

Environmental Protection Operations Directorate
Prairie & Northern Region
9250 49 Street
Edmonton, AB T6B1K5

ECCC File: 4194-10-3/6343

IAAC Registry: 84591



July 7, 2023

via email at: Stephanie.Krysa@iaac-aeic.gc.ca

Stephanie Krysa
Impact Assessment Agency of Canada / Prairie and Northern Region
1145-9700 Jasper Avenue, Edmonton, AB T5J 4C3

Dear Stephanie Krysa:

RE: 84591– Environment and Climate Change Canada’s (ECCC) Federal Authority Advice Record (FAAR) for the proposed Moraine Power Generation Project

Environment and Climate Change Canada has reviewed Moraine Initiatives Ltd.’s Initial Project Description for the proposed Moraine Power Generation Project as requested by the Impact Assessment Agency of Canada in a May 18, 2023 letter. Our FAAR response is attached.

Our advice is based on ECCC’s mandate under the *Species at Risk Act*, the *Migratory Birds Convention Act*, the pollution prevention provisions of the *Fisheries Act* and the *Canadian Environmental Protection Act, 1999*.

Your one-window contact for coordination of ECCC’s participation in this project is Jordan Hollman, phone:587-200-6620, email: jordan.hollman@ec.gc.ca. Please also address electronic correspondence to the ECCC Prairie and Northern Region EA Generic Inbox at EASouthPNR@ec.gc.ca.

Sincerely,

<Original signed by>

Andrea McLandress
Regional Director, Environmental Protection and Operations Directorate
Prairie and Northern Region

cc: Gillian Brown, A/Head, EA-PNR South, EPOD, ECCC
Marcus Edino, Senior Environmental Assessment Officer, EA-PNR South, EPOD, ECCC
Att.: 20230616-ECCC_FAAR_Response_Moraine_Power



ATTACHMENT: May 18, 2023
Federal Authority Advice Record
Response due by July 7, 2023

Moraine Power Generation Project – Moraine Initiatives Ltd.
Agency File: 005860

Department/Agency	Environment and Climate Change Canada (ECCC)
Lead Contact	Jordan Hollman
Full Address	220 4th Ave SE, Calgary AB T2G 4X3
Email	jordan.hollman@ec.gc.ca
Telephone	587-220-6620
Alternate Contact	Marcus Edino; marcus.edino@ec.gc.ca

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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.

ECCC does not expect that it will be required to exercise a power or perform a duty or function related to the Project to enable it to proceed. Once the scope of the Project and of the assessment are established by the Agency, this may change as additional activities or Project components come into scope.

Please note the following requirements that may apply to the Project:

Species at Risk Act permits

For species listed in Schedule 1 of the *Species at Risk Act* (SARA) as Extirpated, Endangered or Threatened, a permit may be required from ECCC (section 73 of SARA) for activities that affect a listed terrestrial wildlife species, the residences of its individuals or any part of its critical habitat, where those prohibitions are in place. Such permits may only be issued: if all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted; all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals or its critical habitat; and if the activity will not jeopardize the survival or recovery of the species.

Prohibitions are in place for individuals and residences on federal lands in a province, reserve or any other lands under the *Indian Act*, or lands under the authority of the Minister of the

Environment, and for birds listed under the *Migratory Birds Convention Act, 1994* wherever they occur regardless of land tenure.

Furthermore, prohibitions may be in force on land other than federal land pursuant to other orders or regulations under SARA. It is possible that additional prohibitions may come into force in the future through orders in Council for individuals, residences and critical habitat on non-federal lands and/or through ministerial order for critical habitat on federal lands. It is also possible that, over the course of the assessment or after the assessment, additional species could be listed under SARA; permits may be required for Project activities that affect these additional species. Proponents are advised to monitor for such developments on the SARA Registry <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>.

