subject to review, and even the kinds of projects that are still reviewed have much more leeway before an evaluation is triggered. New resource development projects are emerging in connection with the BC government's intention to double oil and gas development in the province. These initiatives are escaping public review and will continue to slip through until the *Environmental Assessment Act* is reformed.

Another key reform is to make the environmental assessment legislation support intervenor funding. The assessment process is complex and difficult to navigate without experienced counsel. Currently communities, First Nations, affected groups, and individuals can be forced to assume the costs of lawyers and experts to defend their interests against the legal power of project proponents. New mechanisms must be created to ensure that legal resources and experts are made available to affected groups throughout the assessment process, without the public participants having to bear the cost.

Another concern is that the BC Environmental Assessment Act does not involve

Texada Island and the Sunshine Coast at dawn. Photo: ToddBF, Flickr

Liquid Natural Gas Tanker. Photo: Turner's Images, Flickr Aboriginal governments at the project committee level. The new Act removes reference to First Nations' interests, except in s. 29, which recognizes the Nisga'a Treaty. The *Environmental Assessment Act* should be amended to reflect the constitutional requirements for meaningful consultation with First Nations.<sup>5</sup>

Furthermore, in BC the time limit to review a project for environmental assessment is six months. This limited time frame impedes meaningful public consultation. The *Environmental Assessment Act* should be amended to ensure that the affected members of the public have enough time to voice their concerns about projects.<sup>6</sup>

In addition, the *Pipeline Act* and *Petroleum and Natural Gas Act* should be amended to include checks and balances specifically tailored to the issues related to LNG. Currently, LNG projects are being regulated under provisions designed for conventional natural gas projects.

Finally, legislation like the *Pipeline Act* and *Petroleum and Natural Gas Act* should be amended to require a public hearing before authorization under these statutes of any major industrial project that was not authorized by existing land use plans.

## Federal Environmental Regulation

The federal government is currently reviewing the *Canadian Environmental Assessment Act*, and concerns are being raised regarding the further deregulation and exemptions being proposed for the Act.

The Canadian Environmental Assessment Agency has suggested changes to the *Environmental Assessment Act*, which could be introduced as a bill in early spring. The proposed bill in Ottawa would remove many legal requirements to undertake environmental assessments. Currently the federal government conducts 5,000 environmental assessments a year. The new bill would create a list of 200 to 300 projects a year for review. The projects on the list for review can be subject to further exemptions under certain conditions.<sup>7</sup> In addition to limiting the number of projects for review, the bill removes the current triggers for environmental assessment.

The proposed changes to the federal Act have left Canadian environmental groups concerned. Stephen Hazell, Executive Director of the Sierra Club of Canada, stated that "the proposed exemptions are so broad the number of projects being assessed could be far less than 200 ... we argue it could be zero."<sup>8</sup>

Jamie Keen, a communications officer for Mining Watch Canada, questioned the government's motivation for the changes, because tools already exist in the legislation to help speed up and streamline the assessment process.<sup>9</sup> This begs the question of the real purpose of legislation whose stated function is to create a "much timelier and predictable process."<sup>10</sup>

The passage of this proposed legislation would significantly decrease environmental protection in Canada. Environmental assessment of projects protects Canadians from irreversible environmental, social, cultural, and even economic damage. Assessment is an important safeguard that should be strengthened, not undermined. Citizens concerned about this proposed bill should contact their MP to voice their concerns.



