



Thursday 23rd September, 2021

Jeremy LaFontaine
Land and Resource Specialist
Rural Development, Lands, and Innovation
Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNRO)
780 Blanshard Street
Victoria, BC V8W 2H1

Sent via email to: Jeremy.LaFontaine@gov.bc.ca

RE: Woodfibre LNG Ltd. - Industrial Lease application (Lands File# 2412152)

Dear Jeremy,

My Sea to Sky is a people-powered environmental organization that was founded in 2014 to defend, protect, and restore Átl'ka7tsem / Howe Sound.

We currently represent more than 20,524 people that have signed the Howe Sound Declaration in opposition to the proposed Woodfibre LNG project. On behalf of these signatories, we wish to comment on this application for a water lot lease at Woodfibre Creek / DL8296.

We refer to the Crown Land Allocation Principles which provide guidance to decision makers regarding the allocation of Crown Land. Woodfibre LNG has failed to demonstrate social, economic, or environmental public benefits in its application.

Woodfibre LNG's application is also incomplete, refers to supposed studies that are not available for public review, and relies on dated economic assumptions that are no longer valid.

We strongly urge you to reject Woodfibre LNG's application to amend the Crown water lot lease for the following reasons:

1. Absence of public support

On 20th July 2021, the District of Squamish council unanimously approved this resolution:

"Resolved, that Council submit a letter to FLNRORD opposing Woodfibre LNG's Crown Water Lease application request, outlining concerns with respect to a lack of engagement, inconsistent information, and missing information."

Local governments around Howe Sound have expressed continued opposition to Woodfibre LNG since 2014, and reiterated that opposition in 2020 when providing input to the BC EAO regarding an extension to Woodfibre LNG's environmental assessment certificate. See Appendices 1 + 2 attached.

The proposed Woodfibre LNG project clearly does not support local community values or interests as per the official community plans of local governments located within the Howe Sound watershed.

2. Lack of socio-economic benefit

In *Section 6.3 Socio-Economic Benefits*, Table 6 of the application refers to socio-economic benefits calculated in 2014, and included in Woodfibre LNG's Application for Environmental Assessment.

However, many of the numbers included in Table 6 are inconsistent with the numbers that appear in the Application for Environmental Assessment. For example, Woodfibre LNG refers to \$108 million in taxation to all three levels of government during Construction, but this is inconsistent with the numbers provided in the Executive Summary of the Application for Environmental Assessment.

Seven years later, these calculations are also now out of date and irrelevant.

My Sea to Sky has repeatedly requested an independent cost-benefit analysis of the proposed Woodfibre LNG project. This has never been provided.

The proponent has also been requested to provide the District of Squamish with an updated socio-economic benefits study, but has consistently failed to do so.

Since 2014, the Provincial and Federal governments have granted several tax breaks and subsidies for Woodfibre LNG since the project was approved in October 2015, including:

- E-drive subsidy¹
- Exemption from the BC Carbon tax²
- 3% reduction in corporate income tax³
- Deferral of provincial sales tax on construction materials²
- Exemption on 45.8% anti-dumping steel tariff⁴
- Accelerated depreciation rate⁵

The calculations of socio-economic benefits that appeared in the original 2014 assessment need to be re-evaluated by an independent and objective expert to inform this process.

3. Environmental damage

3.1 Damage to fish habitat

Woodfibre LNG notes in section 2.3.7 that: "*It is anticipated that marine construction activities associated with the construction of infrastructure (including the MOF, the FSO, and the access trestle) will result in both the temporary and permanent loss of fish habitat.*"

The Federal Government's Pacific Salmon Strategy Initiative states that "*many Pacific wild salmon are on the verge of collapse*" and that "*climate change, habitat loss, and fishing pressures have negatively affected Pacific salmon at every stage of their lifecycle.*"⁶

Woodfibre LNG's application identifies the presence of chum, pink, and chinook salmon proximal to the water lot, all of which are declining in population in southern B.C., according to Fisheries and Oceans Canada.⁷

We do not support amending a Crown lease for a project that will result in either the temporary or permanent loss of fish habitat. Any approval to amend needs to be supported by a clear, transparent, and proven plan approved by Fisheries and Oceans Canada that restores and improves fish habitat in greater numbers than the amount that will be destroyed.

3.2 Impacts to shoreline habitat

The proposed Floating Worker Accommodation (aka “Floatel”) is still under review by the BC EAO, IAAC, and Squamish Nation. It has not been approved, the process currently appears to be stalled, and Woodfibre LNG fails to acknowledge the impacts to shoreline habitat that are noted in its application for an amendment to the Environmental Assessment Certificate. We believe these impacts to shoreline habitat need to be reviewed as part of the request to amend the Crown water lot lease, and agree with the recent assessment of the floatel by District of Squamish staff:

“The shoreline in this area is steep and forested, containing some of the most mature forest on site. The amendment refers to this forest as immature, and fails to characterize the value of this forest. Steep bedrock outcrops exist along the shoreline, posing significant challenges to egress construction that may result in significant environmental impacts. Egress will require removal of environmentally valuable shoreline forest habitat and two creek crossings. District staff question the classification of these impacts as “minor interactions” as stated within the amendment, and question if the long term environmental losses are justified given the temporary nature of accommodation proposed. District staff urge the province to consider relocating the floatel to an already denuded portion of the shoreline within the works area.”

Given that the floatel is yet to be approved, there is a need for the social, environmental, and safety concerns that we have shared regarding the floatel to be addressed prior to consideration of an amendment of the Crown water lot lease.

