



Gitksan Watershed Authorities
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NEWSLETTER – Comments on Ksi Lisims LNG due December 1, 2023.

This update is to share implications and concerns for fish and fish habitat in relation to the Ksi Lisims LNG Project development in review for approval. The comment period on this proposed project ends this Friday December 1st.

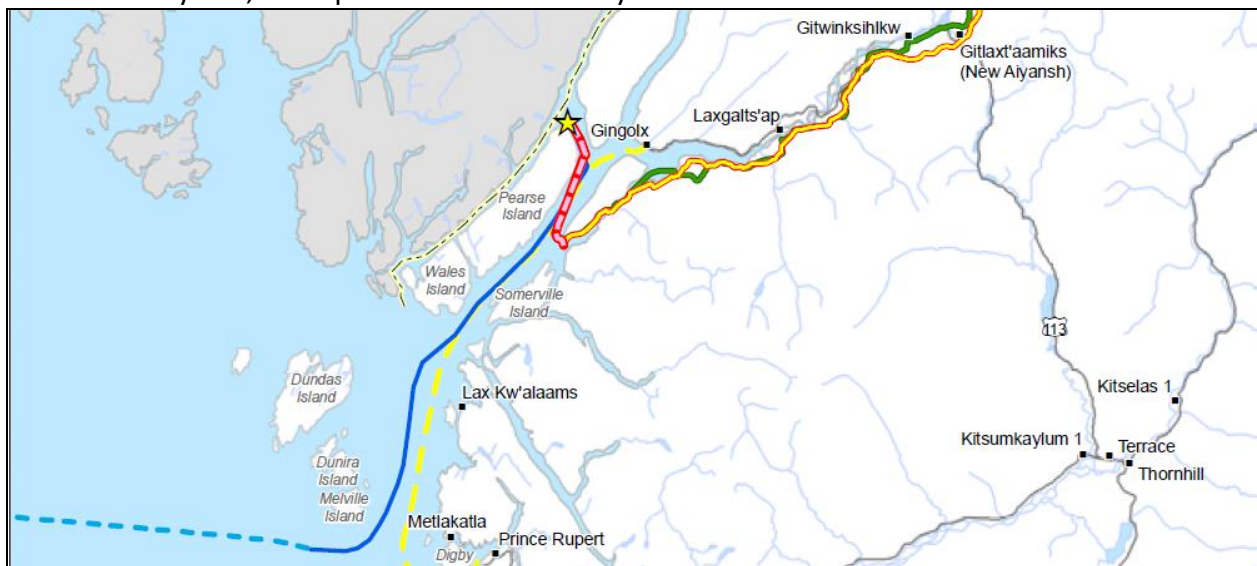
To submit your comments on Ksi Lisims LNG, go here:

<https://projects.eao.gov.bc.ca/p/60edc23bc69c5e0023a12539/commenting>

You may make comments by name or anonymously and can attach files to your submission.

1. WHAT IS THE PROJECT?

Nisga'a Nation, Rockies LNG Limited Partnership (Rockies LNG) and Western LNG LLC have partnered to propose an LNG shipping terminal near Gingolx. This terminal would receive natural gas extracted from northeastern BC, convert it to Liquid Natural Gas (the liquified form of natural gas) on site for export to international markets. The project will not be owned by the Nisga'a: they propose that it will be owned and operated by a subsidiary of Western LNG with Nisga'a oversight. If they receive approval, they expect that the project will be constructed within 3 to 4 years, and operate for at least 30 years.



The project would include two large jetties with floating platforms to store, process and load LNG onto the carrier ships. Most of the rest of the infrastructure would be on the nearby shoreline, including a work camp, offices, and water treatment plants, waste storage areas. The LNG carrier ships will travel south to Triple Island near Prince Rupert before heading to the open ocean, and return by the same route.

The project proposes it would be connected to the BC Hydro electrical grid by a transmission line through Nisga'a lands, and in the meantime operate on natural gas without that connection.

The Prince Rupert Gas Transmission Project has been chosen as the supply pipeline for Ksi Lisims LNG. This pipeline was approved in 2014. In this region, it would be routed through the Suskwa, Skeena, Kispiox, Cranberry, and Nass valleys including a compressor station up Salmon River Road. The approval of Ksi Lisims will have impacts to upriver territories and people which were not included in the technical or Indigenous knowledge or use assessments.