## **For More Information**

## Environmental and Community Organizations

Texada Action Now Community Association, www.texadaactionnow.org

Texada LNG, www.texadalng.com

Dogwood Initiative, www.dogwoodinitiative.org

West Coast Environmental Law's Environmental Dispute Resolution Fund, http://www.wcel.org/services/edrf/

Georgia Strait Alliance, http://www.georgiastrait.org/

Ratepayers for Affordable Clean Energy, http://lngpollutes.org

## Industry

WestPac LNG website, www.westpaclng.com

Kitimat LNG website, http://www.kitimatlng.com

## Federal Government

Canadian Environmental Assessment Agency, Pubic Participation, http://www.acee-ceaa.gc.ca/011/index\_e.htm

Find your Member of Parliament (MP) to express your concern: http://www2. parl.gc.ca/Parlinfo/Lists/Members.aspx

Contact the Federal Minister of the Environment, Hon. Jim Prentice, to express your concern: http://www.ec.gc.ca/default.asp?lang=En&n=B6832638-I

## **Provincial Government**

British Columbia Environmental Assessment Office, http://www.eao.gov.bc.ca/

Find your Member of the Legislative Assembly (MLA) to express your concern: http://www.leg.bc.ca/MLA/3-I-I.htm

Contact BC's Minister of the Environment, Hon. Barry Penner, to express your concern: http://www.gov.bc.ca/env/contacts.html

Contact BC's Minister of Energy, Mines and Petroleum Resources, Hon. Blair Lekstrom, to express your concern: http://www.leg.bc.ca/MLA/38thParl/lekstrom.htm

Shell Tanker 'LNG Cross River' lights up an otherwise tranquil night. Photo: Chablis, Flickr

Sunfish (also known as Mola Mola) off the BC Coast. Photo: Aldea Wood Appendix I: LNG Regulatory Requirements



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Appendix II: Chronology of LNG Accidents CHRONOLOGICAL LIST OF LNG ACCIDENTS

	Comment	LNG peakshaving facility. Tank failure and no earthen berm. Vapor cloud formed and filled the surrounding streets and storm sewer system. Natural gas in the vaporizing LNG pool ignited.		Overfilling. Tank covered and deck fractures.	Valve leakage. Deck fractures.	First documented LNG rollover incident. Tank developed a sudden increase in pressure. LNG vapor discharged from the tank safety valves and vents. Tank roof slightly damaged. No ignition.	Industrial incident unrelated to the presence of LNG (construction incident). During the repairs, vapors associated with the cleaning process apparently ignited the mylar liner. Fire caused temperature in the tank to rise, generating enough pressure to dislodge a 6-inch thick concrete roof, which then fell on the workers in the tank.	Glass breakage. Small amount of LNG spilled upon a puddle of rainwater, and the resulting flameless vapor explosion, called a rapid phase transition (RPT), caused the loud "booms". No injuries resulted.	Valve leakage. Deck fractures.
	LNG Spill/ Release	NA	Yes	Yes	Yes	Yes	O Z	Yes	Yes
cidents	Ship/ Property Damage	AN		Yes	Yes	ΥN	°Z	Yes	Yes
	Injuries/ Fatalities	128 deaths	1 seriously burned	No	ON	NA	40 killed	No	No
	Ship Status	NA	A transfer operation	Loading	Disconnec ting after discharge	Unloading LNG into the storage tank	۲ ۲	AN	Loading
	Location	Cleveland, Ohio, US	Canvey Island, UK			Italy	Staten Island, NY, US	Canvey Island, UK	
	Ship/Facility Name	East Ohio Gas LNG Tank		Jules Vernet	Methane Princess	LNG ship Esso Brega, La Spezia LNG Import Terminal	Texas Eastern Transmission, LNG Tank		Massachusetts
Major LNG In	Incident Date	1944	1965	1965	1965	1971	1973	1973	1974

Cabrillo Port Liquefied Natural Gas Deepwater Port Revised Draft EIR

C3.1-1

March 2006



## Endnotes

## LNG Proposals in BC

I. Kitimat LNG Inc., *Project Description*, online: http://www.kitimatlng.com.

2. Ibid.

3. Kitimat LNG, Kitimat LNG Terminal: Preliminary Information Document (November 2008), online: Kitimat LNG http://www.kitimatlng.com/upload/documents/ pdf/RequestExpressInt\_Novo8.pdf and Canadian Petroleum Producers, *British Columbia's Oil and Natural Gas Industry*, online: CAPP http://www.capp.ca/GetDoc. aspx?DocID=84443.

