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BC Environmental Assessment Office
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November 28, 2023

RE: Environmental Assessment Submission - Ksi Lisims LNG Project

Please find SkeenaWild Conservation Trusts Environmental Assessment submission concerning the proposed Ksi Lisims LNG - Natural Gas Liquefaction and Marine Terminal Project (hereafter referred to as "Ksi Lisims LNG"). This project, a collaborative effort between the Nisga'a Nation, Rockies LNG Limited Partnership, and Western LNG LLC, proposes to develop a floating natural gas liquefaction facility and marine export terminal at Wil Milit, situated on the northern end of Pearse Island on the northwest coast of British Columbia. Ksi Lisims LNG has been designed with the capacity to produce up to 12 million tonnes per annum of liquefied natural gas (LNG).

Considering the significance and scale of the Project, this letter seeks to address several critical concerns to ensure that the environmental assessment process is conducted as thoroughly and transparently as possible and is in accordance with the most current scientific and regulatory standards.

Impacts to Fish: The presence and relative abundance of juvenile salmon (Chinook, chum, pink, coho, and sockeye) caught during brief surveys of the proposed Marine Terminal Area is of deep concern in relation to the proposed Ksi Lisims LNG terminal. Despite this observation, the Proponent fails to provide any further information. Collection of credible and comprehensive baseline data collection is critical for meaningful assessment of impacts to fish in this location. For example: i) Where do these fish originate (i.e., what populations of salmon are present and at risk to the proposed project?, ii) Is the biological status of any of the above salmon populations considered *threatened* or *at risk*?, iii) How do these fish use the habitat within the proposed Marine Terminal Area?, iv) How long are these fish present within the proposed Marine Terminal Area?

Pacific Herring and Pacific Sandlance were caught by beach seine and trawl net within the Project's proposed Marine Terminal Area during seasonal surveys. However, several questions remain: i) Do adult herring spawn on kelp within the proposed Marine Terminal Area?, ii) Do Sandlance spawn on submerged beaches within the proposed Marine Terminal Area?

The absence of targeted surveys for Eulachon larvae within the Project's proposed Marine Terminal Area is particularly problematic; Eulachon are a COSEWIC-listed species at risk. The methodology to undertake such surveys is well established (see McCarter and Hay 2003, Canadian Stock Assessment Secretariat Research Document 99/177). To our knowledge, no



results were reported despite the zooplankton samples collected during seasonal surveys using vertical tows from an unspecified depth.

Quillback Rockfish (COSEWIC-listed Threatened species) were observed during subtidal surveys on the east side of Pearse Island near the proposed Marine Terminal, yet no further information is provided. Will the proposed destruction of habitat impact these fish in any way?

We request that the following information be provided:

- i) Improved understanding of salmon populations within the proposed Marine Terminal footprint area. This should involve sampling of juvenile salmon for population genetics (tissue or scale samples from fish caught and sent to DFO's molecular genetics laboratory) during their early marine migration from the Nass River and utilization of nearshore waters surrounding Pearse Island.
- ii) Improved understanding of juvenile salmon habitat usage within the proposed Marine Terminal footprint area. Similar to above, this should involve more detailed surveys for juvenile salmon during their early marine migration from the Nass River and utilization of nearshore waters surrounding Pearse Island, which could extend from April until September. Here, research should focus on the Bull Kelp habitat planned for destruction associated with construction activities of the proposed Project's Marine Terminal, but also include all habitats within the Project's footprint. Questions to address include: How long are juvenile salmon present in the area? How do juvenile salmon interact with Bull Kelp habitat? What types of habitats are they most often utilizing? Are some habitats more beneficial than others because of higher food availability or lower predation risk? Which of these habitats are most at risk if the project is built? Knowing more about how juvenile salmon use habitat within the proposed Marine Terminal Area could help initiate more appropriate mitigation measures if the Project is built.
- iii) Improved understanding of the potential presence or abundance of larval Eulachon within the proposed Marine Terminal Area. Targeted surveys using established methodology should be performed to detect the presence, abundance, and relationship of larval Eulachon to habitats within the proposed Marine Terminal Area, and how the destruction or alteration of those habitats might impact larval Eulachon.
- iv) Data from seasonal zooplankton surveys.



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The Project footprint is expected to affect approximately 139,101 m² of marine fish habitat. A total of 25,156 m² of marine habitat is proposed to be *destroyed*. An additional 39,353 m² of marine habitat is proposed to be *altered*, most permanently. Bull Kelp is a key species proposed to be destroyed during the construction phase of the project. Despite assurances by the Proponent that Bull Kelp will naturally recolonize the project area by using project infrastructure, there exists no evidence to support this claim. Nor does the Proponent provide any information regarding the value of Bull Kelp habitat to the surrounding marine fish community, how the destruction of Bull Kelp in the proposed Marine Terminal Area will affect fishes, or the future vulnerability of Bull Kelp to projected warming of marine waters associated with climate change. These are key gaps in information that must be addressed.

