

Copyright December 2013 by ForestEthics Advocacy.

Founded in April 2012, ForestEthics Advocacy is a non-profit society in Canada devoted to public engagement, outreach and environmental advocacy—including political advocacy. We secure large-scale protection of endangered forests and wild places and transform environmentally destructive resource-extraction industries.

Cover photo: Sean Allen

Report prepared by:
Amanda Follett and Nikki Skuce, ForestEthics Advocacy

nikki@forestethicsadvocacy.org

Box 3022, Smithers, B.C. V0J 2N0

Table of Contents

Executive Summary	1
Introduction	2
Enbridge Northern Gateway's Incomplete Application	4
Failure to assess environmental effects and outline mitigation measures	
Failure to establish an oil spill response plan	
Failure to define the pipeline's proposed route	
Failure to assess impacts to aboriginal culture	
Failure to assess existing and potential geohazards along the pipeline route	
Aboriginal Rights and Title	9
Risks to traditional resources	
Loss of culture	
Risks greatly outweigh economic benefits	
Importance of aboriginal law	
Need for consultation	
Cumulative Effects	13
Questionable Economics	14
Jobs shipped to Asia	
Asia premium has a shelf life	
Market support not proven	
Likelihood of an Oil Spill	16
Enbridge's poor track record	
Automatic leak detection not infallible	
Extreme weather, remote terrain	
The cost of a cleanup	
Doing nothing qualifies as response	
Diluted Bitumen a Relatively Unknown Substance	20
What is at Risk: Northern Lifestyles, Economies and Wildlife	21
Enbridge Has No Social Licence	23
Conclusion	24
Endnotes	25



Executive Summary

Enbridge is seeking permission to build two 1,170-kilometre pipelines running between the tar sands in northern Alberta to the port of Kitimat, B.C. One pipeline would carry 525,000 barrels per day of diluted bitumen for transport to Asia via supertankers, and the other would import condensate. The pipelines would cross hundreds of salmon-bearing rivers and streams, including the Fraser and the Skeena. Enbridge's project would also introduce oil supertankers to the Great Bear Sea for the first time. The potential effects of Enbridge's proposed Northern Gateway Pipelines are huge and far-reaching.

For 18 months beginning January 2012, a three-member Joint Review Panel (JRP) with the National Energy Board and Canadian Environmental Assessment Agency held public and technical hearings in communities across Alberta and British Columbia. The JRP is tasked with assessing whether or not Enbridge's Northern Gateway pipelines are in the public interest. During the JRP hearings, First Nations, labour and environmental groups, political representatives, community-based groups and individuals cross-examined Enbridge on its application and evidence. It became clear early on that there were gaping holes in Northern Gateway's application.

During the JRP process, intervenors attempting to examine Enbridge's application were frustrated by the lack of evidence produced and research undertaken by the pipeline company. Repeatedly, the panel heard that Enbridge would conduct studies following the approval of its application, far too late for public input. As the Province of B.C. concluded in its final arguments, "Northern Gateway should not be granted a certificate on the basis of a promise to do more study and planning once the certificate is granted... 'Trust me' is not good enough in this case."

The panel could reject Enbridge's application on many other points, including the company's disregard for aboriginal rights and title, its questionable economics, the cumulative effects from a variety of proposed energy projects in the region and the catastrophic effects of an oil spill. The diluted bitumen Enbridge proposes to transport is untested and its behaviour in water unclear, making cleanup challenging. What stands to be lost are the cultures, lifestyles, wildlife and economies of northwest B.C. Enbridge has chosen to ignore the perspectives of local residents.

This high-risk project would have significant consequences across Canada. The strong majority of participants concluded in their final arguments that Northern Gateway posed too many risks and should not be built. This report highlights evidence and arguments made during the hearings against Enbridge's project.

In June, the panel began deliberating on its decision about whether or not Enbridge Northern Gateway is in Canadians' best interest. The JRP's decision is expected the end of December 2013. We hope that the JRP will conclude, as most participants in the process did, that Enbridge Northern Gateway is not in Canada's national interest and must be rejected.

Introduction

The potential effects of Enbridge's proposed Northern Gateway Pipelines are huge and far-reaching. The pipelines, which would extend from Bruderheim, Alberta to Kitimat, in northern British Columbia, would cross countless tributaries to some of Canada's most significant watersheds, including the Fraser and Skeena, two of B.C.'s most important salmon-bearing rivers. It would also cross the traditional territories of dozens of First Nations, the majority of which oppose the pipeline.

One of the pipelines would carry bitumen, a heavy, tarry substance mined in Alberta's tar sands, whose properties remain relatively unknown. The other would carry condensate, a petro-chemical used to dilute the bitumen so it will flow down the pipeline, to the tar sands. The export of diluted bitumen, or "dilbit," to overseas markets would impact Canadian jobs, economy and pricing.

For 18 months beginning January 2012, a three-member Joint Review Panel (JRP) with the National Energy Board and Canadian Environmental Assessment Agency held public and technical hearings in communities across Alberta and British Columbia. The JRP heard evidence and testimony from hundreds of First Nations, labour and environmental groups, political representatives, community-based groups and individuals expressing the same concern: that the risks associated with the project far exceed any uncertain economic benefits. In June, the panel began deliberating on its decision about whether or not Enbridge Northern Gateway is in Canadians' best interest. The JRP's decision is expected the end of December 2013.

The panel could reject Enbridge's application on many points, including the company's disregard for aboriginal rights and title, the questionable economics laid out in its application, the combined effects from a variety of proposed energy projects in the region and the catastrophic effects of an oil spill. However, it could also turn down the application based on one reason alone: the gaping holes in Northern Gateway's application to the National Energy Board (NEB).





Enbridge Northern Gateway's Incomplete Application

If for no other reason, Northern Gateway's application should be turned down for its lack of due diligence. During the 18-month JRP process, community members and experts attempting to examine Enbridge's application were frustrated by the lack of evidence produced and research undertaken by the pipeline company. Repeatedly, the panel heard that Enbridge would conduct studies following the approval of its application, far too late for public input.

For the JRP to recommend project approval when its application does not comply with the Canadian Environmental Assessment Act would be inappropriate, to say the least. As the Haisla Nation points out, "this information is critical to the assessment of the proposed project, and Northern Gateway's failure to provide it is fatal to any positive recommendation."¹

Failure to assess environmental effects and outline mitigation measures

Northern Gateway has not defined the project's environmental effects nor has it outlined mitigation measures, instead deferring them until after approval.² It is impossible for the JRP to do its job—to determine whether the project is in the public interest—when it cannot weigh the project's benefits against its impacts.

For example, during cross-examination Enbridge acknowledged that the project's effects on marine mammals are uncertain and that no studies had been done to determine killer whale habitat.³ Although it agreed to have a Marine Mammal Protection Plan drafted by 2012, it now says the draft will not be completed until after project approval.

The potential environmental impacts from Northern Gateway pipelines are far-reaching: simple pipeline construction and oil tanker traffic on the northwest coast—regardless of a spill—would have detrimental effects on wildlife and habitat. Enbridge's application fails to consider the effects of these routine operations, which would include impacts to marine fisheries (including commercial, recreational and aboriginal food fisheries), as well as fish and fish habitat.⁴ It also lacks an appropriate risk assessment in relation to accidents and malfunctions, not to mention its failure to adequately assess the risks of an oil spill,⁵ which would be a matter of when not if.