Kitimat LNG plans to export 5 million metric ton/year. For natural gas, I metric ton = 48,700 cubic feet, therefore, Kitimat LNG plans to export 243,500,000,000 cubic feet per year (5 million x 48,700 cubic feet). This equates to 24.35% (24%) of BC's estimated I trillion cubic feet/year production of natural gas ((243,500,000,000 / I trillion) x 100).

4. Kitimat LNG, Press release; Kitimat LNG, Haisla First Nation finalize partnership agreement online: http://www.kitimatlng.com/code/navigate.asp?Id=38

5. Gitga'at – People of the Cane, *Governance*, online: http://www.gitgaat.net/people/governance.htm.

6. WestPac LNG Corporation, Project Description, http://www.westpaclng.com.

7. Richard Fletcher, *WestPac LNG*. *Wrong Direction for BC*, online: Texada Action Now http://www.texadaactionnow.org/Documents/Wrong%20Direction.pdf.

8. Ministry of Energy, Mines and Petroleum Resources, *BC Energy Plan: Electricity Policy*, online: Province of BC http://www.energyplan.gov.bc.ca/PDF/BC\_Energy\_Plan\_Electricity.pdf.

9. Richard Fletcher, *WestPac LNG*. *Wrong Direction for BC*, online: Texada Action Now http://www.texadaactionnow.org/Documents/Wrong%20Direction.pdf.

10. Ibid.

11. WestPac LNG, *Environmental Assessment and Regulatory Process*, online: WestPac LNG, http://www.westpaclng.com/index.php?pageId=Stakeholder+Engagement.

12. WestPac LNG, *Texada Island Terminal*, online: WestPac LNG, http://www.westpaclng.com/index.php?pageId=Texada+Island+Terminal.

13. The Constitution Act, 1982, 30 & 31 Victoria, c. 3 (U.K), s. 35 online: Government of Canada http://laws.justice.gc.ca/en/const/annex\_e.html.

14. Texada LNG, Welcome to TexadaLNG.com, online: http://texadalng.com/.

## Issues for LNG projects in BC

I. Paul W. Parfomak and John Frittelli, *Maritime Security: Potential Terrorist Attacks* and *Protection Priorities* (14 May 2007), online: Congress Research Service http://www.

Aerial view of Texada Island. Photo: paulhami, Flickr fas.org/sgp/crs/homesec/RL33787.pdf.

2. Richard Cobanli, *Safety Zones for LNG Carriers in Atlantic Canada*, online: Transport Canada Marine Safety Atlantic Region, http://a100.gov.bc.ca/appsdata/epic/ documents/p244/1131667690726\_77a2b2b2708941329c009d0c7dcc9544.pdf.

3. Paul W. Parfomak and John Frittelli, *Maritime Security: Potential Terrorist Attacks and Protection Priorities* (14 May 2007), online: Congress Research Service http://www.fas.org/sgp/crs/homesec/RL33787.pdf.

4. Richard Fletcher, *WestPac LNG*. *Wrong Direction for BC*, online: Texada Action Now http://www.texadaactionnow.org/Documents/Wrong%20Direction.pdf.

5. Doug Quillen, *LNG Safety Myths and Legends* (May 2002), online: Chevron Texaco, http://www.netl.doe.gov/publications/proceedings/02/ngt/Quillen.pdf.

6. Paul Parfomak, Liquefied Natural Gas (LNG) Import Terminals: Siting, Safety and Regulation (28 January 2004), online: CRS Report for Congress http://www.au.af.mil/au/awc/awcgate/crs/rl32205.pdf.