3.3 Impacts of underwater noise on herring, salmon, and marine mammals

In 2016, Squamish Nation required Woodfibre LNG to switch from seawater cooling to air cooling as a condition of Squamish Nation’s environmental assessment process.⁸ In the assessment of alternative cooling methods, Woodfibre LNG notes that seawater cooling systems produce less noise than air cooling systems.⁹ However, the impact of this increased noise pollution from the change to an air cooling system, the resulting increase in underwater noise pollution, and its impact on marine organisms has never been assessed in the BC EAO’s Environmental Assessment Certificate Amendment process (note that only atmospheric sound was assessed).¹⁰

The impact of underwater noise from the floating storage tanks has also never been assessed during either the original EA application or the amendment process. Woodfibre LNG proposes to retrofit two forty-year old LNG tankers to construct the floating storage tanks. Due to the nature of LNG, these LNG storage tanks must be constantly stirred, creating additional underwater noise pollution.

Woodfibre LNG’s hired consultants, Hemmera, noted that *“herring are at increased risk during spawning season and are sensitive to noise and physical disturbance.”*¹¹ A study published this month found that fish that are exposed to noise pollution are likely to die early.¹²

Noise pollution is also a key threat to the survival of endangered Southern Resident Killer Whales.¹³

Marine mammals, fish, and invertebrates rely on sound to communicate, aid in navigation, find food, avoid predators, mate and reproduce, and rest. A recent report by Ocean Wise states that:

“Noise, which is any interfering sound, can interrupt critical sound cues necessary for the daily life of marine mammals. Many human activities, including commercial shipping, oil and gas exploration and production, commercial fishing, and shoreline and underwater construction, produce high levels of underwater noise.

Researchers now recognize that noise pollution is a serious threat to cetaceans and many other marine organisms and are studying how to mitigate its negative impacts.¹³

In section 2.2.1 Geotechnical Drilling, Woodfibre LNG has specified in Table 1 that 72 boreholes will be drilled for geotechnical investigation. In section 2.3 Construction Phase, Woodfibre LNG states that many of the facilities proposed within the water lot will require drilling or driving of sheet piles or steel pipe piles. Pile driving and drilling both produce underwater noise that can negatively affect marine organisms (see Figure 1B), and result in auditory masking and increase stress.¹⁴

We recommend FLNRO to require a study assessing the impacts of underwater noise for both the floating storage tanks, the floatel, and the LNG facility itself to determine the impact of underwater noise on herring, salmon, invertebrates, and marine mammals.