Furthermore, baseline studies for species affected by the project were incomplete, relying upon literature rather than field studies.⁶ The application fails to provide adequate baseline data,⁷ to properly consider SARA-listed species,⁸ to select appropriate key indicator species⁹ and

HOW CAN FIRST NATIONS AND RESIDENTS OF NORTHERN BRITISH COLUMBIA, SO RELIANT ON HEALTHY WATERSHEDS AND THE COAST, REALLY **TRUST** THIS COMPANY THAT IS UNABLE, DESPITE ITS MASSIVE BUDGET, TO ANSWER BASIC, FUNDAMENTAL QUESTIONS?

– FORESTETHICS ADVOCACY, PIPELINES AND PROMISES: A SUMMARY OF MISSING ENBRIDGE EVIDENCE BEFORE THE JRP HEARINGS



to employ a proper risk assessment,¹⁰ to name a few. The material also failed to take into account a shifting environmental baseline caused by other projects, which would also contribute to environmental degradation. As a result, the project's true cumulative effects are not known.¹¹

Failure to establish an oil spill response plan

While Enbridge has asserted it will be able to effectively respond to a marine spill of up to 32,000 tons within six to 12 hours and recover the oil within 10 days, it has not said how it will do this.¹² Considering what is at risk off B.C.'s north coast, it would seem prudent to clearly outline a detailed oil spill response plan. However, Northern Gateway has failed to produce such a plan, delaying the task until after project approval.

Northern Gateway isn't a typical pipeline: the diluted bitumen it will be carrying is a relatively untested substance and its behaviour in various water conditions is yet unknown. Enbridge argued in the JRP hearings that dilbit floats in water, despite having to dredge the bottom of the Kalamazoo River following the 2010 spill of over three million litres in Marshall, Michigan. Northern Gateway would traverse remote, unstable mountainous terrain that is difficult to access. A spill into these watersheds would be devastating.¹³

Northern Gateway has not presented nor evaluated a technically feasible recovery strategy for submerged oil below a few metres in depth. Therefore, not only are the environmental effects of submerged oil in this location unknown, the mitigation strategies for recovery of the oil are untested.¹⁴

Coupled with this is the treacherous nature of the waters that supertankers would pass through on their way to and from the Kitimat terminal. Hecate Strait is the fourth most dangerous body of water in the world, with sudden weather changes creating higher-than-average waves in the shallow channel.¹⁵ Despite this, Enbridge failed to adequately assess Hecate Strait's tides, winds and storms when it comes to a spill.

It has not been established that the significant adverse environmental effects of a marine oil spill can be effectively prevented or mitigated. Outside of promising "world-class response capability,"¹⁶ Northern Gateway has yet to produce such a plan and has stated that in some instances doing nothing might be a possible oil spill response.¹⁷

Failure to define the pipeline's proposed route

Another source of frustration for those attempting to cross-examine Enbridge was the shifting nature of its plans, which amounted to a sleight-of-hand when attempting to assess the pipeline's route.

JRP intervenor Friends of Morice-Bulkley found itself stymied by Enbridge

witnesses while attempting to question them about the effects of a pipeline rupture on the Morice River. During the cross-examination, it became apparent that the Morice River area is the subject of a route-revision that could move the pipeline two to three kilometres farther from the river.¹⁸

It's currently unknown whether the new route has been confirmed, what other hazards it could present, or if its move away from a Forest Service Road would reduce access in the case of a spill.¹⁹ In fact, it's unknown whether the move is a positive one or one that brings additional concerns, because it wasn't available for examination during the JRP. As it stands, the public will never have the opportunity to question Enbridge about it. The fluid nature of Northern Gateway's plans made it impossible to effectively question its witnesses, wasting the time of both intervening parties and the panel members.

As well, hazards to such precarious proposed infrastructure as the Clore Tunnel have not been assessed, as Northern Gateway has testified the tunnel could move by up to 500 metres.²⁰ The Gitga'at First Nation, in its final arguments to the JRP, noted that it was unable to "keep pace with (that is, seek further expert review and respond to) the ever expanding and sometimes shifting evidence of the Proponent." Certainly, other groups with limited resources struggled similarly with the ongoing changes.²¹

Failure to assess impacts to aboriginal culture

Enbridge has repeatedly shown its disregard and ignorance for First Nations rights and title. The Gitxaala First Nation has said that, despite repeated requests, Enbridge had not incorporated the nation's traditional land use information into its environmental assessment by the time the JRP hearings drew to a close in June 2013.²² According to the nation's final arguments, Enbridge failed to assess impacts to Gitxaala's use of the land for traditional purposes, assess impacts to aboriginal rights, properly value environmental costs and to adequately identify and assess mitigation measures.²³ Enbridge's lack of regard for aboriginal title indicates the company is unaware of First Nations' rights and how much weight they carry in British Columbia.

Failure to assess existing and potential geohazards along the pipeline route

Much terrain along the proposed pipeline route is unstable and could pose significant threats due to landslides; however, Northern Gateway has not completed its assessment of existing and potential geohazards.²⁴ Like so many elements of the proposed project, the company says it will complete the geohazard assessment following pipeline approval.



Wet'suwet'en Chief Namoks, Tsayu Clan, House of Tsa K'ex Yex

Yet to be completed are additional LIDAR surveys to detect landslide features.²⁵ The application also fails to note known areas of instability, mapping only a two-kilometre corridor around the pipeline route, rather than to the height of land.²⁶ The effects of climate change and mountain pine beetle destruction could also continue to increase the number of landslides in northern B.C.²⁷ and have not been examined.

Allowing Northern Gateway's application to proceed would be unfair to the intervenors who invested a great deal of time and resources in responding to Enbridge's application, and it would negate public input on these components if they are submitted after the public hearing process is complete. As a result, there would be no public oversight as the project moves forward.²⁸ As the Province of B.C. remarked clearly in its final arguments, the lack of detail from Enbridge led to the conclusion that "trust me" isn't good enough.

The precautionary principle, adopted by Canada in the Rio Declaration on Environment and Development, states that, "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."²⁹ The JRP should reject Enbridge's application based on this principle alone.



IT WAS CONFIRMED
IN THE TESTIMONY
GIVEN BY NORTHERN
GATEWAY THAT
**ABORIGINAL TITLE
HASN'T BEEN
CONSIDERED FOR
THE PROJECT.**

– JENNIFER GRIFFITH,
LAWYER FOR THE HAISLA
NATION

WE TALK ABOUT THE WEALTH. MONEY DOESN'T MEAN NOTHING. THIS IS WHAT I HEAR FROM A LOT OF SMGIGYET IS HOW TRUE IT IS. **OUR WEALTH IS ALL AROUND US HERE:** THE SEAFOOD, THE MAMMALS. WHAT DO WE DEPEND ON? FOR YEARS, OUR ELDERS BACK HERE — THEY STILL DEPEND ON THAT.

– GITXAALA HOUSE LEADER LARRY BOLTON, FINAL SUBMISSIONS OF GITXAALA NATION



Aboriginal Rights and Title

Aboriginal rights and title are protected under the Canadian constitution, allowing First Nations to use and exercise control over their land as they choose.³⁰ The proposed pipeline would cross the traditional territories of approximately 50 First Nations who have not ceded their claim to the land.³¹ The majority are openly opposed to Enbridge's pipelines and tankers.

The JRP's purpose is to assess the merits of a project based on the interests of all Canadians. It's hard to imagine what economic benefits could account for putting at risk aboriginal cultures that have thrived on B.C.'s northwest coast for thousands of years. The Northern Gateway project would result in an unjustifiable infringement of First Nations' aboriginal rights and title.³²

Risks to traditional resources

First Nations are supported spiritually, physically, socially and economically by resources from the land and the ocean. Those natural resources would be risked if pipelines and oil tankers were allowed to pass through traditional territories. Northern Gateway would directly affect the ability of nations like the Gitga'at, Haisla and Gitxaala, who live along the pipeline and tanker routes, to continue to sustain their cultures and lifestyles.