2. COMMENTS SUBMITTED TO THE BCEAO

Environmental Assessment Office (EAO)

INTRODUCTION

The Gitksan Watershed Authorities (GWA) is a traditional and science-based body of fisheries professionals, biologists, field technicians, community leaders and support staff that operates under its own Board of Directors: respected Chiefs from each of the four Clans. The GWA was founded in 1992 to foster conservation, protection and management of fish and fish habitat within the 33,000km² traditional territory of the Gitksan people, which is made up of over sixty *huwilp*, or house groups, and spans sections of both the Skeena and Nass Watersheds. As a member of the umbrella organization Skeena Fisheries Commission, GWA gains support from them on technical expertise.

As an organization tasked with providing oversight and technical input into fisheries management concerns as they impact Gitksan rights and interests, we would like to draw the notice of the BC Environmental Assessment Office and the Impact Assessment Agency of Canada to the ways that the proposed Ksi Lisims LNG project has potential to negatively impact our rights and interests as an Indigenous Nation.

The Gitksan were not included as a Participating Indigenous Nation for the Ksi Lisims LNG Project (the Project), nor have we been consulted in accordance with Gitksan Law (ayoukw) or engaged at any point of the Impact Assessment process. We believe this is a grave oversight and a violation of the Impact Assessment Act, which requires such consultation when there is a potential for negative impacts to an Indigenous group's rights. As we have not been engaged in the appropriate way, possibly due to the incorrect assumption that our rights cannot be impacted

by the project due to its location, we wish to correct that assumption and identify the potential impacts to our rights and interests.

We have reviewed the project and identified three major pathways in which we expect the project to impact Gitksan territory and rights. The first is through salmon, as the salmon that have sustained the Gitksan people since time immemorial use the habitat intended to be altered and impacted by this project with no sufficient mitigation. The second is through climate change, as the substantial greenhouse gas emissions released by the project will create impacts regionally and globally. Climate change is already impacting our rights and will continue to do so as long as high emission projects such as Ksi Lisims LNG are undertaken. The third is through the construction of the Prince Rupert Gas Transmission (PRGT) pipeline through Gitksan lands: a project that was never constructed due to lack of a terminal, but would be revived solely for the purpose of feeding Ksi Lisims. The PRGT pipeline was approved ten years ago, before extensive changes to the environment, watersheds, legislation, impact assessment practices, and recognition of Indigenous rights that raise questions of whether the project could even receive Impact Assessment approval in the current era.

SALMON

As an Indigenous Nation with traditional territories and fishing areas in the Nass River system, the Gitksan have both interests in and constitutionally protected rights to salmon that spawn in the Nass River watershed. Salmon are highly migratory species, stocks that spawn in Gitksan fishing areas in the upper Nass migrate downstream, acclimatize to salt water in the Nass estuary in the Project area, and then migrate further to the ocean before returning by the same route. While the majority of Gitksan salmon harvest is from the Skeena watershed, the Nass watershed fills an important role in our food security; the ability to harvest salmon from two watersheds provides food security by allowing Gitksan to meet food needs in years when Skeena salmon stocks are too low to provide sufficient food. This is not a theoretical situation – there have been several years in the last decade in which Skeena salmon stocks were sufficiently low that harvest was limited or even halted for some species, and during which Nass salmon provided a valuable food source.

The project is located 8 km from the main flow of water originating from the Nass. While the Application states that the Project is 30 km from the mouth of the Nass itself, and therefore distant from the potential spawning and rearing areas of Nass salmon¹, we know that estuaries themselves are also important rearing areas. We also know from nearby studies on estuary habitat usage by Skeena salmon that juvenile salmon may sometimes preferentially congregating in habitat like the Project area, where a minor portion of the river outflow is redirected around small islands². While no comprehensive and transparent genetic studies have been completed that would confirm that the salmon known to use the Project area include populations fished by Gitksan, it can be reasonably understood based on basic salmon biology that Gitksan salmon can be found throughout the migration route, including in the Project area.