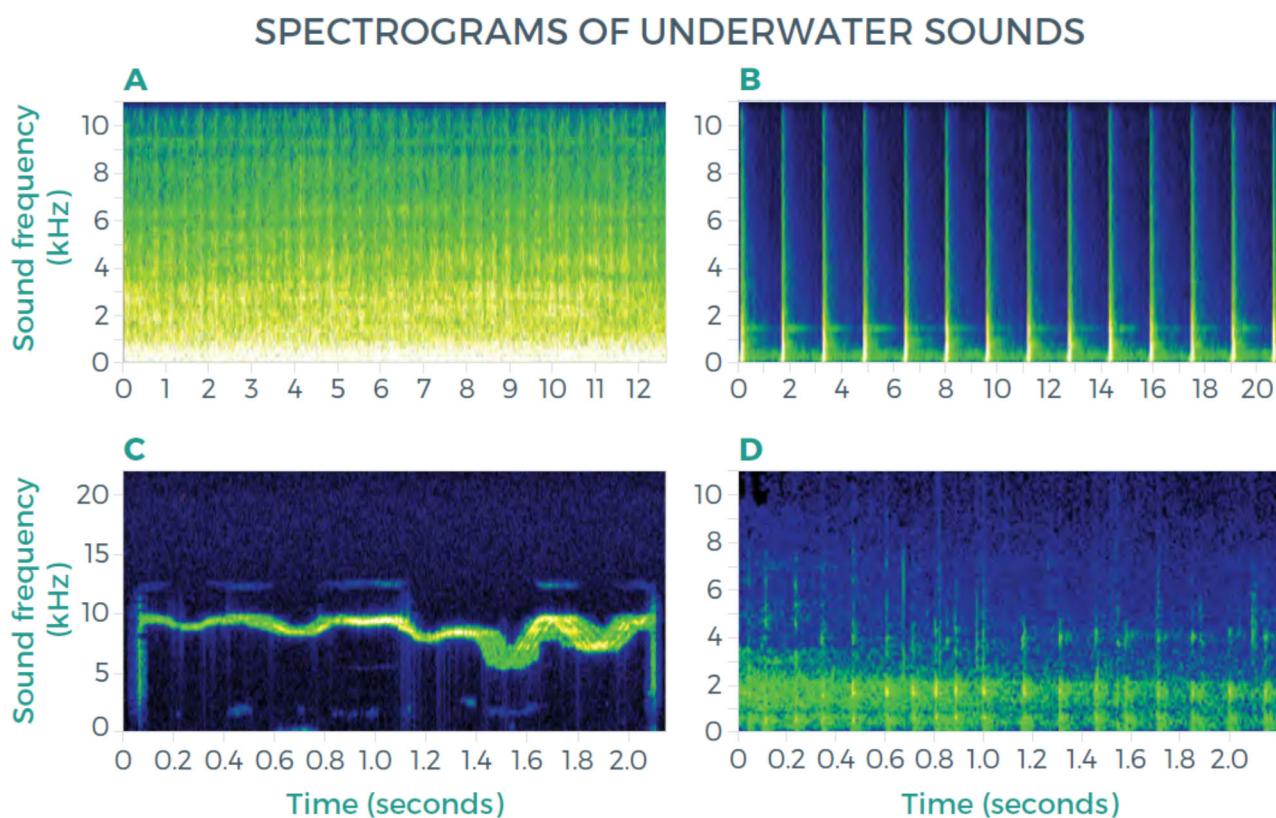


Figure 1. Spectrogram of underwater sounds. A: Continuous (always on) sound from a ship at a distance of 850 meters. Noise from vessels actually extends up to over 100 kHz depending on the vessel type. (Sound clip of freighter in online article.) B: Pile driving, which is an impulsive (on/off) sound of high-energy. This illustration shows 14 pulses (representing the underwater sound produced when the hammer strikes the pile to drive it into the ground) over 21 seconds. (Sound clip of pile driving in online article). C: A killer whale whistle, which is a narrowband sound, extending over a very limited range of frequencies. This depicted sound centers around nine kHz most of the time but ranges from six to 10 kHz along the entire signal. (Sound clip of killer whale whistle in online article.) D: Killer whale echolocation, which can range from very low frequencies (less than one kHz) to over 100 kHz. The display shows the recorded frequencies of the sounds between 0 and 11 kHz (Y-axis). The time (X-axis) shows three seconds of vertical lines, which represent echolocation signals. (Sound clip of echolocation in [online article](#).)

Figure 1. Spectrograms of underwater sounds, with pile driving shown in panel B.¹⁴

4. Safety

4.1 Susceptibility of floating storage tanks to extreme weather

New floating storage tanks (FSTs) commissioned for LNG export or import terminals in Bangladesh and Malta have been relocated, shut down, or replaced with onshore terminals due to their susceptibility to extreme weather.¹⁵ In 2018, Bangladesh declared that it will no longer utilize floating storage units for LNG due to the difficulties of operating during extreme weather.¹⁵

Extreme storms are common in Howe Sound, and winds as high as 50+ knots are documented in the winter.¹⁶ In winter of 2018, there was an extreme wind storm in Howe Sound that resulted in significant damage to boats, docks, and piers.

Given that climate change will result in even more extreme storms,¹⁷ it is critical to re-evaluate whether the proposed floating storage tanks for Woodfibre LNG are safe.

4.2 Henriette Lake Dam needs to be upgraded prior to construction to ensure the safety of workers on site, should Woodfibre LNG's floatel amendment be approved.

The Henriette Lake dam is located in Howe Sound 800 metres directly above the Woodfibre site. It houses a run-of-river generating station owned and operated by Woodfibre LNG. The dam impounds over 10 million cubic metres of water of Henriette Lake, which has a natural outfall along Woodfibre Creek. It is classified by BC Dam Safety as a Class 3 (high failure consequence) dam.

We recently became aware of the 2010 Sandwell report on the seismic stability of the dam, which examined structural issues of the dam in the event of a significant seismic event. The report highlighted the deterioration of the condition of the structure and recommended that it be repaired and brought up to modern seismic standards.¹⁸ This has not been done.

Condition 31(d) of Woodfibre LNG's July, 2019 permit from the BC Oil & Gas Commission states that:

*"The Permit Holder must not undertake commissioning or operation of the LNG facility until it has submitted ... confirmation that the Henriette Lake Dam (Water licence F126618) has sufficiently addressed the recommendations and conclusions from the 2010 seismic assessment completed by Sandwell Engineering."*¹⁹

This is of serious concern given that Woodfibre LNG has applied for an amendment to house 600 construction workers in a "floatel" moored very close to the outfall of Woodfibre Creek.²⁰ As Woodfibre LNG is not currently required by BC OGC to upgrade Henriette Lake Dam prior to construction, this puts construction workers living and working at the Woodfibre site in deadly peril.

A letter sent by Squamish resident Star Morris to BC Dam Safety Section asked if "*the siting of a 'floatel' accommodation for up to 600 workers near the mouth of Woodfibre Creek necessitates a change in the dam's failure consequence classification?*"²¹

The BC Dam Safety Section responded that Woodfibre LNG is responsible for alerting their office regarding changes to the failure consequence classification of Henriette Lake Dam, and has not done so.²²



An audit recently conducted by the BC Auditor General found 87 high-risk dams with deficiencies, and found that provincial officials were not doing enough to prevent dam failures that could lead to deaths and destruction. The locations of these “high-risk” dams are being withheld for now, but we suspect Henriette Lake Dam may be one of them.²³

Henriette Lake Dam must be upgraded prior to the start of construction to ensure the safety of workers at the site should the floatel amendment be granted by BC EAO/IAAC/Squamish Nation.

5. Climate Change

This year, the climate crisis has directly impacted BC communities and our health: deadly heat waves, wildfires, drought, floods, crop failure, fisheries collapse, and costly evacuations and infrastructure damage. These climate-related impacts are unprecedented and intensifying.

In the World Scientist Warning of a Climate Emergency 2021, more than 13,800 scientists urge governments to phase-out and ban fossil fuels and shift to renewables; and slash short-lived air pollutants like black carbon, methane, and hydrofluorocarbons.²⁴

The latest report from the Intergovernmental Panel on Climate Change warns that immediate reductions in greenhouse gases including carbon dioxide, and especially methane (i.e., natural gas) are needed to avert the worst impacts of climate change.²⁵

The International Energy Agency has called on world governments to immediately stop investments in and approvals of new oil and gas projects to limit the global temperature rise to 1.5 °C.²⁶

It is not in the public’s interest to build new fossil fuel infrastructure, like Woodfibre LNG, that will lock in climate pollution for 40 years. While Woodfibre LNG claims that its LNG will replace coal in China, there is no guarantee that LNG exports from Woodfibre LNG will reduce emissions in China.