Approximately 440 supertankers would travel through these First Nations' territories every year, or 1.2 tankers every day,³³ passing within a mile of harvesting sites for seaweed, shellfish, salmon, herring, halibut and many other fish species, marine mammals and plants.³⁴

Wakes, noise and the risk of an oil spill all pose threats to these resources. Wakes from tankers will erode shorelines, affecting seaweed harvesting and clams. Tanker traffic would restrict fishermen from casting nets in the waters where their ancestors traditionally fished.³⁵ The result could be a significant decline in the population of traditional villages like Hartley Bay, with the nation estimating that a spill could mean more than two-thirds of residents leaving the community, many of them educated and employed.³⁶

The Gitga'at have said that any spill would cause "irreparable damage" to its food harvesting, as even a small spill would affect critically important traditional foods, including the already threatened oolichan. Seaweed harvesting sites would also be affected. A medium-sized spill would affect salmon and herring.³⁷

Located at the junction where pipelines meet tanker terminal, the Haisla

Nation perhaps stands to be most impacted by the project. The proposed pipelines will enter Haisla territory at the upper end of the Kitimat River valley, crossing 219 watercourses in the drainage and terminating directly across from the main Haisla residential reserve on Douglas Channel.³⁸ Impacts from construction and operation would include wildlife disturbance and habitat loss, vegetation loss and potential acid rock drainage that could affect water quality in the Kitimat River. The tankers bringing condensate in and shipping oil out will traverse waters heavily relied upon by Haisla Nation members for sustenance and cultural identity.³⁹

Over the pipeline's projected 30-year lifetime, approximately 13,200 tankers will pass through northern B.C. waters. With the proponent's projection that a pipeline spill would occur every 200 years, that leaves a one-in-six chance of a spill.⁴⁰ Humpback whales, harbour seals and killer whales would all be at risk in the case of a spill, along with the famed Kermode bear, if its food sources were depleted.⁴¹

Loss of culture

First Nations culture cannot be separated from the land and natural resources. Food, economy, identity and, indeed, culture all depend upon it.⁴² This intimate relationship with natural resources means that any effect, no matter how small, on the environment will have an impact on the people and the community.⁴³ However, Northern Gateway's assessment of impacts to First Nations did not extend beyond the natural environment to social, economic and cultural impacts resulting from the pipeline.⁴⁴

Traditional harvesting makes up 40 percent of Gitga'at First Nation's diet and over 57 percent of households are active in harvesting activities; approximately 95 percent of seafood consumed is from the non-commercial harvest.⁴⁵ "To the Gitga'at people, a good life is one that involves a strong traditional lifestyle and traditional practices, including food harvesting."⁴⁶

A spill would not only cost these villages their traditional ways of life, but would force a shift to buying imported foods. Because getting these foods to such remote areas is cost prohibitive, many would be forced to



THE PROPOSED PROJECT POSES AN **UNACCEPTABLE RISK** TO OUR PEOPLE AND TO OUR COMMUNITIES.

– ART STERRITT, COASTAL FIRST NATIONS

THIS IS NOT JUST ABOUT THE TREES. IT'S ABOUT THE UNIQUE RELATIONSHIP THAT WE HAVE WITH THE TERRITORY. [NORTHERN GATEWAY] WILL IRREVOCABLY DESTROY THE ABILITY OF THE WET'SUWET'EN TO CONTINUE OUR TRADITIONAL RELATIONSHIP TO THE LAND AND THIS CONSTITUTES IRREPARABLE HARM.

– CHIEF NAMOKS, PRINCE GEORGE JRP HEARING.



leave their traditional territories.⁴⁷ Historical trade routes and partnerships that still exist today would be impacted as one nation's ability to harvest from the ocean would impact other nations and erode age-old social networks.⁴⁸

No one can credibly guarantee there would be no oil spills affecting First Nations' traditional territories, or that those spills would not cause adverse affects for the nation. In the words of the Gitga'at First Nation, "money cannot replace the loss of their socio-cultural lifestyle, heritage and traditions." There is no compensation for such losses.⁴⁹

Risks greatly outweigh economic benefits

First Nations' rights include the right to engage in economic activities and enjoy economic benefits from the land and water.⁵⁰ Enbridge's proposal to occupy the Northern Gateway corridor infringes on those rights.⁵¹

The Gitga'at First Nation, which sits along the tanker route and cannot be accessed by road, is particularly vulnerable to changes in the marine environment. Ninety percent of Gitga'at members surveyed said they do not look forward to economic benefits from the proposed pipeline and that financial gains, such as jobs, business and investment, are insufficient for them to risk their way of life.⁵² This quote, from Gitga'at final arguments to the JRP, demonstrates Enbridge's lack of understanding and respect for First Nations' culture:

Enbridge came in with the argument that it would create jobs in Hartley Bay. We would be on-call and trained in case there's a disaster. ... We had our chiefs there, we had our elders, and everyone got up and said, "no, we don't want this."⁵³

In the case of a major oil spill, Gitga'at traditional harvests could be reduced for more than a decade with costs ranging between \$436,000 and \$5.2 million.⁵⁴ Sport fishing lodges that provide employment say they will leave if Northern Gateway is approved⁵⁵ and it's unlikely that the people of Hartley Bay would be able to continue building their eco-tourism economy.⁵⁶ As a result, many Gitga'at members would be forced to leave their traditional territory.

Importance of aboriginal law

Aboriginal title excludes uses of the land—by First Nations or others—that would threaten future use of that land.⁵⁷ It also brings with it the responsibility for First Nations to protect their resources in decision-making.⁵⁸ Indeed, this ethic is one that First Nations have practised for millennia through their own aboriginal law, which protects the sustainability of land and marine resources.

There is much non-aboriginals can learn about sustainability from traditional practice or law, particularly with regard to harvesting resources sustainably. In Haisla traditional law, it is *nuyem*⁵⁹ that defines how resources are managed to foster their continued viability to support the Haisla people.⁶⁰ Gitxaala has *ayaawx*, or traditional law, which warns against harvesting below the low-tide line, harvesting baby abalone and harvesting seaweed too early, and about conserving what is taken.⁶¹ These practices have kept the resources sustainable for countless generations.

Enbridge's attempts to exchange information about the company's pipeline plan for information about First Nations' law—*ayaawx*, *nuyem* or otherwise—have been cursory at best. An information session with the Gitxaala community in June 2011 resulted in Northern Gateway presenting generic information and not responding to questions about cultural, social, environmental and economic impacts of concern to Gitxaala members. When the nation requested specific information, Northern Gateway referred them to its marine response plan, to be completed after approval.⁶²

It goes without saying that, as the nation points out in its final arguments, "The information requested by Gitxaala needed to be provided before project approval, so that Gitxaala could engage with Northern Gateway on whether the proposed mitigation measures would adequately address their concerns."⁶³

Need for consultation

Along with potential impacts to aboriginal rights and title not being adequately addressed, meaningful consultation has not taken place with respect to Northern Gateway.⁶⁴ The Gitxaala First Nation has said that federal consultation has been "essentially non-existent throughout the JRP process"⁶⁵ and other nations echo this feeling.⁶⁶

Instead, Enbridge provided the JRP with speculation and generalities about aboriginal economies and cultures, and nothing about each nation's unique concerns.⁶⁷ Without this, there is no meaningful information about how each nation would be impacted by the pipeline.