7. Texada Action Now Community Association, online: http://www.texadaactionnow. org/.

8. Paul Parfomak, Liquefied Natural Gas (LNG) Import Terminals: Siting, Safety and Regulation (28 January 2004), online: CRS Report for Congress http://www.au.af.mil/au/awc/awcgate/crs/rl32205.pdf.

9. The Canadian Press, *Kitimat LNG to Export Instead of Import Liquefied Natural Gas from Planned Site* (19 September 2008), online: http://www.oilweek.com/news.asp?ID=18719.

10. Ryan Stuart, *Liquid Gold* (1 March 2008), online: BC Business http://www. bcbusinessonline.ca/node/2178

11. Russell Gold, *Bad Call* (8 February 2009), online: The Wall Street Journal, http://online.wsj.com/article/SB123378467642449289.html?mod=googlenews\_wsj.

12. Ibid.

13. Rory Cox and Robert Freehling, *Collision Course* (2008), online: Pacific Environment http://www.raceforcleanenergy.org/downloads/PacEnvCollisionCourse-FINAL.pdf.

14. Ibid.

15. Ibid.

16. Ibid.

17. Richard Heede, LNG Supply Chain Greenhouse Gas Emissions for the Cabrillo Deepwater Port: Natural Gas from Australia to California (7 May 2006), online: Climate Mitigation Services http://www.slc.ca.gov/Division\_Pages/DEPM/DEPM\_ Programs\_and\_Reports/BHP\_Deep\_Water\_Port/ERRATA\_CSLC/Vol%20II/EDC%20 Attachments%20Vol%20II-06a.pdf.

18. WestPac LNG, *Texada Island Terminal*, online: WestPac LNG, http://www. westpaclng.com/index.php?pageId=Texada+Island+Terminal.

19. Richard Fletcher, *WestPac LNG*. *Wrong Direction for BC*, online: Texada Action Now http://www.texadaactionnow.org/Documents/Wrong%20Direction.pdf.

20. LNG Alliance, *Stopping the LNG Project on Texada Island*, online: http://texadalng.com/LNG\_Backgrounder\_17Dec2007.pdf.

21. Ibid.

22. Ibid.

23. Tourism British Columbia, Northern British Columbia Regional Profile (November 2008), online: http://www.tourism.bc.ca/PDF/Regional%20Profiles\_ NorthernBC\_2008.pdf

24. Paulina Jaramillo, Michael Griffin and Scott Matthews, "Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG and SNG for Electricity Generation" (2007) 41 Environ. Sci. Technol. 6290 – 6296 online: http://www.texadalng.com/ Jaramillo\_ComparativeLCACoalNG.pdf.

25. Richard Fletcher, WestPac LNG. Wrong Direction for BC, online: Texada Action

Now http://www.texadaactionnow.org/Documents/Wrong%20Direction.pdf.

26. Paulina Jaramillo, Michael Griffin and Scott Matthews, "Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG and SNG for Electricity Generation" (2007) 41 Environ. Sci. Technol. 6290 – 6296 online: http://www.texadalng.com/ Jaramillo\_ComparativeLCACoalNG.pdf.

27. WestPac LNG, *Texada Island Terminal*, online: WestPac LNG, http://www. westpaclng.com/index.php?pageId=Texada+Island+Terminal and Richard Fletcher, WestPac LNG. Wrong Direction for BC, online: Texada Action Now http://www. texadaactionnow.org/Documents/Wrong%20Direction.pdf.

28. Richard Fletcher, *WestPac LNG*. *Wrong Direction for BC*, online: Texada Action Now http://www.texadaactionnow.org/Documents/Wrong%20Direction.pdf.

29. Arthur Caldicott, *LNG in the Georgia Basin,* online: Georgia Strait Alliance http://www.georgiastrait.org/files/share/LNG\_Briefing\_Notes.pdf.

30. Richard Fletcher, *WestPac LNG*. *Wrong Direction for BC*, online: Texada Action Now http://www.texadaactionnow.org/Documents/Wrong%20Direction.pdf.