“...exporting LNG is likely to increase global greenhouse gas emissions. While uncertainty remains, methane leakage, additional energy demand, and decreased domestic coal displacement have the very real potential to undermine any prospective climate benefit in the long term.”

“...policymakers, including regulators and legislators, must consider the complete climate ramifications of LNG exports.”

“The sheer scale of potential LNG exports, corresponding increases in global emissions under the most probable scenarios, and lifetimes of LNG infrastructure make enhanced regulatory scrutiny not only necessary but imperative. Future LNG export facilities could become today’s coal plants, where entrenched interests fight meaningful action to reduce climate emissions, with significant negative impacts on the global public.”²⁷

World-wide, methane emissions from fossil fuel extraction is 25-40% higher than previously estimated.²⁸ A report released this year by the BC OGC shows that fugitive methane emissions in British Columbia are up to 2.2 times higher than previous estimates.²⁹

Because of methane’s strong global warming potential and short atmospheric lifetime relative to carbon dioxide, immediate reduction of methane emissions is essential to limit global temperature rise to 1.5 °C.²⁵

This means that any calculations of net climate benefit for the proposed Woodfibre LNG export facility are inaccurate and need to be updated based on this new scientific information.

Woodfibre LNG also fails to acknowledge that the local greenhouse gas emissions of this one project are equivalent to ~1.5 times the emissions of the entire community of Squamish (Figure 2). This is inconsistent with the District of Squamish's commitment to reduce greenhouse gas emissions by 45% below 2010 levels by 2030, and net zero by 2050, as per the District's Climate Emergency Resolution and resulting Community Climate Action Plan.^{30,31}

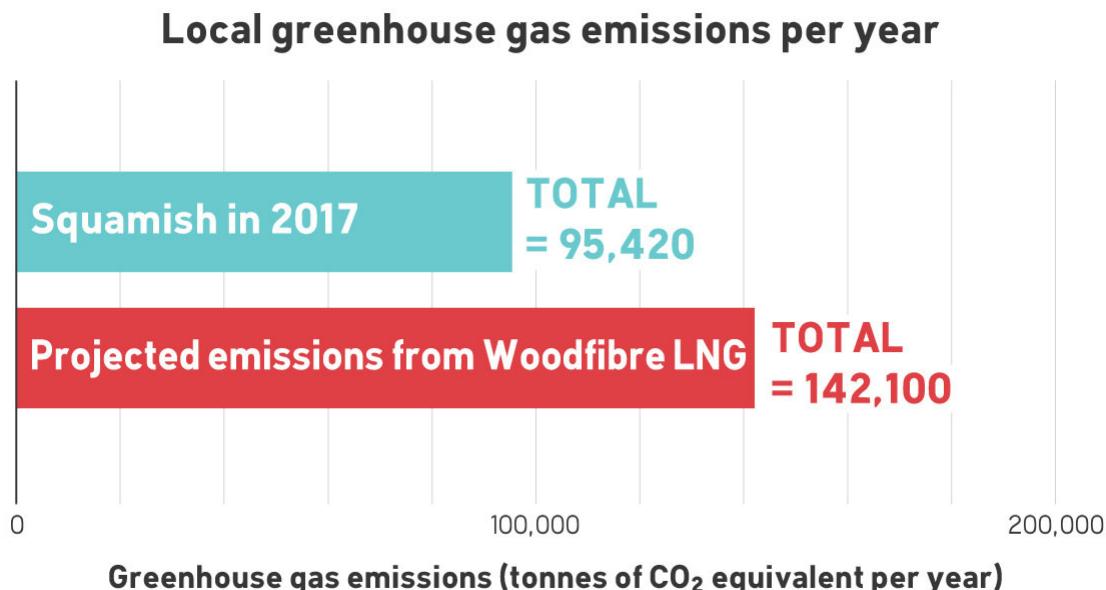


Figure 2. Comparison of greenhouse gas emissions for the entire community of Squamish in 2017 (95,420 tonnes CO₂e), with the projected local greenhouse gas emissions from Woodfibre LNG every year (142,100 tonnes CO₂e). Note that this only compares Woodfibre LNG's locally produced emissions within the District of Squamish. This does not include upstream emissions from fracking, emissions from shipping, regasification, or the emissions when the LNG is burned at the final point of combustion.

In 2018 the Government of British Columbia released its CleanBC plan aimed at reducing climate pollution.³² Using 2007 as the baseline, B.C. is committed through legislation to reductions of: 40% by 2030; 60% by 2040; and 80% by 2050.

In 2019, the BC government introduced requirements to set sectoral emissions targets and an interim emissions target on the path to our 2030 goal, through the Climate Change Accountability Act.^{33,34}

A recent review of Canada's Energy Sector states that "*Developing a liquefied natural gas (LNG) export industry in BC will render BC's CleanBC plan impossible to achieve. The Canada Energy Regulator's evolving scenario forecast for BC would mean that its oil and gas sector alone would exceed the CleanBC target by 93 per cent, even if every other sector of the BC economy reduced its emissions to zero.*"³⁵

While Woodfibre LNG has committed to net zero emissions by 2050, there is no demonstrable pathway to achieve that other than relying on the uncertain technologies of carbon capture and storage. Irregardless, the science is very clear that no more fossil fuel infrastructure can be built if we want to limit temperature rise to 1.5 °C, which is imperative for the future of life on earth.