Additionally, the federal government failed to follow its own guidelines with regard to First Nations consultation,⁶⁸ ignoring feedback from First Nations on the proposed process for project review. To date, the federal government has not met with affected nations like the Haisla to discuss a consultation process.⁶⁹

Instead, the federal government has indicated that the JRP process is First Nations' opportunity to engage in consultation.⁷⁰ By doing this, it unilaterally established a consultation process for the proposed project that relies exclusively on the JRP review.⁷¹ A few potentially impacted First Nations, such as those from the Yinka Dene Alliance, refused to participate in the JRP for this reason. The Haisla Nation notes,



Nikki Skuce

None of the federal departments have met with the Haisla Nation since the JRP review has commenced for any purpose other than to tell the Haisla Nation it is only engaging in consultation through the JRP review for now. This is not consultation. It is, perhaps, an initial step towards a consultation process.⁷²

Under cross-examination, Northern Gateway chose not to challenge Haisla claims to aboriginal rights and title. Neither did the federal government. As the nation notes in its final arguments, “Thus it should be accorded substantial weight.”⁷³ Most First Nations along the proposed pipeline and tanker routes have not ceded their rights to the land, which are recognized under the Canadian constitution.

Cumulative Effects

An assessment of cumulative effects is required under the Canadian Environmental Assessment Act, with cumulative effects referring to the combined impacts of industry on the environment. Although resource extraction and transportation is expanding rapidly across northern B.C. and the pipeline route, Northern Gateway didn't consider these combined impacts on the landscape.

At least 12 liquid natural gas (LNG) projects are proposed for the Kitimat and Prince Rupert regions,⁷⁴ putting increased pressure on the environmental base. However, Northern Gateway's application does not consider these potential projects in its application, nor does it consider the effects of increased marine traffic.⁷⁵

The Environmental Assessment Act requires proponents to take into account health and socio-economic conditions, cultural heritage and the current use of lands and resources for traditional purposes; however, Northern Gateway only assessed its own impacts to the land, determining that they would be insignificant.⁷⁶

Cumulative effects also apply to culture.⁷⁷ For the past 150 years of colonialism, First Nations' traditional ways of life have been severely challenged. Places of cultural significance have been destroyed, populations were diminished by disease, cultural practices were outlawed, and racism, physical and sexual abuse have all been suffered by First Nations populations.⁷⁸

Until Northern Gateway examines the full scope of its proposed project's effects socially, culturally, environmentally and economically on northern B.C., the JPR and the public do not have a full understanding of how this pipeline would impact the region.

Questionable Economics

Enbridge has overstated the economic benefits derived from Northern Gateway. Just as it did not consider other projects in its environmental review, it did not consider proposed projects like the expansion of the Kinder Morgan TransMountain pipeline to Burnaby, B.C., which would increase potential pipeline capacity to the west coast by 450,000 barrels per day, in its economic assessment.⁷⁹

Instead, its economic assessment largely revolves around benefits derived from tar sands expansion. The JRP ruled prior to the hearings that environmental impacts in the tar sands were outside the scope of the proceedings. Accordingly, financial benefits from tar sands expansion should also be excluded,⁸⁰ if the JRP is to weigh the project's risks and benefits on a level playing field.

Jobs shipped to Asia

Any increased employment in the tar sands would be offset by the refinery jobs that will be shipped to Asia. Northern Gateway would provide a conduit for raw bitumen to make its way directly to China, where it would be processed in overseas refineries. The Alberta Federation of Labour has opposed the project on these grounds. Refining the product here in Canada would have a significantly greater economic benefit by creating a long-term, sustainable refining industry that upgrades bitumen domestically.⁸¹ It seems obvious that this would be more in the public interest for Canadians than shipping raw product overseas. That said, proposals to build refineries on the west coast would not eliminate the risks associated with transporting oil across the region by pipeline or the introduction of tankers on the northwest coast, nor would it mitigate all economic impacts.

Asia premium has a shelf life

Enbridge has touted the “Asia premium” as an economic argument for Northern Gateway. According to the company, the project would result in a price uplift⁸² for Western Canadian crude ranging from \$0.34 to \$3.35 per barrel between 2018 and 2035⁸³ that would potentially benefit domestic oil producers.

However, this assumption is inherently flawed. Enbridge's prediction of an average \$2 increase in the price of Canadian crude may benefit producers, but it would not benefit refiners.⁸⁴ As well, with Chinese government investment in the tar sands increasing, Chinese oil companies operating in Alberta and shipping bitumen down the Northern Gateway pipeline to their own refineries overseas would be unlikely to do so at inflated prices.⁸⁵

IN THE ABSENCE OF
DETAILED PLANS...
**THE PROVINCE
REMAINS DEEPLY
CONCERNED THAT
ANY RESPONSE
TO A SIGNIFICANT
SPILL, WERE IT TO
OCCUR, WOULD
BE LIMITED IN ITS
EFFECT, AND THAT
SERIOUS IMPACTS
ON THE MARINE
ENVIRONMENT, AND
THE LIVELIHOODS OF
THOSE WHO RELY ON
IT, WOULD RESULT.
FOR THIS REASON,
THE PROVINCE
IS NOT ABLE TO
SUPPORT APPROVAL
OF THE PROJECT.**

– FINAL ARGUMENT OF
THE PROVINCE OF BRITISH
COLUMBIA

China is not a free market society and, as such, economic predictions cannot assume that pricing will follow market demands. Chinese tar sands producers would be selling to themselves, with their own integrated operations in mind, not the free market economic influences at play in Canada. As a result, these decisions are not strictly free market decisions.⁸⁶

Furthermore, it's likely that the "Asia premium" advantage will erode as other countries and producers take advantage of it.⁸⁷ As a result, it's unlikely this price uplift will continue unabated, as shown in Enbridge's predictions. Enbridge also does not take into account a stronger Canadian dollar in response to increased oil prices, which would impact the manufacturing sector, or increases in the price of fuel.⁸⁸

Market support not proven

Market support for a proposed pipeline is traditionally secured prior to approval through Transportation Service Agreements (TSAs) with producers. However, Enbridge has failed to obtain any binding commitments, with no evidence submitted by the end of the JRP hearings that any TSAs were in place.⁸⁹ In a letter to the JRP dated Dec. 2, 2010, pipeline builder Kinder Morgan argued this alone should make Enbridge's application incomplete and therefore null and void.⁹⁰

In the absence of binding TSAs, Northern Gateway pointed to precedent agreements—which precede TSAs—as proof of market demand.⁹¹ However, precedent agreements simply lay the groundwork for TSAs and are not binding to either Northern Gateway or the shipper. All told, funding partners have invested just \$140 million, or 2.5 percent of the total \$5.5 billion project costs that funding partners would be committed to if they were entering into binding TSAs.⁹²

Enbridge's claims for bolstering the economy appear grossly overstated. Not only would jobs be shipped overseas along with the raw bitumen, the premium price touted for this resource will be short-lived, if it materializes at all. Furthermore, commercial viability and demand for this pipeline are speculative, at best. Lastly, there was no economic assessment done on how imports of condensate will negatively impact the overall stated benefits of Northern Gateway to Canada's economy. It's hard to imagine how such dubious economic rewards could outweigh the pipeline's social, cultural and environmental risks.