31. Greenhouse Gas Reduction Targets Act, SBC 2007, c. 42, online: http://www.bclaws. ca/Recon/document/freeside/--%20g%20--/greenhouse%20gas%20reduction%20 targets%20act%20%20sbc%202007%20%20c.%2042/00\_07042\_01.xml.

32. LNG Alliance, Stopping the LNG Project on Texada Island, online: http://texadalng. com/LNG\_Backgrounder\_17Dec2007.pdf.

33. WestPac LNG. *Questions Raised at Texada Public Meetings,* online: WestPac LNG http://www.westpaclng.com/uploads/LNG\_Q\_A\_2007.pdf.

34. LNG Alliance, Stopping the LNG Project on Texada Island, online: http://texadalng. com/LNG\_Backgrounder\_17Dec2007.pdf.

35. Ibid.

#### What government approvals are needed for LNG projects?

I. *The Constitution Act,* 1867, 30 & 31 Victoria, c. 3 (U.K), s. 910nline: Government of Canada, http://laws.justice.gc.ca/en/const/c1867\_e.html#pre.

2. The Constitution Act, 1867, ibid., s. 92.

3. Canada, National Energy Board, "Pipeline regulation in Canada: A guide for landowners and the public," Ottawa, 2003.

4. Ibid.

5. *The National Energy Board Act,* online: Government of Canada, : http://www.canlii.org/en/ca/laws/stat/rsc-1985-c-n-7/latest/rsc-1985-c-n-7.html

6. Canadian Institute of Resources Law, "The Legal and Policy Framework for managing Public Access to Oil and Gas Corridors on Public Land in Alberta, Saskatchewan and British Columbia," Calgary, Alberta, 2004.

7. The NEB may exempt certain activities from project approval, including: (I) pipelines or branches of, or extensions to, pipelines not exceeding forty kilometres in length; and (2) such tanks, reservoirs, storage facilities, pumps, racks, compressors, and loading facilities as the Board considers appropriate.

8. National Energy Board, *The Public Hearing Process—Your Guide to Understanding NEB Hearing* online: http://www.neb.gc.ca/clf-nsi/rthnb/nvlvngthpblc/pblchrng/pblchrngpmphlt-eng.html#s1.

9. Ibid.

10. Ibid.

11. West Coast Environmental Law, Memo on *TERMPOL Review Process and Enbridge Gateway Project*, July 25, 2007

12. Transport Canada, *Termpol Review Process* 2001, TP743E (January 2001), at Forward, online: Transport Canada Marine Safety < http://www.tc.gc.ca/publications/EN/ TP743/PDF/HR/TP743E.pdf> [Termpol Code] 13. Memorandum of Understanding Between Transport Canada and Fisheries and Oceans Respecting Marine Transportation Safety and Environmental Protection, (April 1996), at p. 21, online: Transport Canada Marine Safety http://www.tc.gc.ca/marinesafety/TP/ mou/memo-tc.pdf.

14. Transport Canada, *Termpol Review Process* 2001, TP743E (January 2001), at para 1.1.1, online: Transport Canada Marine Safety http://www.tc.gc.ca/publications/EN/ TP743/PDF/HR/TP743E.pdf.

15. West Coast Environmental Law, Memo on TERMPOL Review Process and Enbridge Gateway Project, July 25, 2007

16. West Coast Environmental Law, Memo on *TERMPOL Review Process and Enbridge Gateway Project*, July 25, 2007

17. Transport Canada, *Termpol Review Process* 2001, TP743E (January 2001), at para 2.3.1, online: Transport Canada Marine Safety http://www.tc.gc.ca/publications/EN/TP743/PDF/HR/TP743E.pdf.