6. Incomplete information

6.1 Figure 3 Site Layout map

The map in *Figure 3 Site Layout* includes the as-yet unapproved “Floatel,” but omits the as-yet unapproved FortisBC compressor station proposed for the site. Either both should be shown, or neither.

A “Sewage Treatment plant” is referenced in the application, but is not shown on the Figure 3 map. Also, the “Marine offloading facility” shown in the map is a new feature unreferenced in previous assessment documents—the latter’s purpose is unclear.

6.2 Geotechnical drilling/boreholes

The geotechnical drilling information shown in Table 1 of the application is largely devoid of specifics of the extent of this activity in the lease area. Given the sensitivity of the local environment to disturbance (especially the local herring spawn, salmon, cetacean, and pinniped populations, now recovering after years of industrial depredation), and the site’s history of massive foreshore pollution by the former pulp mill, we would have expected far more detail on this activity. Given that the proponent has owned the site since 2013, we would have expected an evaluation of bore samples in advance of any drilling activity and the detail of the precautions the proponent will take in the drilling to detect and avoid disturbing the toxins known to be present in the sediment;

6.3 Floatel

These facilities (there are two, not one, as shown) are as yet unapproved and have many unanswered questions regarding the socio-economic and environmental impacts of housing up to “1,715” workers aboard them for the several years of construction work. We are especially concerned with its location in the middle of known rich populations of herring-spawn, and with the as-yet unexplained procedures for handling waste and wastewater generated aboard;

6.4 TERMPOL Review

It appears the proponent has still not completed a Transport Canada TERMPOL review, which examines safety and other issues associated with producing and shipping hazardous LNG from the site, and recommends changes where appropriate. The map shows that the project still intends to use two 43 year-old repurposed LNG tankers for floating storage tanks. It is certainly not in the public interest to approve an amendment for this project without public safety concerns being addressed and transparent. To this date, the proponent has missed every promised deadline for completing this review, which started over five years ago.

6.5 Emergency planning

Squamish is not a Transport Canada-authorized port, and so does not have a harbor-master to direct and control marine traffic emanating from Squamish Terminals and Woodfibre LNG. Squamish does not have a fire-boat. Nor is its fire department equipped to deal with a fire at an LNG facility/ gas compressor station with no roadway access.

There is as yet no clarity about the emergency plan for managing a fire on the site, at the terminal or onboard a ship. LNG vapours are extremely flammable and any malfunction could be catastrophic. To date there are no management plans for fire suppression at the floating storage terminals. Who is fighting the fire from the water and where are those fire boats kept?

It is not in the interest of the public to approve an amendment for this operation without a comprehensive detailed plan that would include worst case scenario planning and impacts on the marine and terrestrial environments.



7. Poor notification of public consultation

We first became aware of Woodfibre LNG's application for an amendment to the crown water lot lease after we were alerted to the publication of a small ad in the July 1st edition of the Squamish Chief newspaper. While we recognize that this is the current requirements for public engagement, we suggest that FLNRO and the BC government consider updating these requirements as many smaller newspapers are no longer printing physical papers, and most of the general public now access the news online. Different mechanisms need to be identified to notify the public and ensure meaningful public engagement. We appreciate that FLNRO has been willing to extend the deadline for us to respond.

8. Cumulative impacts

As a general comment, the separate assessments of the LNG, pipeline/compressor stations and BC Hydro power sub-components of this LNG project has been an informational disservice to people concerned with knowing the project's cumulative impacts. The District of Squamish has long sought a comprehensive plan for this development, and has yet to receive one.

In summary, we do not support the amendment to the water lot lease requested by Woodfibre LNG, as it commits Howe Sound to forty years of fossil fuel exports, with impacts to human health, our safety, our environment, our communities, and our climate.

We look forward to your consideration of these issues. Please feel free to contact us for further information or clarification.

Sincerely,

Tracey Saxby BA/BSc (Hons I)
Executive Director
My Sea to Sky
Email: tracey@myseatosky.org
Phone: +1 (604) 892-7501

Eoin Finn B.Sc., Ph.D., MBA
Director of Research
My Sea to Sky
Email: eoin@myseatosky.org
Phone: +1 (604) 715-7991



Appendix 1: 2020 resolutions by local governments in Howe Sound

District of Squamish

In a 4-3 vote, the District of Squamish ratified the following resolution on 19th May 2020 stating that:

"...the District of Squamish does not support an extension of the Environmental Certificate for Woodfibre LNG unless the extension includes a condition that Woodfibre LNG must meet the IPCC targets for its operation within the District of Squamish to reduce its GHG emissions by 45% by 2030 and 100% by 2050."

The DoS staff report to the BC EAO includes the complete resolution and can be accessed [here](#).

Bowen Island Municipality

In a 5-2 vote, Bowen Island Municipality has reiterated their opposition to Woodfibre LNG by passing the following resolution on 25th May 2020, stating:

"That Council direct staff to communicate to the Provincial Environmental Assessment Office that Bowen Island Municipality continues to not support the Woodfibre LNG project."

The BIM staff report to the BC EAO can be accessed [here](#). The resolution can be accessed in the meeting minutes [here](#).

