# ATTACHMENT: September 19, 2019 Federal Authority Advice Record form Response due by October 9, 2019

Cedar LNG Project – Cedar LNG Export Development Ltd. Agency File: 005734

Department/Agency	Environment and Climate Change Canada (ECCC)
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1. Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed?

If yes, specify the Act of Parliament and that power, duty or function.

The Initial Project Description states that "Dredging (...) is not expected to be required at this time, therefore disposal at sea is not being proposed" (page 23). The Summary of the Initial Project Description, however, states that construction activities include "potential localized removal and disposal of marine sediments to accommodate marine terminals and the nearshore LNG production unit" (page 4). It is therefore unclear if disposal at sea will be pursued by the Proponent.

Should dredging and disposal at sea be identified as necessary at the Project development stage, then then a Disposal at Sea permit would be required under the authority of the *Canadian Environmental Protection Act, 1999* (CEPA). Disposal at sea is prohibited without a permit issued by Environment and Climate Change Canada.

2. Is your department or agency in possession of specialist or expert information or knowledge that may be relevant to the conduct of an impact assessment of the Project?

Specify as appropriate.

**Air quality**: source emissions (e.g. combustion emissions from mobile off-road equipment and on-road vehicles), dispersion and photochemical modelling, monitoring and measurement, impacts pathways, federal policies and regulations, and transboundary effects notifications as it relates to the potential applicability of the transboundary notification provisions of the 1991 Canada/US Air Quality Agreement (Article V).

**Greenhouse gases and Climate change:** estimations of net greenhouse gas (GHG) emissions (direct and upstream), GHG mitigation measures and determination of Best Available Technologies/Best Environmental practices (BAT/BEP), project resiliency to effects of climate change, climate change policies and national GHG projections

**Wildlife and habitat**: migratory birds, their nests, eggs, and habitat under authority of the *Migratory Birds Convention Act 1994*; non-aquatic species at risk, their habitat and critical habitat under authority of the *Species at Risk Act* including recovery strategies and management plans; ecological function of wetlands.

Water quality and quantity: effects of quality and quantity changes both at the discharge point and in the surface water receiving environment, as well as surface water hydrology. Includes monitoring and modelling, wastewater and runoff management, effects from contaminated soils or sediments, and impacts to groundwater that affect surface water.

**Disposal at Sea**: Environmental effects of any proposed disposal at sea activities as they relate to the potential applicability of the disposal at sea provisions of the *Canadian Environmental Protection Act 1999*.

**Environmental emergencies**: emergency management planning and guidance where releases of hazardous substances could affect fish, fish habitat, aquatic species, or migratory birds; fate and behaviour, atmospheric transport and dispersion modelling of contaminants in water and air.

Contaminated sites and sediments: risk assessment and management.

3. Has your department or agency considered the Project; exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action that would allow the Project to proceed in whole or in part?

Specify as appropriate.

#### Not at this time.

4. Has your department or agency had previous contact or involvement with the proponent or other party in relation to the Project? (for example, enquiry about methodology, guidance, or data; introduction to the project)

Provide an overview of the information or advice exchanged.

Not at this time.

5. Does your department or agency have additional information or knowledge not specified, above?

Specify as appropriate.

Not at this time.

6. From the perspective of the mandate and area(s) of expertise of your department or agency, what are the issues that should be addressed in the impact assessment of the Project, should the Agency determine that an impact assessment is required?

For each issue discussed, provide a concise, plain-language summary that is appropriate for inclusion in the Summary of Issues.

### Air quality:

There is potential for the construction and operation of the project to adversely affect air quality due to land clearing activities, power generation, fuel combustion, incineration, flaring, and vehicle and vessel

traffic. Emissions of pollutants could have an adverse effect on sensitive receivers, such as migratory birds, and species at risk as well as on the health of Indigenous communities. Emissions of pollutants may result in exceedances of established regional air quality thresholds for management action, and should be assessed.

The Proponent is considering two options for power generation: connecting to the provincial power grid or developing their own on-site generation with a gas turbine using natural gas (NG). The direct air emissions from these two sources vary substantially (i.e. emissions will be less if power is sourced from the provincial power grid). Should the Proponent proceed with on-site generation with a gas turbine, then the selection of the turbine should consider ECCC's *Reducing nitrogen oxide emissions from natural gas-fuelled stationary combustion turbines: guidelines* available at <a href="https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/guidelines-objectives-codes-practice/reduction-nitrogen-oxide-combustion-turbines-guidelines.html">https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/guidelines-objectives-codes-practice/reduction-nitrogen-oxide-combustion-turbines-guidelines.html</a>.

## Greenhouse Gases and Climate Change:

An issue for the project is the potential to release GHG emissions and to have an impact on Canada's ability to meet its obligations and commitments in respect of climate change.