Likelihood of an Oil Spill

The risks of an oil spill have been established. The probability of an oil spill over the pipeline's lifetime is more than 70 percent.⁹³ Similarly, the likelihood of a tanker spill greater than 1,000 barrels over 10 years is up to 99.9 percent, while a spill of greater than 10,000 barrels over the 30 years is up to 99.7 percent.⁹⁴

While full-bore spills are less frequent than smaller spills, smaller spills could present a greater environmental threat because of their potential frequency.⁹⁵ A report released by the Province of B.C. in October 2013 indicates that only three to four percent of a relatively small oil spill off B.C.'s north coast would be recovered in the first five days.⁹⁶

Enbridge's poor track record

According to Enbridge's own data, between 1999 and 2010 it was responsible for over 800 spills resulting in the release of over 160,000 barrels of oil products into the environment. The company has been found responsible for several more spills since 2010.⁹⁷

The US National Transportation Safety Board investigated Enbridge's July 25, 2010 pipeline spill at Marshall, Michigan, which dumped 3,750,000 litres of diluted bitumen into the Kalamazoo River.⁹⁸ It found pervasive organizational failures at Enbridge including deficient pipeline integrity management systems, inadequate training of control centre personnel, a culture of not adhering to procedures and failing to prepare for worst-case discharges. Many deficiencies were identified following previous Enbridge spills. In 1999, the Transportation Safety Board of Canada identified that Enbridge's pipeline integrity management program was inadequate.⁹⁹

The company has also had least 18 safety and environmental failures on its North American pipeline system since 1994 that resulted in corrective orders, enforcement orders or penalties. In one of those enforcement actions, a judgment for \$1 million was issued against Enbridge for 400 violations related to pipeline construction in Wisconsin in 2006-2007. Three of the 18 failures each resulted in the release of over three million litres of oil.¹⁰⁰

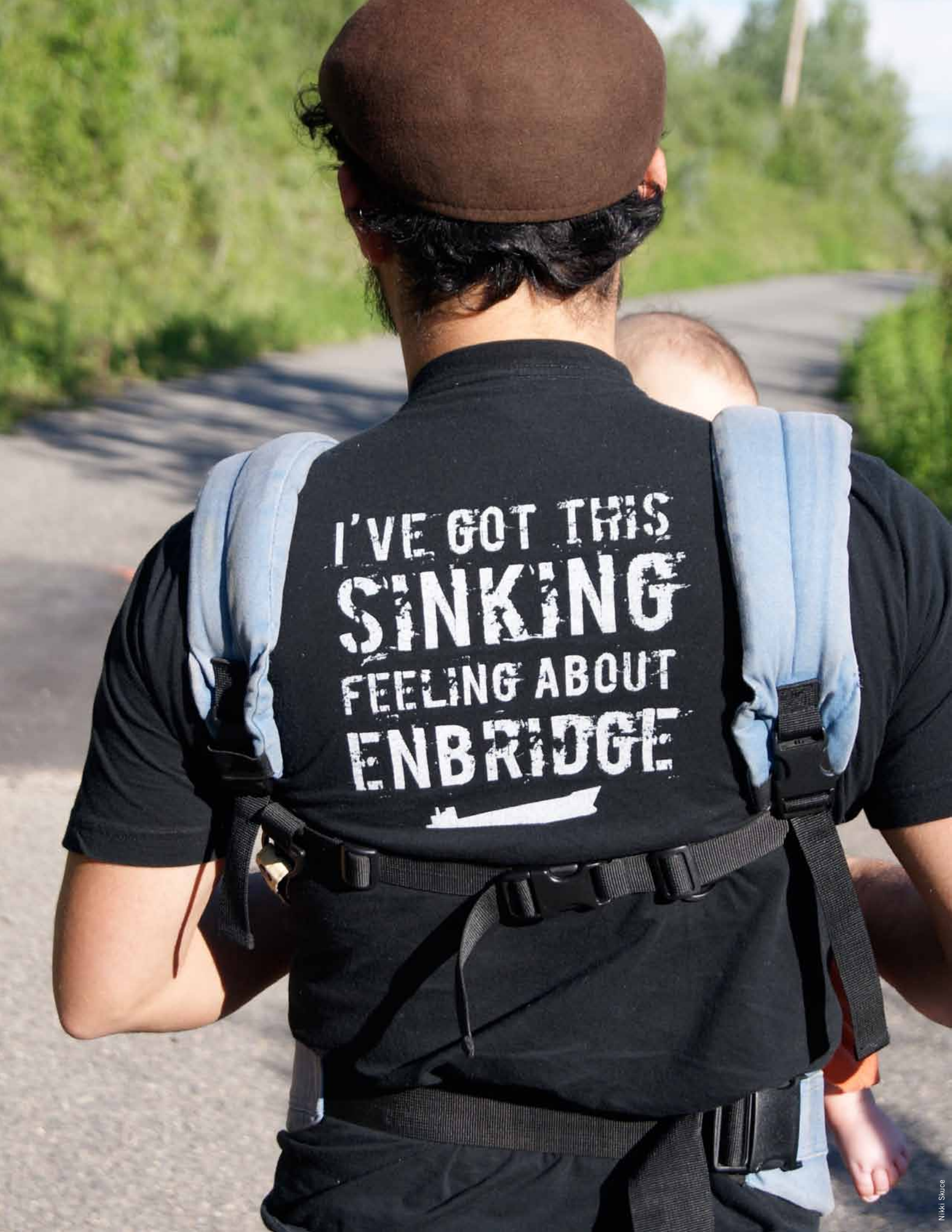
The company claims its track record for oil spills is getting better. However, when given the opportunity to offer a guarantee, Enbridge declined. In oral testimony, vice-president of pipeline integrity Walter Kresic would not commit the company to a maximum number of leaks per year at which Northern Gateway would suspend pipeline operation.¹⁰¹

In its final arguments to the JRP, the Province of B.C. concluded that, "Enbridge has not demonstrated an ability to learn from its mistakes."¹⁰² The company acknowledges that it did not follow its own rules when a leak was detected in the Marshall, Michigan spill, and the system was



ENBRIDGE SPILLED OVER 20,000 BARRELS OF DILUTED BITUMEN INTO A WETLAND AND THEN INTO THE KALAMAZOO RIVER IN 2010. WHILE ENBRIDGE TRIED TO CONVEY THE MICHIGAN SPILL AS AN OUTLIER IN THE JRP, THEY SPILLED OVER 23,000 BARRELS IN HARDISTY, AB IN 2001, AND OVER 20,000 BARRELS OF HEAVY CRUDE ON FARMLAND NEAR REGINA, SK IN 2002.

– EVIDENCE SUBMITTED BY FORESTETHICS ADVOCACY.

A person is seen from the back, wearing a black t-shirt and a brown beret. They are carrying a baby in a light blue carrier. The t-shirt has a white graphic that reads "I'VE GOT THIS SINKING FEELING ABOUT ENBRIDGE" with a silhouette of a bridge below the text. The person is walking on a paved path with green foliage in the background.

I'VE GOT THIS
SINKING
FEELING ABOUT
ENBRIDGE



not immediately shut down.¹⁰³ It would also not commit to an automatic shutdown in the case of a leak, instead preferring to have a person make the shutdown decision,¹⁰⁴ something that would have assisted in the Michigan spill and would prevent future risk of human error.