Squamish Lillooet Regional District

In a unanimous vote, the Squamish Lillooet Regional District supported the following motions on 27th May 2020:

"THAT the Squamish-Lillooet Regional District (SLRD) Board generally supports the Environmental Assessment Certificate extension application submitted by Woodfibre LNG Limited ("Woodfibre") but such SLRD support is conditional upon the certificate extension including a condition that the greenhouse gas emissions in relation to the Woodfibre LNG facility/operations must be net zero by 2050."

AND

"THAT staff respond to the Environmental Assessment Office in respect of the Environmental Assessment Certificate extension application submitted by Woodfibre LNG Limited to provide the Board's comments as follows:

- The SLRD's Regional Growth Strategy contains a goal and strategic directions to take action on climate change and any certificate extension should incorporate strong climate change targets;*
- Any certificate extension should be in accordance with new legislation, including current climate action legislation, Greenhouse Gas Reduction Targets Act and the CleanBC Plan, as well as the new Fisheries Act;*
- The Board has concerns with the timing and lack of stakeholder or public engagement undertaken by the applicant;*
- The Board has concerns with future disturbance/increased activity on herring spawn; and*



- *The Board has concerns with the proponent using housing as a rationale for the need for a certificate extension, as housing was raised at the outset of the process."*

These motions can be accessed in the meeting minutes [here](#).

Town of Gibsons

In a unanimous vote, Town of Gibsons passed the following resolution in support of the District of Squamish's resolution on 2nd June 2020.

"THAT the Town of Gibsons supports the following resolution from the District of Squamish:

THEREFORE be it resolved that the Council of the District of Squamish does not support an extension of the Environmental Certificate for Woodfibre LNG unless the extension includes a condition that Woodfibre LNG must meet the IPCC targets for its operation within the District of Squamish to reduce its GHG emissions by 45% by 2030 and 100% by 2050.

AND THAT a letter be drafted and sent to the BC Environmental Assessment Office and copied to the District of Squamish."

These motions can be accessed in the meeting minutes [here](#).

District of West Vancouver

In a unanimous vote, District of West Vancouver supported the following motion on 8th June 2020:

"WHEREAS on July 21, 2014, the District of West Vancouver passed the following resolution:

- 1) *the District of West Vancouver Council advise the environmental assessment office of our concerns regarding super tanker safety, rogue waves, foreshore erosion, conflicting waterway uses, and the LNG terminal in Howe Sound and tanker traffic, in response to their request for feedback on the Woodfibre LNG project; and*
- 2) *the District of West Vancouver be included in any existing and future committees, working groups and consultative bodies regarding the tanker traffic and location and operation of the LNG plant; and that*
- 3) *the District of West Vancouver Council write to the federal government with a suggestion to ban the passage of LNG tankers in the waters of Howe Sound;*

WHEREAS on May 12, 2020, Nina Leemuis, Chief Administrative Officer of the District of West Vancouver (DWV) sent a letter to the Environmental Assessment Office (EAO), as the EAO had not advised nor consulted the DWV of Woodfibre LNG's application for an extension to the deadline of their EAC;

WHEREAS the BC Environmental Assessment Office published a new Certificate Extension Policy on 22 April 2020 that requires any EA extension application to detail "new information that has come to light since the original EAC was granted that could change the conclusions reached in the EAO's assessment of the project";

WHEREAS the International Panel on Climate Change published a Special Report in October 2018 that finds it necessary to limit global warming to 1.5 degrees Celsius, and that doing so will require "rapid and far-reaching" changes in all aspects of society so that net human-caused emissions of CO₂ fall by 45% of 2010 levels by 2030 and reach 'net zero' by 2050;



WHEREAS the Province of BC has adopted the GHG Reduction Act and the CleanBC plan and commits B.C. by legislation to achieve GHG emissions reductions of 40% by 2030 and 80% by 2050 (over a 2007 baseline);

WHEREAS the District of West Vancouver declared a Climate Emergency on July 8, 2019, and established goals to reduce its emissions of CO₂e/year in-line with the IPCC goals of 45% reduction by 2030 and net zero by 2050; and

WHEREAS the estimated GHG emissions of the Woodfibre LNG facility are estimated to be 129,400 tonnes CO₂e/year based on their submission to the EAO and there are no current plans in place to mitigate or offset these emissions to achieve net zero;

"Therefore be it resolved that:

- 1) *the Council of the District of West Vancouver not support an extension of the Environmental Assessment Certificate for Woodfibre LNG unless the extension includes the condition that Woodfibre LNG must meet the IPCC targets for its operation within the District of Squamish to reduce its GHG emissions by 45% by 2030 and 100% by 2050, and*
- 2) *This resolution be included in the District of West Vancouver's feedback to the EAO as part of our response to Woodfibre LNG's application for an extension to their EA certificate."*

These motions can be accessed in the meeting minutes [here](#).



Appendix 2: Past resolutions by local governments in Howe Sound

Village of Lion's Bay, 20th May, 2014

"the Village of Lions Bay urges the federal government to ban the passage of LNG tankers in the waters of the Malaspina, Georgia, Juan de Fuca and Haro Straits, and Boundary Pass."

<http://files.lionsbay.ca/2014%20Content/Council/Minutes/20140520%20Regular%20Meeting%20Minutes%20-%20signed.pdf>

Powell River Regional District, 22nd May, 2014

Resolution 9.1 Ban LNG Tankers from Howe Sound & Georgia/Haro Strait

D.Murphy/P. Brabazon THAT the Board concur with the recommendations of the Committee of the Whole to send a letter to the Premier of BC, the Prime Minister of Canada and copy to other appropriate local governments to advise the Regional District's support for the 2008 UBCM resolution to ban LNG tanker traffic in the Georgia/Haro Straits is still in effect.