¹ Ksi Lisims LNG. 2023. Ksi Lisims LNG Natural Gas Liquefaction & Marine Terminal Project – EAC Application Section 07-09 Marine Resources. Page: 7-9-110

² Carr-Harris C, Gottesfeld AS, Moore JW. 2015. Juvenile Salmon Usage of the Skeena River Estuary. PLoS ONE 10(3)

Five species of Pacific salmon (sockeye, Chinook, coho, chum, and pink) were confirmed to be using rearing habitat in the Project area. They were found in both intertidal habitat and subtidal habitat, and salmonids were one of the fish groups found in highest densities within the Project area as hundreds were found within the few surveys that took place. In particular, the eastern side of Pearse Island, where the majority of the marine habitat is proposed, supported large numbers of juvenile salmonids in spring and summer when they are known to spend weeks to months rearing in estuarine areas. Research has shown that juvenile salmon holding in estuaries and undergoing the physical transformations that will allow them to survive in salt water are particularly sensitive to disturbance, meaning that activities that will cause disturbance at this stage should be undertaken with great caution³

The Project is expected to result in impacts to intertidal habitat and subtidal habitat due to the construction of marine infrastructure and the operations of the facility, among other potential impact vectors. The construction of pilings, berths, and wastewater outfalls are expected to directly impact salmon habitat through the destruction of existing habitat, while floating and elevated infrastructure such as barges, trestles, and decks are expected to substantially alter habitat through shading. The fish habitat loss due to infrastructure is expected to total 132,707 m², of which 76,811 m² is expected to be permanently destroyed. While some will be marine riparian habitat that is not directly used by salmon, 64,509 m² of the altered and destroyed habitat will be salmon habitat. Although acoustic thresholds for salmon are not standardized, it is expected that there will be sufficient underwater noise pollution from operations to impact 28,220 km² of habitat⁴ sufficient to cause avoidance behaviour from the indicator species the Proponent identified in their methodology for acoustic disturbances to fish (marine mammals). There will be additional impacts to salmon due to artificial lighting from floating infrastructure, sedimentation of water from construction, and potential water chemistry changes from the release of high salinity brine, but those impacts were not quantified within the Application. This is particularly concerning regarding the known impacts of desalinization brine effluent in the marine environment⁵

These impacts are proposed to be mitigated with 91,850 m² of fish habitat offsetting⁶. Much of the habitat offsetting will aim to increase freshwater spawning habitat availability for local salmon populations on Pearse Island. Of the proposed offsetting, 56,500 m² will result in habitat potentially usable by Nass salmon, all of which will be done by changing existing, undisturbed salmon habitat and converting it to a “higher value” habitat. This is a controversial practice for offsetting as it results in the loss of natural, functional habitat known to be used by the target species in favour of artificial habitat of uncertain function and use. Many of these proposed sites are within the Project’s marine footprint, including areas expected to be impacted by water withdrawals and effluent releases, raising questions regarding the conservation value of

³ Hodgson, E.E. et al. 2020. Changing estuaries and impacts on juvenile salmon: A systematic review. *Global Change Biology* 26(1986).

⁴ Proponent did not calculate area of true habitat disturbance, and only reported the maximum radius of disturbance, which is used here. This will inevitably include areas of land that are not salmon habitat, but more accurate estimates were not provided.

⁵ Jenkins, S. et al. 2012. Management of Brine Discharges to Coastal Waters Recommendations of a Science Advisory Panel. https://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/docs/dpr051812.pdf

⁶ Ksi Lisims LNG. 2023. Ksi Lisims LNG Natural Gas Liquefaction & Marine Terminal Project – EAC Application Section 07-09 Marine Resources. Appendix 7.9b – Conceptual Habitat Offsetting Plan

attempting to increase fish densities within an area where they may be subject to negative health impacts from the Project.

The Project is unlikely to single-handedly decimate any fish stock besides those that spawn on Pearse Island itself. However, the Government of Canada's Wild Salmon Policy notes "an ongoing concern is that habitat productivity can deteriorate as the result of many small, incremental and often unidentified impacts accumulating over time" and that "Ecosystem integrity needs to be considered in management decision-making to foster the conservation of salmon in an increasingly uncertain future."⁷ Similarly, BC's Wild Salmon Advisory Council identified habitat protection as a key priority for wild salmon, advising all BC agencies "to use a "wild salmon lens" in relevant provincial land-use decisions related to the use of all Crown lands/watercourses/estuaries (including those leased to industrial uses) so that wild salmon receive greater and more consistent consideration in decision-making" and to "pay particular attention to industry and land-use activities including forestry, road construction, mining and agriculture which have been shown to have significant interaction with wild salmon habitats and potentially deleterious impacts"⁸. We believe that both the Government of Canada and the Province of British Columbia have a duty to follow the directives of their own policies and advisors when considering this project and its potential impacts to salmon.