Automatic leak detection not infallible

Automatic leak detection does not exempt human error. Such was the case in Marshall, Michigan, where the leak went undetected for 17 hours despite the automatic leak detection system.¹⁰⁵

In fact, only five of 11 Enbridge spills greater than 1,000 barrels that occurred between 2002 and 2012 were detected as a result of remote leak detection technology, with human observation the most common detection method.¹⁰⁶ Enbridge has said the minimum detectable leak size for the Northern Gateway pipeline will be determined in detailed engineering, following approval by the JRP, and that slow leaks would not be detectable, although they have still resulted in a substantial amount of oil spilled.¹⁰⁷

A 2012 study commissioned by the Pipeline and Hazardous Materials Safety Administration in the U.S. reviewed oil spills over a two-and-half-year period. It found that the public and emergency responders called in nearly 30 percent of larger spills.¹⁰⁸

The remote nature of the Northern Gateway pipeline makes this all more troublesome. In the Coast Mountains east of Kitimat, the pipeline would cross remote terrain inaccessible by road and often inaccessible by air due to extreme weather conditions. Not only is human observation in these areas extremely unlikely, accessing the spill once it has been confirmed could be treacherous. Stopping a leak in these areas could take weeks or even months.

Extreme weather, remote terrain

Compared with the Marshall, Michigan spill, which took place in a residential area, the terrain features and seasonal conditions in the Kitimat River valley would be significantly more challenging and costly to clean up.

Coast Mountain topography is extreme and many points on the proposed pipeline cannot be accessed by road. Weather can also limit the ability of helicopters to reach remote areas. Winter conditions, avalanches, heavy snow, spring melt and fast-flowing watercourses due to runoff would all present challenges to accessing a pipeline through the Coast Mountains.¹⁰⁹ Northern Gateway has acknowledged that accessing pipeline spills could be challenging, with spills into a watercourse at a remote location presenting the most difficult cleanup challenges.¹¹⁰ Along with being remote, flows in the Kitimat River are significantly higher than the Kalamazoo River, particularly during spring runoff.¹¹¹



Along with the Kitimat River valley, the Clore and Morice rivers are examples of remote watercourses in rugged terrain that could present a significant cleanup challenge in the case of an oil spill.¹¹² All three contain valuable fish habitat and are important to First Nations and northern communities.

The pipeline's possible impact to the Morice River could not be properly examined by the JRP, because the route was in the process of a revision. The ambiguity of where the pipeline will be routed or how close it will come to the Morice or other rivers makes it impossible to properly assess the pipeline's potential impacts in this area. Accessing the pipeline, when both it and roads are covered in snow, could also present real challenges during a spill.

The cost of a cleanup

Northern Gateway has proposed that \$250 million in liability insurance would be adequate for the Northern Gateway pipelines.¹¹³ According to the United States National Transportation Safety Board, Enbridge's cleanup cost for the Marshall, Michigan spill had exceeded US \$767 million by July 2012,¹¹⁴ with costs tallying over \$1 billion as of September 2013 from additional cleanup.¹¹⁵ That means costs for an easily detectable and accessed spill are up to four times what Enbridge is preparing for in the case of Northern Gateway.

Furthermore, Enbridge's "limited liability partnership" with Northern Gateway means that if cleanup and compensation costs exceed the partnership's insurance, the pipeline operator would only be partially responsible for cleaning up an oil spill, with the majority of the burden left to taxpayers.¹¹⁶ Enbridge has protected itself from bearing any substantial portion of the costs and avoided any legal liabilities.

Doing nothing qualifies as response

Given that Northern Gateway has testified that doing nothing could be considered a response to a spill, it's unclear what action would take place during proposed "response" times.¹¹⁷ Enbridge witnesses have stated that in some instances, doing nothing may be a possible response to a spill, letting "natural attenuation" occur.¹¹⁸ With regard to marine oil spills, Northern Gateway has also stated that, "monitoring is a response." The same Enbridge witnesses noted that for most open ocean spills, no oil is recovered and the oil remains in the environment.¹¹⁹



Storytellers Foundation

WE CANNOT LIVE
WITHOUT THIS
SACRED ANIMAL,
OUR FISH, THE
SALMON...**THIS IS
WHO WE ARE.**

– WET'SUWET'EN HEREDITARY
CHIEF FRANK ALEC, JRP
HEARINGS IN BURNS LAKE,
B.C.

Diluted Bitumen a Relatively Unknown Substance

Enbridge is proposing to transport a relatively unknown substance through Northern Gateway. Bitumen is a heavy, corrosive petroleum product that's mined in the tar sands and diluted with a natural gas condensate to allow it to flow freely through pipelines. Its transportation through pipelines is still relatively new and largely untested, although the 2010 spill at Marshall, Michigan raised concerns about its corrosivity in aging pipelines and behaviour in water.

The Northern Gateway project is premised on the assertion that diluted bitumen, or "dilbit," will float when exposed to water.¹²⁰ However, it became clear throughout the JRP hearings that its behaviour in water is still uncertain.¹²¹ Without a proper understanding of how dilbit behaves when released into a marine environment or varying river conditions, it's impossible to either identify potential risks or prepare a response.¹²²

Traditional oil spill recovery technology is designed for floating oil, which means that not knowing whether the dilbit will sink or float makes it impossible to determine whether or not it could be recovered.¹²³ If the substance sinks, it would be harder to clean up and would have catastrophic effects on the environment and local economies, such as commercial salmon fishing and tourism.¹²⁴

Changes to diluted bitumen as it ages in the environment may also affect cleanup. There are indications that, although initially buoyant in water, with exposure to wind and sun, as well as by mixing with water and sediment in the water, the density of diluted bitumen can increase to the point that the oil will sink.¹²⁵

Enbridge's own evidence with regard to diluted bitumen in water is conflicted, with some witnesses testifying that it will sink under certain conditions and others testifying that for bitumen to sink would be contrary to an "immutable fact of physics."¹²⁶ The outcome is unclear; what became clear under cross-examination is that Northern Gateway witnesses have more research to do on the material they propose to transport across northern B.C.'s pristine waterways.

IN THE REAL
WORLD, WE HAVE
SEEN DILUTED
BITUMEN SINK,
DESTROY IMPORTANT
HABITATS, AND TAKE
YEARS TO CLEAN UP;
**IN THE REAL WORLD,
WE HAVE SEEN
ENBRIDGE ASLEEP
AT THE SWITCH. IF
ENBRIDGE IS SO
CONFIDENT IT HAS
THE TECHNICAL AND
ORGANIZATIONAL
COMPETENCIES
TO EFFECTIVELY
PREVENT OR
RESPOND TO A
DILUTED BITUMEN
SPILL IN THE
RUSHING SKEENA
RIVER OR IN THE
TUMULTUOUS
HECATE STRAIT, WHY
COULDN'T THEY
DO SO JUST A FEW
SHORT YEARS AGO
IN THE SHALLOW,
PLACID WATERS OF
THE KALAMAZOO
RIVER?**

– NATHAN CULLEN, MP FOR
SKEENA-BULKLEY VALLEY,
FINAL WRITTEN ARGUMENTS
TO JRP.

NORTHERN GATEWAY SHOULD NOT BE GRANTED A CERTIFICATE ON THE BASIS OF A PROMISE TO DO MORE STUDY AND PLANNING ONCE THE CERTIFICATE IS GRANTED. THE STANDARD IN THIS PARTICULAR CASE MUST BE HIGHER. AND YET, IT IS RESPECTFULLY SUBMITTED...NG HAS NOT MET THE STANDARD. **“TRUST ME” IS NOT GOOD ENOUGH** IN THIS CASE.

– ARGUMENT OF THE PROVINCE OF BRITISH COLUMBIA

What is at Risk: Northern Lifestyles, Economies and Wildlife

Northern B.C. boasts unique cultures, wildlife and ecosystems unlike anywhere else in the world. It's a place where First Nations, whose claims to the land have never been ceded through treaties, have thrived for thousands of years. It contains some of the world's largest remaining untouched wilderness. And it's home to salmon-bearing rivers that sustain the cultures, lifestyles and economies of the region.