Town of Gibsons, 15th July, 2014

"Gibsons Council urge the federal government to ban the passage of LNG tankers in the waters of Howe Sound and the Georgia Strait, and to request the support of other communities around the Howe Sound to support this resolution."

<http://www.gibsons.ca/include/get.php?nodeid=808>

District of West Vancouver, 21st July 2014

"to write to the federal government with a suggestion to ban the passage of LNG tankers in the waters of Howe Sound."

<http://westvancouver.ca/sites/default/files/dwv/council-minutes/2014/July/14jul21.pdf>

District of Squamish, 20th January 2015

"Council votes no to LNG pipeline test drilling in Squamish estuary"

<http://www.squamishchief.com/news/local-news/council-votes-no-to-fortis-drilling-1.1737742>

Bowen Island Municipality, 24th February, 2015

"Resolution regarding an LNG tanker ban in Howe Sound carried"

<https://bowenisland.civicweb.net/document/59416/150223%20RC%20MinutesFINAL%28E%29.pdf>



District of Squamish, 28th April 2015

"Squamish Council voted 4-3 to send a letter to the Environmental Assessment office stating that the Woodfibre LNG project is not supportable as it stands."

<http://squamish.ca/assets/WLNG/DOS-Council-EAO-Response-Apr30-2015-combined.pdf>

Islands Trust continues to support a ban on LNG tankers, 2008, 2015, and 2020

In 2008 the Islands Trust Council voted to support a ban on the passage of LNG tankers in the waters of the Malaspina, Georgia, Juan de Fuca and Haro Straits, and Boundary Pass.

In a [letter](#) dated 2015, the Chair of Islands Trust Council, Peter Luckham, wrote that "The Islands Trust's position on the subject has not changed since the 2008 position."

In a more recent email communication in 2020, Islands Trust Vice Chair, Dan Rogers, affirmed that this decision still stands, and wrote that "Local Trust Committee and local trustees took positions opposing the project and asking that it be rejected by the EAO."

Union of BC Municipalities resolution, 2008

WHEREAS the waters of Georgia and Malaspina Straits provide a vital habitat for diverse bird and fish species, a corridor for commercial and recreational marine traffic and an attraction for upland settlement; AND WHEREAS WestPac LNG is soliciting interest to build an LNG import facility and associated 600MW gas-fired electricity generating plant on Texada Island, which will involve the passage of a significant number of LNG tankers in the Georgia Strait, which will interfere with existing marine traffic, put at risk these ecologically important and sensitive inland waters, and negatively impact upland development along this route: THEREFORE BE IT RESOLVED that the UBCM urge the federal government to ban the passage of LNG tankers in the waters of the Malaspina, Georgia, Juan de Fuca and Haro Straits, and Boundary Pass.

UBCM resolution B143 on LNG Tanker Traffic Ban in Georgia Strait

REFERENCES

- ¹ BC Hydro (2016) New eDrive electricity rate for LNG facilities. Press release published 2016-11-04 by BC Hydro.
https://www.bchydro.com/news/press_centre/news_releases/2016/new-edrive-electricity-rate-for-lng-facilities.html
- ² Zussman, R (2018) B.C. government promises rebates to carbon tax and PST for LNG industry. Global News. Published 2018-03-22.
<https://globalnews.ca/news/4099444/b-c-government-promises-carbon-tax-and-pst-rebates-for-lng-industry/>
- ³ Government of BC (2019) Legislation introduced to complete fiscal framework for LNG investment, jobs and benefits. Press release, 2019-03-25. <https://news.gov.bc.ca/releases/2019FIN0035-000478>
- ⁴ Thuncher, J (2019) Woodfibre LNG purchases essential equipment for Squamish project. Squamish Chief, published 2019-08-09.
<https://www.squamishchief.com/news/local-news/updated-woodfibre-lng-purchases-essential-equipment-for-squamish-project-1.23910913>
- ⁵ Government of Canada (2015) Accelerated capital cost allowance for liquefied natural gas. Press release, 2015-02-19.
<https://www.canada.ca/en/news/archive/2015/02/accelerated-capital-cost-allowance-liquefied-natural-gas.html>
- ⁶ Government of Canada (2021) Pacific Salmon Strategy Initiative. Website accessed 2021-09-22. <https://www.dfo-mpo.gc.ca/campaign-campagne/pss-ssp/index-eng.html>
- ⁷ Fisheries and Oceans Canada (2019) State of Canadian Pacific Salmon: Responses to Changing Climate and Habitats. Canadian Technical Report of Fisheries and Aquatic Sciences 3332. 61 pp. <https://waves-vagues.dfo-mpo.gc.ca/Library/40807071.pdf>
- ⁸ Thuncher J (2016) Sea-cooling system out, air-cooling system in. Squamish Chief, published 2016-10-21.
<https://www.squamishchief.com/local-news/sea-cooling-system-out-air-cooling-system-in-3345935>
- ⁹ Woodfibre LNG (2015) Assessment of alternative cooling methods: Response to EAO Supplemental Information Request. April 2015. 28 pp. <https://projects.eao.gov.bc.ca/api/document/588691b5e036fb0105769008/fetch>
- ¹⁰ Woodfibre LNG (2017) Application for an Amendment to Environmental Assessment Certificate #E15-02. January 2017. 129 pp.
<https://projects.eao.gov.bc.ca/api/document/589385a2d3cfab001dff700d/fetch>
- ¹¹ Hemmera Envirochem Inc. (2015) Woodfibre LNG Project: Herring Survey Summary Report. Prepared May 2015. 25 pp.
<https://projects.eao.gov.bc.ca/api/public/document/588691b4e036fb0105769000/download/Woodfibre%20LNG%20Project%20Herring%20Survey%20Summary%20Report%2C%20May%202015..pdf>
- ¹² Masud N et al (2020) Noise pollution: acute noise exposure increases susceptibility to disease and chronic exposure reduces host survival. Royal Society Open Science. Published 16th September 2020. <https://doi.org/10.1098/rsos.200172>
- ¹³ Vergara V et al (2021) Understanding underwater noise pollution from marine vessels and its impact on whales, dolphins, and porpoises. Ocean Wise. Published January 2021. <https://www.aquablog.ca/2021/02/new-spotlight-report-from-ocean-wise-details-impact-of-underwater-noise-on-whales/>
- ¹⁴ Heise K (2018) Underwater noise interferes with marine animal communication. In: Bodtker K (Ed) OceanWatch: B.C. Coast Edition. Coastal Ocean Research Institute. 323 pp. <https://oceandata.ca/bccoast/>
- ¹⁵ Plante L et al (2020) Gas Bubble 2020: Tracking global LNG infrastructure. Global Energy Monitor. 21 pp.
- ¹⁶ Squamish Windsports Society (2020) Terminal wind meter. Website accessed 2020-09-09. <https://squamishwindsports.com>
- ¹⁷ IPCC (2018) Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. 630 pp.
https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf
- ¹⁸ Sandwell Engineering (2010) Henriette Lake Dam, Seismic Assessment of the Concrete Ambursen-Type Buttress Dam, 3D Dynamic Analysis, 20th January 2010.
- ¹⁹ BC OGC (2019) Application Determination Number 100105360. Permit issued 2nd July 2019.
<https://www.bcofc.ca/files/projects/woodfibre-lng/100105360-PERMIT-LNG-FACILITY.pdf>