18. The TERMPOL Code details the types of studies that can be required by the TRC. These include: The Code details the studies that can be required by the TRC. The studies are:

• Origin, Destination and Marine Traffic Volume Survey;

- Fishing Vessel Operations Survey;
- Offshore Exercise and Offshore Exploration and Exploitation Activities Survey;
- Special Underkeel Clearance Survey;
- Transit Time and Delay Survey;
- Casualty Data Survey;
- Ship Specifications;
- Site Plans and Technical Data;
- Cargo Transfer and Transhipment Systems;
- Channel, Manoeuvring and Anchorage Elements;
- Berth Procedures and Provisions;
- Single Point Mooring Provisions and Procedures;
- General Risk Analysis and Intended Methods of Reducing Risks;
- Terminal Operations Manual;
- · Contingency Planning; and
- Oil Handling Facilities Requirements.

Transport Canada, *Termpol Review Process 2001*, TP743E (January 2001), at para 2.3.1, online: Transport Canada Marine Safety < http://www.tc.gc.ca/publications/EN/TP743/PDF/HR/TP743E.pdf

19. Ibid.

20. Navigable Waters Protection Act, R.S.C. 1985, c. N-22

## Endnotes to Provincial processes, laws and approvals

1. British Columbia, Environmental Assessment Office. "Who we are – What we do," 2004.

2. Environmental Assessment Act, S.B.C. 2002, c. 43. For an overview, see Environmental Assessment Office, *Guide to British Columbia Environmental Assessment Process* (March 2003), online: Province of BC, http://www.eao.gov.bc.ca/guide/2003/.

3. Ibid.

4. British Columbian Assessment Office., "Who we are - What we do".

5. Environmental Assessment Act, S.B.C. 2002, c. 43, s. 10(1)(b).

6. West Coast Environmental Law, Deregulation Backgrounder, Bill 37: Significant Project Streamlining Act, online: WCEL http://www.wcel.org/deregulation/bill75.pdf

7. Environmental Assessment Office, *Guide to British Columbia Environmental Assessment Process* (March 2003), online: Province of BC, http://www.eao.gov.bc.ca/guide/2003/.

8. Ibid.

## Opportunities for Citizen Engagement in LNG

I WestPac LNG. *Questions Raised at Texada Public Meetings,* online: WestPac LNG http://www.westpaclng.com/uploads/LNG\_Q\_A\_2007.pdf.

```
3. Ibid.
```

4. BC Environmental Assessment Office, *Public Participation*, online: Province of BC http://www.eao.gov.bc.ca/participation.html.

5. Ibid.

6. Canadian Environmental Assessment Agency, *Public Participation*, online: Government of Canada, http://www.ceaa-acee.gc.ca/default.asp?lang=En&n=8A52D8E4-1.

```
7. Ibid.
```

8. Canadian Environmental Assessment Agency, *Participant Funding Program*, online: Government of Canada, http://www.ceaa-acee.gc.ca/default. asp?lang=En&n=E33AE9FB-1.

9. West Coast Environmental Law, *EDRF – The Environmental Dispute Resolution Fund*, online: WCEL http://www.wcel.org/services/edrf/.

10. Many of the suggestions for citizen engagement come from West Coast Environmental Law, Memo on *TERMPOL Review Process and Enbridge Gateway Project*, July 25, 2007

11. BCUC website: http://www.bcuc.com/Hearing.aspx.

## **Opportunities for Law Reform**

I. West Coast Environmental Law, *Deregulation Backgrounder, Bill* 38: *The New Environmental Assessment Act,* online: WCEL http://www.wcel.org/deregulation/bill38.pdf.

- 2. Ibid.
- 3. Ibid.
- 4. Ibid.
- 5. Ibid.
- 6. Ibid.

7. CBC, Proposed Bill Could Cut Federal Environmental Assessments, NGOs Warn (13 March 2009), online: CBC News, http://www.cbc.ca/technology/story/2009/03/13/tech-090313-environmental-assessments.html?ref=rss.

- 8. Ibid.
- 9. Ibid.
- 10. Ibid.



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<sup>2.</sup> Ibid.