An oil spill in this vast and wild environment could result in significant adverse effects for fish species, such as the threatened oolichan and wild north-coast salmon.¹²⁷ Both species are culturally significant for First Nations in the northwest and salmon are an essential economic driver throughout British Columbia.

Wild salmon serves as a vital source of food for aboriginal groups and has a central place in aboriginal culture. Interviews conducted with the Haisla in Kitamaat Village indicate that between 70 and 100 percent of the local community relies on food, social and ceremonial fishing and that generally one or more members of a family fished for food purposes.¹²⁸ The same can be assumed for inland nations based along the Nass, Skeena and Fraser watersheds.

Along with aboriginal groups, an oil spill into a salmon-bearing watercourse would create hardships for commercial fishers and fishing guides,¹²⁹ industries that are pivotal to the sustainability of livelihoods in northern B.C. Salmon also forms the basis of a food chain that includes flora as well as fauna, and is an important food for grizzly bears and the prized Kermode or spirit bear, namesake of the Great Bear Rainforest. During community hearings across the proposed pipeline route, residents repeatedly expressed concern over potential impacts to wild salmon and the quality of life in the northwest.

Northern Gateway's studies of an oil spill's ecological effects were limited to two locations along the Morice River. It concluded that fish would be affected directly for a period of days or weeks, and that the reproductive cycle for fish would be affected for a year or two. However, more than two years after the Marshall, Michigan spill, oil continued to accumulate in the stream bed, indicating that effects could be much longer.¹³⁰

The results from a spill would be both short-term—wildlife toxicity from ingesting oil, inhaling vapour and becoming oiled—and long-term, such as the loss of habitat, uptake of contaminants and mortality of prey organisms.¹³¹ Based on the Alaskan Exxon Valdez oil spill, the effects of an oil spill in the marine environment can last for decades,¹³² indicating that Enbridge's proposed “natural attenuation,” or letting the environment take care of itself, might be overly optimistic.

NO

TANKERS

THROUGH

HAIDA

GWAII

WATERS!



JOIN WITH BRITISH
COLUMBIANS
IN REJECTING
THIS PROJECT.
IF THE FEDERAL
GOVERNMENT
ABUSES THEIR
POWER BY RULING
IN FAVOUR OF
WEALTH FOR A FEW
MULTI-NATIONAL
CORPORATIONS,
**WE WILL TEACH
THEM A LESSON IN
DEMOCRACY THEY
WON'T SOON FORGET.**

– ART STERRITT, COASTAL
FIRST NATIONS, JRP
HEARINGS IN TERRACE, B.C.

Fisheries and Oceans Canada suggests that habitat compensation, by which new habitat is set aside in exchange for damaged habitat, is only 60 to 80 percent effective. Despite proposing this as a mitigation measure, Northern Gateway has not undertaken any studies on the effectiveness of habitat compensation.¹³³

Even if no spill occurred, environmental damage would take place as a result of the presence of tankers, including significant adverse environmental effects upon wildlife, such as species listed under the Species at Risk Act (SARA). Species that could be affected include woodland caribou, salmon, herring, marbled murrelets, humpback, killer and fin whales and sea otters.¹³⁴ Effects would take place in both the marine and terrestrial environments, with pipeline construction also depleting habitat and impacting wildlife.

Northern Gateway has deferred detailed habitat surveys and site-specific fish habitat management plans until after project approval.¹³⁵ In order to properly assess what is at risk and develop response plans, baseline data must be in place before this project is given the go-ahead. Salmon's importance to residents as well as aboriginal, commercial and recreational fisheries in British Columbia make it an area where significant uncertainty is unacceptable.

Enbridge Has no Social Licence

Enbridge has proven repeatedly that it lacks understanding of the region surrounding its proposed pipelines and residents' values, interests and concerns. Nor has it taken the time to listen and understand them.

During Enbridge's final arguments before the JRP, the panel repeatedly heard that First Nations were "not prepared to discuss economic opportunities and benefits" or "chose not to engage in discussions around economic opportunities."¹³⁶ What the pipeline company fails to understand is that such things as lifestyle, culture and environmental sustainability are not negotiable. The company's values are at odds with those of northern B.C. and they cannot be imposed on unwilling residents.

As Cheryl Brown with Douglas Channel Watch stated in her final arguments, "There has been a large emphasis on economic opportunities, but in contrast, there has been a strong statement by First Nation groups about the threat to culture."¹³⁷

The same can be said of residents across the northwest. Despite several municipal resolutions against the project and the Province of B.C. rejecting it in its final arguments, the proponent continues to communicate that it is listening while pushing forward with a pipeline that is not wanted, not needed and not in the public interest.

Conclusion

At the Northern Gateway Project hearings, the NEB heard oral statements from 1,239 people. More than 9,000 individuals and groups submitted letters of comment. Intervenor, of which over 220 were registered, tested Enbridge's application and evidence, and submitted their own evidence. Overwhelmingly, participants came out against Northern Gateway and the risks associated with this proposed tar sands pipeline and tankers. After 18 months of hearings full of vague responses from Enbridge and compelling evidence from intervenors, Enbridge failed to prove that its project is needed or that it has the competence to build it safely.

When it comes to addressing Northern Gateway's shortcomings, the burden of proof rests squarely on the proponent's shoulders.¹³⁸ It is not up to organizations and individuals opposing the pipeline to prove its lack of benefit for Canadians, but for Northern Gateway to prove its case for the pipeline and convince residents along the pipeline's path of its value. This has clearly not been done. Nor has Enbridge proven that the benefits outweigh the risks, because it has not thoroughly laid out the risks in its proposal.

Overall, the JRP process made it abundantly clear that the Northern Gateway pipelines and tanker project is not in the best interest of First Nations, potentially impacted communities, British Columbians and our national treasures such as wild salmon watersheds and the Great Bear Rainforest. Enbridge failed to clearly argue the benefits as well as prove that it would not cause adverse environmental effects.

Enbridge Northern Gateway is not in Canada's national interest and must be rejected.

Endnotes

All documents were submitted to the Joint Review Panel by May 31, 2013 and can be downloaded from www.neb-one.gc.ca/ll-eng/livelink.exe?func=ll&objId=624910&objAction=browse&sort=name, unless otherwise noted. Hearing transcripts are available at <http://gatewaypanel.review-examen.gc.ca/clf-nsi/prtcptngprcss/hrng-eng.html>.