²⁰ Woodfibre LNG (2019) Worker Accommodation: Application to amend Environmental Assessment Approvals. October 2019. 136 pp. https://projects.eao.gov.bc.ca/api/public/document/5db883d3cc52100021d0a1d3/download/191028_WLNG_Floatel_Amendment_Final_v2.pdf

²¹ Morris S (2020) Star Morris to Scott Morgan, BC Dam Safety Section, 7th July 2020. Letter re: Henriette Lake Dam and worker safety.

²² Morgan S (2020) Scott Morgan, BC Dam Safety Section to Star Morris, 16th July 2020. Letter re: Henriette Lake Dam and worker safety.

²³ Office of the Auditor General of British Columbia (2021) Oversight of dam safety in British Columbia: an independent audit report. September 2021. 36 pp. <https://www.bcauditor.com/pubs/2021/oversight-dam-safety-british-columbia>

²⁴ Ripple W et al (2021) World Scientists' Warning of a Climate Emergency 2021. BioScience, Volume 71, Issue 9, September 2021, Pages 894–898, <https://doi.org/10.1093/biosci/biab079>

²⁵ IPCC (2021) Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. <https://www.ipcc.ch/report/ar6/wg1/#FullReport>

²⁶ International Energy Agency (2021) Net Zero by 2050: a roadmap for the global energy sector. IEA, Paris. <https://www.iea.org/reports/net-zero-by-2050>

²⁷ Gilbert, AQ and Sovacool, BK (2017) US liquefied natural gas (LNG) exports: Boom or bust for the global climate? Energy 141, 1671–1680. <https://doi.org/10.1016/j.energy.2017.11.098>

²⁸ Hmiel, B., Petrenko, V.V., Dyonisius, M.N. et al. Preindustrial ¹⁴CH₄ indicates greater anthropogenic fossil CH₄ emissions. Nature 578, 409–412 (2020). <https://doi.org/10.1038/s41586-020-1991-8>

²⁹ Tyner DR & Johnson MR (2021) Where the methane is: insights from novel airbourne LiDAR measurements combined with ground survey data. Environ. Sci. Technol. 2021, 55, 9773–9783. <https://pubs.acs.org/doi/pdf/10.1021/acs.est.1c01572>

³⁰ District of Squamish (2019) Climate Emergency Resolution, 2nd July 2019. <https://squamish.ca/yourgovernment/projects-and-initiatives/completed-projects/2020-completed-projects/climate-emergency-resolution/>

³¹ District of Squamish (2020) Community Climate Action Plan. April 2020. <https://squamish.ca/assets/5a46b62375/CCAP-Update-January-2020-v2.pdf>

³² Government of BC (2018) CleanBC plan to reduce climate pollution, build a low-carbon economy. Press release, 2018-12-05. <https://news.gov.bc.ca/releases/2018PREM0088-002338>

³³ Government of BC (2018) Climate action gets new teeth with accountability act. Press release, 2019-10-30. <https://news.gov.bc.ca/releases/2019ENV0110-002082>

³⁴ Government of BC (2020) Climate Planning & Action. Website accessed 2020-05-04. <https://www2.gov.bc.ca/gov/content/environment/climate-change/planning-and-action>

³⁵ Hughes DJ (2021) Canada's Energy Sector: Status, evolution, revenue, employment, production forecasts, emissions and implications for emissions reduction. Corporate Mapping Project. June 2021. 60 pp. https://www.policyalternatives.ca/sites/default/files/uploads/publications/BC%20Office/2021/06/REPORT_ccpa-bc-cmp_canadas-energy-sector.pdf