ECCC will require detailed information on the potential effects of the Project, including locations and/or occurrences of species at risk, their use of habitat and critical habitat within the Project area, and specific effects on federal land, before ECCC can determine whether a SARA permit is required. For example, as common nighthawk and bank swallow are known to nest in quarries, they are potentially present at the Project site. If individuals of these migratory bird SAR (or other migratory bird SAR) are known to be present in the Project footprint (i.e. brownfield area) and the Proponent plans to conduct activities within the Project site during the breeding period or period of residence protection that will impact the SAR, a SARA permit would be required.

Migratory Birds Convention Act permits

The *Migratory Birds Regulations, 2022* (MBR 2022) protect migratory birds, their eggs and their nests, by prohibiting activities that may harm them. Unless a person has a permit or the regulations authorize it, it is prohibited to engage in the following activities:

- Capturing, killing, taking, injuring or harassing a migratory bird or attempting to do so;
- Destroying, taking or disturbing an egg; and
- Damaging, destroying, removing or disturbing a nest, nest shelter, eider duck shelter or duck nesting box, unless the following exceptions apply:
 - The nest does not contain a live migratory bird or a viable egg; and,
 - The nest was not built by a species listed in Schedule 1 of MBR 2022.

Modernization of the MBCA in 2022 has additionally identified 18 species of birds whose nests are protected year-round (Schedule 1 of MBR 2022). The nests of species listed in Schedule 1 are protected at all times, unless the following conditions are met:

- Notification of the unoccupied nest has been submitted/received through the Registry for Abandoned Nests; and,
- The waiting time designated in the regulations has passed, during which time the nest has not been occupied by a migratory bird.

In some situations, it may be possible to obtain a permit to move or destroy an unoccupied nest of a Schedule 1 species. For more information, please visit: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html>.

1b. Please describe any Indigenous or public consultation that will be undertaken in relation to the excise of that power, duty or function, including when it would take place.

ECCC does not expect to exercise any powers or perform a duty or function under any Act of Parliament in relation to the Project that will involve public and Indigenous Consultation.

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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 the specialist or expert information or knowledge.

ECCC has specialist or expert information that may be relevant to the impact assessment in the areas listed below. In each of these subject areas we have expertise related to establishing an adequate baseline, assessing potential effects to biophysical valued components, effectiveness of mitigation measures, methods for monitoring and follow-up, as well as information regarding federal policies, standards, and regulations that may be relevant to the assessment (Note: ECCC does not assess proposed projects for regulatory compliance, but instead provides technical input to the Agency to inform the assessment). Once the scope of the Project and the assessment are established by the Agency, this list may change.

Air quality: ambient air quality; sources of emissions; emissions estimation and measurement; atmospheric transport, transformation and dispersion modelling; and follow-up monitoring.

Greenhouse gas emissions and climate change: estimations of greenhouse gas (GHG) emissions (net and upstream); impact on carbon sinks; GHG mitigation measures and determination of Best Available Technologies/Best Environmental practices (BAT/BEP); credible plan to achieve net-zero GHG emissions by 2050; climate change science to inform evaluation of potential changes to the environment and Project resilience to effects of climate change; climate change policies; and national GHG projections.

Water quality and quantity: surface water quality; contamination sources for surface water and groundwater, including effluent; wastewater; water quality predictions and modelling; seepage and runoff effects; management of contaminated soils or sediments; hydrology (streamflow rates data and modelling, flooding and extreme events management, drainage control, water levels, water balances); geochemistry; cumulative effects and follow-up and monitoring.

Wildlife, species at risk, and habitat: migratory birds, their nests, eggs, and habitat under authority of the *Migratory Birds Convention Act 1994*; species assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC); species at risk (under the *Species at Risk Act 2002*), individuals, their residences, habitat and critical habitat including recovery strategies, action plans and management plans under ECCC's mandate; ecological function of wetlands; and ecotoxicology.

Environmental emergencies: emergency management planning and guidance, including where the release of hazardous substances could affect species at risk and/or migratory birds; atmospheric transport and dispersion modelling of contaminants in air; fate and behaviour; and hydrologic trajectory modelling of contaminants in water.