1. Haisla Nation Final Argument, p. 3.
2. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, pp. 5, 14.
3. Ibid., p. 11.
4. Ibid., p. 38.
5. Ibid., p. 36-37.
6. Final Submissions of Gitxaala Nation, p. 47.
7. Written Final Argument of the Joint Intervenors BC Nature and Nature Canada, p. 10, 21.
8. Ibid., p. 13.
9. Ibid., p. 23.
10. Ibid., p. 36.
11. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 11.
12. Argument of the Province of British Columbia, p. 2.
13. Ibid., p. 2.
14. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 67.
15. Final Argument of the Council of the Haida Nation, p. 25.
16. Argument of the Province of British Columbia, p. 9.
17. Ibid., p. 10.
18. Final Argument of Northwest Institute and Friends of Morice-Bulkley, p. 14; Argument of the Province of British Columbia, p. 21.
19. Argument of the Province of British Columbia, p. 21.
20. Final Argument of the Haisla Nation, p. 135.
21. Final Argument of the Gitga'at Nation, p. 6.
22. Final Submissions of Gitxaala Nation, p. 40-41.
23. Ibid., p. 36-37.
24. Argument of the Province of British Columbia, p. 5; Final Argument of the Haisla Nation, p. 131; Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 51.
25. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 53.
26. Argument of the Province of British Columbia, p. 6.
27. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 53.
28. Ibid., p. 18.
29. United Nations General Assembly. Report of the United Nations Conference on Environment and Development. Rio de Janeiro: 1992. Downloaded from <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>
30. Final Argument of the Haisla Nation, p. 10, 37.
31. Yinka Dene Alliance. Submission to the United Nations Special Rapporteur on the Rights of Indigenous Peoples. Vanderhoof, B.C.: September 2013, p. 2. Downloaded from yinkadene.ca

32. Final Argument of the Haisla Nation, p. 10.
33. Final Argument of the Gitga'at Nation, p. 47.
34. Final Submissions of Gitxaala Nation, p. 6.
35. Final Argument of the Gitga'at Nation, p. 51.
36. Ibid., p. 62.
37. Ibid., p. 58.
38. Final Argument of the Haisla Nation, p. 127.
39. Ibid., p. 12.
40. Final Argument of the Gitga'at Nation, p. 56.
41. Ibid., p. 57.
42. Ibid., p. 15.
43. Ibid., p. 17.
44. Written Final Argument of the Office of the Wet'suwet'en, p. 2.
45. Final Argument of the Gitga'at Nation, p. 15.
46. Ibid., p. 36.
47. Final Submissions of Gitxaala Nation, p. 212.
48. Ibid., p. 213.
49. Final Argument of the Gitga'at Nation, p. 13.
50. Ibid., p. 78.
51. Written Final Argument of the Office of the Wet'suwet'en, p. 38.
52. Final Argument of the Gitga'at Nation. May 31, 2013, p. 28.
53. Ibid., p. 30.
54. Ibid., p. 66.
55. Ibid., p. 51.
56. Ibid., p. 47.
57. Ibid., p. 74.
58. Coastal First Nations – Great Bear Initiative Written Final Argument, p. 6.
59. Final Argument of the Haisla Nation. May 31, 2013, p. 10.
60. Ibid., p. 42.
61. Final Submissions of Gitxaala Nation, p. 221.
62. Ibid., p. 251.
63. Ibid., p. 252.
64. Coastal First Nations – Great Bear Initiative Written Final Argument, p. 9, 14.
65. Final Submissions of Gitxaala Nation, p. 273.
66. Final Argument of the Council of the Haida Nation, p. 1.
67. Written Final Argument of the Office of the Wet'suwet'en, p. 2.
68. Final Argument of the Haisla Nation, p. 51.
69. Ibid., p. 52.
70. Ibid., p. 54.
71. Ibid., p. 59.
72. Ibid., p. 54.
73. Ibid., p. 26.
74. Coastal First Nations – Great Bear Initiative Written Final Argument, p. 31.
75. Ibid., p. 30.
76. Written Final Argument of the Office of the Wet'suwet'en, p. 27.
77. Final Argument of the Council of the Haida Nation, p. 16.
78. Ibid., p. 21.
79. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 34.

80. Ibid., p. 31.
81. Written Argument of the Alberta Federation of Labour, p. 2.
82. Ibid., p. 9.
83. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 30.
84. Argument of the Province of British Columbia, p. 46.
85. Written Argument of the Alberta Federation of Labour, p. 10, 30.
86. Ibid., p. 30, 31.
87. Haisla Nation. Final Argument of the Haisla Nation. May 31, 2013, p. 92.
88. Written Argument of the Alberta Federation of Labour, p. 3.
89. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 24, 26.
90. Ibid., p. 25.
91. Final Argument of the Haisla Nation, p. 80, 81.
92. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 26.
93. Coastal First Nations – Great Bear Initiative Written Final Argument, p. 53; Final Argument of the Haisla Nation, p. 174.
94. Coastal First Nations – Great Bear Initiative Written Final Argument, p. 62.
95. Argument of the Province of British Columbia, p. 7-8.
96. Nuka Research for the Province of B.C. West Coast Spill Response Study. Downloaded from www.env.gov.bc.ca/main/west-coast-spill-response-study/
97. Cullen, Nathan. Final Written Argument, Enbridge Northern Gateway Joint Review Panel, p. 3.
98. Final Argument of the Haisla Nation, p. 170.
99. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 74.
100. Ibid., p. 73.
101. Ibid., p. 76.
102. Argument of the Province of British Columbia, p. 29.
103. Ibid., p. 26.
104. Ibid., p. 31.
105. Final Argument of the Haisla Nation, p. 170, 173; Coastal First Nations – Great Bear Initiative Written Final Argument, p. 59-60.
106. Final Argument of the Haisla Nation, p. 171.
107. Argument of the Province of British Columbia, p. 29.
108. Macdiarmid, Jessica. Toronto Star. Oct 23, 2013. “Can we count on high-tech pipeline leak detection?” http://www.thestar.com/news/gta/torontopipeline/2013/10/23/can_we_count_on_hightech_pipeline_leak_detection.html
109. Ibid., p. 11.
110. Ibid., p. 10.
111. Final Argument of the Haisla Nation, p. 73.
112. Argument of the Province of British Columbia, p. 21.
113. Final Argument of the Haisla Nation, p. 72.
114. Ibid., p. 72, 267.
115. Paris, Max. CBC News. September 6, 2013. “Enbridge’s Kalamazoo cleanup dredges up 3-year-old oil spill.” Downloaded from www.cbc.ca/news/politics/enbridge-s-kalamazoo-cleanup-dredges-up-3-year-old-oil-spill-1.1327268
116. Ibid., p. 75.
117. Argument of the Province of British Columbia, p. 23.
118. Ibid., p. 10.
119. Ibid., p. 42.

120. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 46.
121. Final Argument of the Haisla Nation. May 31, 2013, p. 247.
122. Final Argument of the Haisla Nation, p. 241; Coastal First Nations – Great Bear Initiative Written Final Argument, p. 77, 81; Cullen, Nathan. Final Written Argument, Enbridge Northern Gateway Joint Review Panel, p. 5.
123. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 47; Final Argument of the Haisla Nation, p. 241.
124. Coastal First Nations – Great Bear Initiative Written Final Argument CFN, p. 77.
125. Ibid., p. 80.
126. Argument of the Province of British Columbia, p. 12-13.
127. Ibid., p. 9.
128. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 67.
129. Ibid., p. 71.
130. Ibid., p. 71.
131. Final Argument of the Haisla Nation, p. 234.
132. Argument of the Province of British Columbia, p. 38.
133. Written Final Argument of ForestEthics Advocacy, Living Oceans Society and Raincoast Conservation Foundation, p. 72.
134. Ibid., p. 56.
135. Ibid., p. 73-74.
136. Neufeld, Richard. Joint Review Panel for the Enbridge Northern Gateway Project: Transcript. June 17, 2013. Vol. 176, p. 42. Downloaded from <http://gatewaypanel.review-examen.gc.ca/clf-nsi/prtcptngprcss/hrng-eng.html>
137. Brown, Cheryl. Joint Review Panel for the Enbridge Northern Gateway Project: Transcript. June 24, 2013. Volume 180, p. 29. Downloaded from <http://gatewaypanel.review-examen.gc.ca/clf-nsi/prtcptngprcss/hrng-eng.html>
138. Written Final Argument of the Joint Intervenors BC Nature and Nature Canada, p. 8.