The project will therefore result in a net loss of habitat for Nass salmon, and potential impacts to Gitksan rights and interests, over which we have received no consultation.

CLIMATE CHANGE

The KsiLisims project summary section 8.12 states: "Further, the interactions of climate variables with the Project infrastructure components may result in cascading climate impacts on the natural environment including air, freshwater, marine water, groundwater, vegetation and wetland, fish, and wildlife habitats."

Climate change and its impacts to the region are a very real and present threat to the Gitksan and our rights and interests. Average air temperature has risen, and stream water temperatures have been recorded that may have lethal or sublethal impacts on rearing salmon. An unprecedented BC Level 5 drought in 2018 resulted in streams known to provide critical salmon habitat running dry, which then reoccurred in 2023. Recent climate modeling suggests that the Skeena region has already experienced 2°C of climate warming and may experience a further 4.3°C increase in average annual air temperature by 2100⁹. Current climate modeling predicts that future climate change in the region will likely result in additional decreases in winter precipitation, increased

⁷ Fisheries and Oceans Canada. 2018. Canada's Policy for the Conservation of Wild Pacific Salmon. <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/315577.pdf>

⁸ BC Wild Salmon Advisory Council. 2019. Recommendations for a Made-in-B.C. Wild Salmon Strategy. Prepared for the Province of British Columbia. <https://engage.gov.bc.ca/app/uploads/sites/121/2022/11/Wild-Salmon-Advisory-Council-Report.pdf>

⁹ Adapting forest and range management to climate change in the Skeena Region: Considerations for practitioners and Government staff. 2016. <https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nrs-climate-change/regional-extension-notes/skeenaen151125.pdf>

air and water temperatures, glacial melting, changes to hydrological regime and timing, and increased likelihood and severity of summer heatwaves and droughts¹⁰.

These impacts to the Gitksan are not minor. Gitksan salmon fisheries for food, social, and ceremonial purposes have already been halted in previous years due to low salmon returns and survival. Forest fires and floods have threatened and destroyed our homes and other infrastructure. Droughts and changing forest conditions have impacted the terrestrial wildlife and plant species that we rely upon for our food security. Efforts to combat climate change are of great importance to us, and we have concerns about the contribution of this Project to greenhouse gas emissions and climate change.

The proposed Project would be a major component of BC's contribution to climate change. The impacts of operation itself are impossible to accurately estimate, as the Proponent has stated that they cannot confirm a timeline for which the Project will be powered using low emission power from BC Hydro, and until that is completed the project will be powered by fossil fuels. As the Impact Assessment Act requires the use of the precautionary principle, the worst case scenario (the 'Alternative Case') must be assumed. Under the Alternative Case, the operations will emit 1,831,576t CO₂e/year, or approximately 1.8 Mt CO₂e/year. BC has committed to reduce its emissions to 38 Mt CO₂e/year by 2030¹¹, and its Oil and Gas Industry emissions to 7.5-8.1 Mt CO₂e/year¹². The Project would therefore be responsible for approximately 4.7% of BC's total emissions, and up to 24% of emissions for the entire Oil and Gas sector of BC. With the in-construction LNG Canada facility proposed to emit 8.6Mt CO₂e/year, these two projects alone would cause BC's Oil and Gas sector to fail to meet its climate targets. This is not a "net zero" project.

PIPELINE

The Impact Assessment process approaches the Ksi Lisims LNG terminal as a self-contained facility in which natural gas simply appears to be processed. However, natural gas must be transported to the facility through the Prince Rupert Gas Transmission (PRGT) pipeline. This pipeline is not yet constructed, despite receiving its Environmental Assessment Certificate ten years ago, as it is economically unfeasible to build without the Ksi Lisims LNG terminal to receive the gas. Despite the attempt to treat the two projects as separate and unrelated, they are effectively the same project as neither is feasible or will be built without the other. As the Gitksan are not bound by the Impact Assessment Act, our consideration of the Project includes all its necessary components.

The PRGT pipeline crosses large sections of Gitksan traditional territory, through our forests and under important salmon-bearing rivers and streams that we rely upon for our food and cultural activities. The construction of the PRGT pipeline will have direct impacts on Gitksan territory and people.