Climate and meteorology: long-term climate patterns and norms..

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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.

ECCC has not considered, exercised a power or performed a duty, or taken any course of action as part of the Project.

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

Provide an overview of the information or advice exchanged.

As indicated by the Proponent in the Initial Project Description, Section 3 and based on information readily available, ECCC has not had any direct involvement with the Proponent or other parties that would be relevant to the assessment of this Project. ECCC Prairie and Northern Region has not been in contact with the Proponent regarding permitting or authorizations for the Project.

5. Does your department or agency have additional information or knowledge not specified, above, including information on the geographic, environmental, economic or social context of the project? (e.g. location of protected or sensitive areas, previous history between local communities and proponent or similar projects, local or regional social or economic concerns)?

Specify as appropriate.

ECCC has no additional information.

6. What are the key issues likely to be relevant to the public interest decision, based on the mandate and area(s) of expertise of your department, and which should be addressed in an impact assessment of the Project, should the Agency determine that one is required?

For each key issue:

- Describe the effect or the nature of the issue, including any relevant context;
- Provide the rationale and/or evidence for why it is a key issue;
- Identify briefly solutions to the issue, including any information or studies that should be required in the Tailored Impact Statement Guidelines, potential mitigation measures, and/or regulatory requirements relevant to the issue;
- Provide a concise, plain-language summary of the issue for inclusion in the Summary of Issues.

The information provided will be used by the Agency to determine if and an impact assessment is required and where appropriate to develop project-specific draft Tailored Impact Statement Guidelines that focus on the key issues likely to be relevant to the public interest decision.

Please use table 1 to respond to this question

7. Where possible, identify any clarifications or additional information the Proponent could include in the Detailed Project Description or in the response to the Summary of Issues that would:

- give confidence that an issue or effect could be addressed and managed;
- inform the decision as to whether an impact assessment is required; or
- aid in tailoring the Impact Statement Guidelines, if an impact assessment is required.

These clarifications and additional information will be included as specific questions in the Summary of Issues provided to the proponent

Please use table 2 to respond to this question

Andrea McLandress

Name of Departmental / Agency
Responder

Regional Director, Environmental
Protection and Operations
Directorate, Prairie and Northern
Region

Title of Responder

July 7, 2023

Date

Table 1: Key Issues to inform decision-making

The Agency asks that federal authorities align expert advice with the Agency’s approach to tailoring, which focuses on key issues or effects that are likely to be relevant to the public interest decision. In identifying key issues, federal authorities should be mindful of the Project’s context (size, scope, location), Indigenous knowledge and perspectives, and public concerns. Key issues that may be relevant to the public interest decision include:

- effects that may be significant, based on federal experts’ knowledge and experience with past projects;
- effects that may impact Indigenous peoples and their rights, based on Indigenous knowledge and perspectives or experience with past projects;
- effects on key species or habitats (e.g. at risk, important to Indigenous communities, commercial importance, provide important ecosystem function);
- issues or effects that may result from novel project activities, components or technology;
- effects with large uncertainties, including in the effectiveness of mitigation measures;
- transboundary effects where mitigation measures are limited;
- positive effects, including where project may support other governmental priorities, including reconciliation with Indigenous peoples; and
- key concerns raised by Indigenous or local communities.

Effects that are anticipated to be minor or which can be managed using well understood mitigation measures, existing guidance, and/or other regulatory processes may have simplified information requirements or may be removed entirely. Measured advice from federal authorities on key issues and solutions —and on the scope and detail of any required information and studies — will enable the Agency to focus assessments on issues that are important to participants and to decision-makers.