The Strategic Assessment of Climate Change (SACC) outlines information that should be provided by a proponent during the impact assessment process. This information includes basic information related to GHG emissions, GHG mitigation measures and climate change resilience. The draft SACC also outlines the circumstances in which an upstream GHG assessment will be required, and when additional information such as a best available technology/best environmental practice (BAT/BEP) determination will be required. The specific information on GHG emissions and climate change to be included in the impact statement will be outlined in the Tailored Impact Statement Guidelines (TISG). To inform the development of the TISG in consideration of the SACC, The Proponent should provide more information (e.g. the methodology and the assumptions) for the GHG emissions estimate included in the Initial Project Description.

ECCC will review information provided on GHG emissions, GHG mitigations measures and climate change resilience provided throughout the Impact Assessment and provide an additional analysis as described by section 5.4 of the draft SACC.

ECCC notes that the list of potential alternative means of carrying out the project should be expanded to include alternatives that would reduce GHG emissions, such as alternative means of onsite power generation in relation to the alternative option for power supply, as well as building heating options.

The Proponent is considering two options for power generation for the Project: connecting to the provincial power grid or developing their own on-site generation with a gas turbine using natural gas (NG). The GHG emissions from these two sources vary substantially (i.e. GHG emissions will be less if power is sourced from the provincial power grid). Should the Proponent proceed with on-site generation with a gas turbine, then the selection of the turbine should consider ECCC's *Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity* available at <a href="https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-261/index.html">https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-261/index.html</a>.

## Effects of the Environment on the Project

There is the potential for environmental conditions to result in effects on the project itself, including effects due to climate change (such as due to changes in precipitation or extreme events).

## Wildlife and Habitat:

## Species at Risk

Several federally listed species are known to occur in the Project region, as identified by the Proponent (page 47). There is the potential for the Project to affect species at risk due to increased human presence, use of heavy equipment, vegetation clearing, and collisions with vehicles and infrastructure. An assessment of all species at risk both known and with potential to occur in the Project area should be conducted. In addition, the proponent describes how Marbled Murrelet suitable nesting habitat, as described in the 2014 federal recovery strategy, is potentially located in the proposed Project site (page 37). The impact assessment should demonstrate that measures are taken to avoid, reduce, or compensate for potentially adverse effects to federally listed species. Mitigation measures must be designed based on the most recent best management practices, guidelines, and scientific literature and implemented in a way that is consistent with all applicable recovery strategies and action plans.

## Migratory Birds

The Project has the potential to adversely affect migratory birds as defined under the *Migratory Birds Convention Act.* Adverse effects during the construction and operation of the Project may occur due to clearing activities, collisions with vehicles or infrastructure, flaring events, increased presence of humans, use of heavy equipment and increased sensory disturbance (page 63). Further, adverse effects could occur from marine shipping due to artificial light, sensory disturbance (e.g., visual, noise, wake) and environmental emergencies (e.g., spills) (page 63).

### **Wetlands**

The Project has the potential to adversely affect wetland communities, including provincially listed ecological communities, and ecological functions, thereby also affecting the availability and/or quality of wetland habitat for migratory birds and other wildlife. Adverse effects could occur as a result of construction of terrestrial project components (i.e. roads, possible power generation facility), as well as effects to water quality.

## Water quality and quantity:

There is the potential for the construction and operation of the Project to adversely affect water quality due to wastewater, storm water and process water discharge (page 24) and accidental releases of solid, liquid or hazardous waste (page 29). There is the potential for the construction and operation of the Project to affect water quantity due to the use of nearby surface water and groundwater as a water supply source (page 8); the use of nearby water sources may decrease stream flow and increase contaminant loading.

### **Disposal at Sea:**

The proponent should clarify if Disposal at Sea will be pursued during the impact assessment. Should the proponent conclude that disposal at sea is necessary, the impact assessment should include information required to understand how disposal at sea could result in environmental effects (i.e. location of dredging activity, characterization of sediment and proposed location(s) of disposal activity, etc.), as well as an assessment of the impacts of disposal at sea.

## **Environmental Emergencies:**

There is the potential for adverse effects resulting from an environmental emergency (accident or malfunction) from the Project. Optimized spill prevention, preparedness and response plans are necessary components of any project proposal that poses a risk of spills of hazardous substances to the environment. The impact assessment should provide an adequate assessment of accidents and malfunctions to understand their potential geographical extent as well as their potential effects.

#### **Contaminated Sites:**

There is the potential for adverse effects on air and water quality should any contaminated soil and materials excavated from the Project footprint, organic waste and wastes from construction, liquid wastes (storm water, sanitary wastewater, effluent run off, industrial wastewater from gas dehydration process, and ballast water discharge), as well as hazardous wastes occur on the project site and are not properly managed or disposed of.

Saul Schneider Name of Departmental / Agency Responder

Regional Director, Environmental Protection Operations Directorate – Pacific and Yukon Region Title of Responder

October 9, 2019 Date