¹⁰ Climate Preparedness and Adaptation Strategy Actions for 2022-2025. 2021.

<https://www2.gov.bc.ca/assets/gov/environment/climate-change/adaptation/cpas.pdf>

¹¹ Province of BC. Roadmap to 2030. https://www2.gov.bc.ca/assets/gov/environment/climate-change/action/cleanbc/cleanbc_roadmap_2030.pdf

¹² Clean BC. 2021. Sectoral GHG Targets Modelling Methodology

https://www2.gov.bc.ca/assets/gov/environment/climate-change/action/cleanbc/bc_sectoral_ghg_targets_modelling_methodology.pdf

While our concerns regarding PRGT are numerous and require ongoing discussions beyond this letter, we would like to highlight some high-level concerns that have become more apparent in the ten years since we were last materially consulted on the project:

- Our region has been the site of considerable disturbance related to the Coastal Gaslink (CGL) pipeline. As has been detailed in numerous Environmental Audit reports, warning letters, non-compliance reports and administrative penalty notices, the mitigation measures and environmental assessment process have failed to protect waterways and the environment as a whole from excessive impacts due to CGL construction. PRGT promised within its Environmental Assessment Application to follow similar procedures to CGL. With no full investigation on how these mitigation measures failed in the case of CGL, and with no additional assurances from PRGT that they will avoid those failures, how can we expect anything but a similar failure from PRGT?
- Likewise, with the CGL pipeline construction we have seen excessive amounts of social impacts through the establishment of work camps, from interested actors outside of our region, from the activities of the Proponents and their contractors, and from the actions of police that have resulted in accusations of infringement on the human rights of First Nations people on whose territories the pipeline has been constructed. None of these impacts were indicated in the Environmental Assessment. None were fully addressed by the mitigation measures proposed by the EA Application or the conditions under which the EA Application was approved. It now seems likely that similar issues will occur with the PRGT pipeline due to their almost identical mitigation measures, and that these now-anticipated impacts were not dealt with during the EA process.
- Pipeline corridor impacts to wildlife including bear and moose habitat segmentation and increased human access is an ecological concern with potential impacts to food security. Caribou were an important traditional resource for the Gitksan, but one that has been greatly impacted by development in our region. Environment and Climate Change Canada has indicated that they now believe that residual impacts to caribou from PRGT will be “an order of magnitude greater”¹³ than predicted in the EA Application and have not been mitigated. With this new understanding of its impacts on wildlife, we believe the impacts to all wildlife need to be re-examined.
- There has been considerable changes in legislation and policy related to PRGT since its initial approval including changes to: the Impact Assessment Act with the new inclusion of climate change, Indigenous rights, and sustainability assessments; habitat provisions under the Fisheries Act; the BC Environmental Assessment Act and its consideration of Indigenous rights, long term impacts, and sustainability; the Water Sustainability Act and environmental flow needs; and the Wild Salmon Policy and new commitments regarding the protection of salmon from habitat disruption. With our new understanding that the previous EA regime did not adequately protect the environment, salmon, or Indigenous rights, we have no confidence that the approvals given under it will do so.
- Salmon in the Skeena River watershed are increasingly at risk from climate change and habitats and populations that could potentially have withstood the environmental damage of the pipeline construction may now be unable to cope with additional impacts.
- Likewise, wetlands proposed for water drainage, diversion, or construction have been increasingly relied upon to help mitigate climate change impacts and are now in a more fragile

¹³ PRGT Extension – WG Comments Master Table

https://projects.eao.gov.bc.ca/api/public/document/5cc0dd32fac147002471cd5c/download/PRGT_Extension_WGT_T.pdf

state. The impacts of the intended damage to these wetlands may cause permanent and severe damage to these important habitats, with indirect additional impacts to water resources, fish and fish habitat, and human infrastructure.

CONCLUSION

After reviewing the proposed Ksi Lisims Application, we are left with serious concerns and questions. As we were not engaged or consulted about this Project, we have had no recourse to have our questions answered or our concerns addressed or even considered. The Project Application does not seem to have adequately addressed or even characterized the impacts to Gitksan interests and rights. Lacking proper aquatic baseline information for assessment and evaluation is a major concern. We call on the BC Environmental Assessment Office and the Impact Assessment Agency of Canada to take the time to engage with the Gitksan and address Gitksan Watershed Authorities concerns with this proposed project before approving it.