Comment ID	Valued Component or Factor to Consider	Description of Key Issue (Context and Rationale)	Solutions	Plain language summary for inclusion in Summary of Issues
<p><i>Please identify comments by organization and comment number.</i></p> <p><i>e.g.: IAAC-01</i></p>	<p><i>Identify valued component(s) or factor to consider—within the mandate of your department or agency—to which the effect or issue applies.</i></p>	<p><i>Provide a brief description of the issue and rationale for being a key issue.</i></p> <p><i>Include, where relevant,:</i></p> <ul style="list-style-type: none"> <i>the pathway of effects;</i> <i>social, economic or environmental context which are relevant to it being a key issue;</i> <i>key uncertainties that should be addressed in the impact assessment;</i> <i>Indigenous or public concerns or perspective;</i> <i>potential for differential effects among diverse subgroups;</i> <i>scientific evidence or traditional knowledge, including from past project experience, which supports inclusion as a key issue.</i> 	<p><i>Where applicable, briefly identify solutions to address the potential issue or effects including</i></p> <ul style="list-style-type: none"> <i>Information or studies required to describe and characterize the effect, should an impact assessment be required; including any guidance for data collection and/or analysis or existing data sources to inform the assessment;</i> <i>Any powers, duties or functions that your department or agency has that may mitigate, manage, or set conditions related to the effect;</i> <i>Guidance or policies for mitigating effects or any standard and well-understood mitigation measures that would address the effect, including follow-up monitoring activities; and/or</i> <i>Commitments the proponent could make to respond to the issue.</i> <p><i>Where available, please refer to existing text in the TISG template.</i></p>	<p><i>For issues to be included in the Summary of Issues, provide a concise, plain language synopsis of the key issue and any questions or directions for the proponent.</i></p>
ECCC-T1-1	Air Quality	<p>The construction, operation, and decommissioning of the Project can result in adverse effects on air quality. Project operations including the combustion turbine generator and other activities associated with combustion (including transportation) can result in the emission of contaminants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs), and particulate matter (PM_{2.5}, PM₁₀ and PM).</p> <p>Activities which cause a physical disturbance to land, such as earth moving, land clearing and transportation, can also introduce particulate matter (e.g., dust and soot) to the surrounding region. The emission of these air contaminants can result in local or regional</p>	<p>Construction activities and the combustion of fossil fuels can result in the deposition of contaminants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs), and fine particulate matter (PM_{2.5}) in the air which can degrade local and regional ambient air quality. The Proponent should consider the use of equipment outfitted with engines meeting Tier 4 emission standards to mitigate air quality impacts.</p>	<p>The Project could negatively impact air quality due to construction activities and operation of the combustion turbine generator. These airborne contaminants can also settle out of the air and impact the surrounding ecosystems.</p> <p>Additionally, the proximity of the Project to a nearby pulp and paper mill and a four-lane highway with considerable commercial</p>

