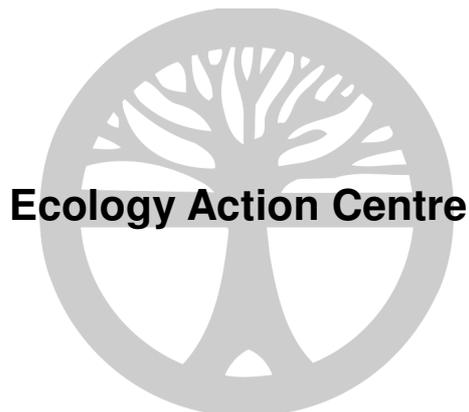


**Written submission B for Nova Scotia Environmental
Assessment Board Public Hearings on the Keltic
Petrochemicals Inc. Proposed LNG and Petrochemical
Plant Facility – Goldboro, Nova Scotia**

To

**Nova Scotia Environmental Assessment Board,
Mr. James Gordon**

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Marine and Coastal Impacts

The Ecology Action Centre expected the Keltic environmental assessment documents to recognize that coasts provide:

- habitat, nursery zones and breeding areas
- buffer zones and filtration
- protection for human settlement and infrastructure
- economic development opportunities
- recreation and leisure
- transportation, and
- the basis for inshore fisheries

We also expected Keltic to consider coastal areas as dynamic systems that change, evolve, and migrate in response to natural and human-induced changes. For example, the proponent should show how their project will be affected by the sea-level rise, coastal flooding, and extreme weather events associated with climate change in Nova Scotia.

This presentation will focus on asking the proponent to provide more information about the impact of, and proposed mitigation and compensation measures for the proposed Keltic project on coasts and the marine ecosystem.

Nova Scotia's relatively undisturbed coastline is one of our greatest natural assets. Large scale heavy industrial projects disrupt natural coastal processes, reduce the productivity and resilience of the entire ecosystem, including adjacent marine and terrestrial habitats, and preclude other more ecologically and environmentally sustainable alternatives such as tourism. Heavy industrial development also makes Nova Scotia's coasts more vulnerable to accelerated sea level rise, storm surges, and coastal flooding associated with climate change.

The proposed Keltic project will have a high environmental impact on the coastal habitat and coastal communities of Guysborough County. Nova Scotia's coasts are increasingly threatened by piece-meal, poorly planned coastal development. The Keltic project would contribute to this ongoing cumulative disruption and degradation.

The high economic and ecological costs of poor coastal planning will be borne by residents, municipalities, and the province, rather than by the proponent.

In light of the cumulative threats to Nova Scotia's coasts and the high cost of poorly planned development, the Ecology Action Centre feels all municipalities and the provincial government should adopt an integrated coastal planning strategy before accepting further large scale projects.

Questions

Need for coastal planning

Nova Scotia needs an overall coastal planning policy is to ensure that one of our richest assets and cultural features is properly developed. This project seems to disregard many values the coast bring to the area and the province as a whole. Considering the value (ecological, economic, cultural) of intact, undisturbed coastlines to Guysborough County, is large scale industrial development the best use of this valuable asset?

Dam on Isaac Harbour River

Dams and other barriers have an enormous impact on rivers and the entire watershed on which they are part. They also prevent fish passage for resident and migratory species, including the Atlantic Salmon. The proponent does not clearly provide information as to the impacts the dam and the wharf will have on the migrating Atlantic Salmon population in the region. We are particular interested in receiving information as to the impacts of the dam at various stages in the salmon lifecycle and not just for adults returning to the river. What other recreational and commercial species depend on the Isaac Harbour River for some portion of their lifecycle?

There are very little details about how the impacts of the removal of water from the Isaac Harbour River will affect seasonal patterns of drainage and flooding, water levels throughout the year, upstream and downstream erosion, water temperatures, and sedimentation. Could the proponent please explain about the location, condition, and temperature at which it will dispose of water taken from the Meadow Lake?

Wetlands

This project will impact a number of and wide variety of wetland types. These provide extremely valuable ecological services for humans and other species. We would like to know how the proponent will work with the province to ensure no further loss of wetland functions as specified in the implementing Guidelines accompanying the recent Wetlands Designation Policy.

What measures has the proponent taken to avoid potential impacts on wetlands? So far, the mitigation measures proposed are vague and general. Which measures will be taken to protect what types of wetlands during what phase of construction? What is proposed to mitigate the impacts of construction, for example, on the many waterfowl dependent on the brackish ponds located under the proposed site of the marginal wharf?

Having not seen the wetland compensation plan yet, we would like to know if one has been submitted by the proponent and what kinds of wetlands will be restored and where to they suggest restoration activities will take place? Do they have clear plan to restore treed bogs systems? How will they monitor the effectiveness of their restoration activities?

Marginal wharf

It is difficult to comment on the proposed marginal wharf since the plans are very vague. It is not possible to determine how will the size and placement of such a large structure affect currents, water circulation, and flushing in the harbour, yet these are important to the wellbeing of the marine ecosystems.

How will the marginal wharf affect the availability and quality of habitat in the Harbour? What are the impacts on the aquatic species in the Harbour? Has the proponent modelled how this structure will affect shoreline erosion in the area?

In addition to a valuable commercial fishery, there are important recreational fisheries in the area. How will the marginal wharf affect the recreational scallop divers in Country Harbour and the weekend recreational fishermen of Isaac's Harbour? This information is not indicated in the assessment.

Red Head Cemetery according to the proponent's report was excavated and the remains moved due to coastal erosion. How will the terminal, wharf, and land site, contribute to increased erosion?

Fisheries

Please explain why lobster was the only marine species of concern? Is this an indicator species for the health of the aquatic habitat? Is this the species most likely to show pollution effects such as toxins in their systems for monitoring purposes? What other species should be monitored?

Have marine habitat compensation plans been submitted by the proponent? How will the effectiveness of any compensation activities be measured?

Climate Change

Please explain how the proposed siting of the wharf and terminal will be affected by extreme weather events, increased intensity of coastal storm surges, and coastal flooding associated with climate change? How will climate change impact the long-term feasibility and viability of the project?

Navigation

What would be the impact of an LNG vessel grounding anywhere along this coast? Is it practical to use shearwater fogs experience for local fog conditions considering the distance and the localized fog and wind conditions?

Will the size and placement of the marginal wharf allow sufficient room for ships to turn around? Given the space need for the LNG vessels to turn, there is likely to be impact on the local fisherman's daily operations and this might involve a loss of revenue or increase the risk of operation near the LNG vessels. Given the shoals on either side of the desired navigation channel what would be the feasibility of other ships skirting around the LNG vessels as they turned?

The EIA does not cover the impacts of an additional two hundred merchant ships per year that will be entering the area because of this project. Therefore, what impact will these ships have on the aquatic, land and air species, and recreational and commercial fisheries, today and in the future of these ships from waste, emissions and trafficking?

Migratory Birds

The coast, its beaches, ponds, inlets and harbours play an important role for the migratory and endangered seabirds that nest and forage in the Country Harbour area, Isaac's Harbour and Stormont Bay. The impacts from the EIA are not clear on this issue. What is the cumulative effect of all of the project's components on seabird populations all along the coast?

It is also unclear whether the project as currently proposed allows for adequate protection of endangered roseate terns. The proponent describes how shipping lanes will "under normal operations" maintain a distance of 20 km from the nesting areas of the terns. It is unclear how the shipping lanes will affect the feeding, foraging and other areas required by the birds at other stages in their life cycle.