According to a review by DFO, The Project will result in the destruction or harmful alteration of fish habitat, and therefore will require a Fisheries Act authorization and adequate habitat offsetting plan. Despite most industrial projects in BC requiring Fisheries Act authorization and adequate habitat offsetting, there are very few examples to show that such offsets work (i.e., adequately replace natural functioning habitat). While the Proponent acknowledges that, “A long-term monitoring program will be required to evaluate the success of offset features”, there is no mention of whether the proposed mitigation measures or habitat offsets have proved successful elsewhere. In fact, a habitat offset plan has yet to be developed; only proposed. We urge that an independent review/assessment of the past successes/failures of mitigation measures and habitat offsets be included in the application, and that a habitat offset plan for the project be available for review during the assessment phase. The inclusion of both would enable a much more thorough evaluation of the potential effects of the Project on marine resources such as fishes and their habitat.

Climate Impacts: The mitigation proposed to address the climate impacts of the Project is deficient. As emphasized by the International Energy Agency's declaration in 2021, the development of new fossil fuel infrastructure poses a direct challenge to meeting global climate goals. The application for Ksi Lisims LNG asserts that it will contribute to reducing global greenhouse gas (GHG) emissions by replacing higher-emission fuels in Asia. However, it provides insufficient evidence to substantiate this claim and overlooks the estimated annual release of approximately 33 million tonnes of emissions resulting from the burning of this LNG:

Upstream Emissions: The application relies on Environment Canada's emissions data for upstream natural gas production, which may underestimate actual emissions. Recent studies measuring fugitive methane emissions in British Columbia and Alberta should be used to accurately recalculate upstream emissions. The EAO should require the application to utilize this more precise data. (see Conrad, B.M., Tyner, D.R., Li, H.Z. *et al.* (2023). A measurement-based upstream oil and gas methane inventory for Alberta,



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Canada reveals higher emissions and different sources than official estimates. <https://doi.org/10.1038/s43247-023-01081-0>)

Methane Emissions: Methane is a potent greenhouse gas (GHG) with significant short-term climate impacts. The application utilizes incorrect global warming potential (GWP) values for methane and measures its impact over a 100-year period, potentially understating its true climate impact. The EAO must insist on the application using the correct GWP values for methane over both 20-year and 100-year timeframes.

Full Cost Accounting: The current assessment does not consider the full context of greenhouse gas emissions for the entire scope the development, and thus is not accurate. We urge the EAO to require the Proponent to fully assess the climate impacts associated with this proposed project. This must include emissions from source extraction of the natural gas, the processing and shipping of LNG at the terminal, and its end-use.

It is imperative that the Environmental Assessment Office (EAO) mandates the Proponent to provide credible evidence to support its assertion that Ksi Lisims will contribute positively to global climate goals.

Electricity: The application proposes drawing 4,700 GWh of electricity annually from the BC grid to power the Ksi Lisims LNG terminal. This substantial demand could have profound implications for the province, including its economy and emissions targets. The EAO should mandate the application to specify the effects on British Columbia's economy and decarbonization efforts resulting from the diversion of electricity.

Economic Impacts: Considering the potential decline in LNG demand in a world actively addressing climate change, the Proponent should be required by the EAO to assess the project's viability under such circumstances. The concept of a "stranded asset" and the failure to deliver promised economic benefits are critical considerations not addressed in Ksi Lisims assertions relating to "community benefits" and "contributions to sustainability" and should be addressed in the application. Furthermore, the project's potential impact on global natural gas prices, affecting BC businesses and households, should be assessed by the EAO. Current assertions in project provide a limited and narrow-sighted scope for fully understanding negative economic impacts.

Impacts to Whales: The proposed shipping route would have approximately 150 tankers annually passing through waters located near critical habitat designated for Northern Resident Killer Whales and is inhabited by diverse whale species. The EAO should insist on a thorough



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assessment of vessel noise impacts on whales and the risk of collisions with LNG tankers, particularly in an already busy shipping route.

Regulatory Considerations: It is essential to consider the broader regulatory context when assessing the Ksi Lisims LNG project. Environmental Assessment Act, S.B.C. 2018, c. 51, s.25(2) (h) emphasizes the consideration of greenhouse gas emissions, including their effects on the province's ability to meet targets under the Greenhouse Gas Reduction Targets Act. Additionally, the Impact Assessment Act, S.C. 2019, c. 28, requires the evaluation of factors that hinder or contribute to the Government of Canada's ability to meet environmental obligations and climate commitments. It is crucial that the Chief Executive Assessment Officer has a clear understanding of the final federal emissions cap and its application to the project.

Associated Pipeline: SkeenaWild urges the BCEAO to require a new environmental assessment for the associated gas pipeline infrastructure (Prince Rupert Gas Transmission) for the Ksi Lisims LNG project. The original environmental assessment certification was granted over ten years ago and is now outdated and no longer in accordance with the specification of the original proposal. We understand that PRGT is significantly revising the pipeline route and terminus for Ksi Lisims, and it is therefore important that BCEAO require a new process for affected Indigenous communities and the public to provide input on potential impacts.

Conclusion: Our organization urges the Environmental Assessment Office to conduct a comprehensive and transparent environmental assessment of the Ksi Lisims LNG and PRGT projects, in the context of other cumulative impacts, and taking into account the aforementioned concerns and the broader regulatory context. This project's potential environmental and climate implications must be rigorously evaluated to ensure the well-being of our region and its alignment with global climate goals.

Thank you for your dedication to a thorough and responsible environmental assessment process.

Sincerely,

Greg Knox
Executive Director
SkeenaWild Conservation Trust