		<p>degradation of ambient air quality, with potential impacts on sensitive ecosystem receptors. Furthermore, emissions of air contaminants as a result of this Project may add cumulatively to the emissions from other activities, contributing to degradation of air quality in the region, including receptors at a nearby recreational vehicle (RV) park and a planned hotel. Notably, the proximity of the Project to a thermochemical pulp and newsprint mill (The Alberta Newsprint Company) and proximity to a four-lane divided highway, with over one quarter of the traffic consisting of commercial vehicles, presents the potential for cumulative impacts to ambient air quality.</p> <p>When contaminants settle out of the air in the surrounding environment, their deposition may result in adverse impacts to terrestrial and aquatic ecosystems. For example, polycyclic aromatic compound (PAC) or airborne particulate emissions may result in elevated concentrations of these contaminants in water, soil, flora, and fauna. Emissions of NO_x and SO₂ may also lead to acidification and potential exceedance of ecosystems' critical loads. Air contaminant emissions can result in contamination of nearby land and waterbodies (such as the Athabasca River and Baseline Lake) and may affect sensitive ecosystem receptors.</p>		<p>vehicle traffic may result in cumulative impacts to air quality in the region, including receptors at a nearby RV park and a planned hotel.</p>
ECCC-T1-2	Air Quality	<p>Projects which involve on-road vehicles and mobile off-road machines for construction, operation and decommissioning, or that lead to an increase in road traffic, have the potential to adversely affect air quality. More specifically, the combustion of fossil fuels can result in the emission of air contaminants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs), and fine particulate matter (PM_{2.5}). When some contaminants settle out of the air in the surrounding environment, their deposition may result in acidification and potential exceedance of ecosystems' critical loads. The emission of these air pollutants can result in local or regional degradation of ambient air quality, with potential impacts on sensitive ecosystem receptors.</p>	<p>The use of equipment with engines that meet Tier 4 emission standards assists in mitigating the air quality impacts of the Project.</p>	<p>Vehicle use related to the Project can potentially result in adverse air quality impacts, particularly during construction. Mitigating measures should be applied when possible, such as the use of engines that meet Tier 4 emission standards.</p>
ECCC-T1-3	Greenhouse gas emissions and climate change	<p>Canada's environmental obligations and climate change commitments include the Paris Agreement, the 2030 Emissions Reduction Plan and the <i>Net-Zero</i></p>	<p>The SACC provides guidance related to climate change throughout the impact assessment process. Should the Project be subject to an IAA impact assessment, the SACC would apply. The SACC outlines information that the Proponent should provide during the impact assessment process on GHG emissions, impact of the Project on carbon sinks, impact of the Project on federal</p>	<p>Should the Project be subject to an IAA impact assessment, the SACC would apply. The Project's GHG emissions</p>

		<p><i>Accountability Act.</i> Canada's emissions reduction target is of 40 to 45 percent below 2005 levels by 2030 and to achieve net-zero emissions by 2050.</p> <p>The Government of Canada is also taking action to reduce greenhouse gas (GHG) emissions from the generation of electricity to achieve a net-zero electricity supply by 2035.</p> <p>The construction, operation, and decommissioning of the proposed Project may result in GHG emissions, and/or impact to carbon sinks, and may hinder or contribute to the Government of Canada's ability to meet its commitments in respect of climate change. The Proponent estimated the Project's construction, operations, and decommissioning GHG emissions. However, ECCC has concerns with the estimates (see Table 2 for details). These concerns include uncertainties in the GHG emissions estimates.</p> <p>If the Project is subject to an impact assessment under the IAA, the Proponent may also be asked to prepare an upstream GHG assessment, as the Project may cause incremental upstream GHG emissions.</p> <p>The Proponent also indicates in the Initial Project Description that the Project would be in operation until around 2068. The Proponent did not make a commitment to be net-zero by 2050 for any activity that goes beyond 2050. However, the Proponent made a commitment that the Project will be compliant with the forthcoming Clean Electricity Regulations. As per the Strategic Assessment of Climate Change (SACC), all projects that undergo an impact assessment under the Impact Assessment Act are required to provide a credible net-zero plan by 2050.</p>	<p>emissions reduction efforts and on global GHG emissions, GHG mitigation measures and climate change resilience. The SACC also outlines the circumstances in which an upstream GHG assessment would be required and the circumstances in which a credible plan to achieve net-zero emissions by 2050 will be required.</p> <p>More details are provided in the draft Technical Guide Related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment (Technical Guide) published in August 2021.</p> <p>Links:</p> <p>Strategic Assessment of Climate Change</p> <p>draft Technical Guide Related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment</p>	<p>and climate change impacts should be assessed consistent with guidance in the SACC to ensure that GHG emissions are mitigated. The Proponent should develop a plan to achieve net-zero emissions by 2050 as the Project's lifetime, including decommissioning, is anticipated to go beyond 2050.</p>
ECCC-T1-4	Climate change resilience	<p>The Proponent indicates that the Project would be in operation until around 2068. Climate over the lifetime of the Project is projected to be different from past and current climate in the Project area. Given these projected changes in future climate, climate change considerations are relevant to the Project review.</p> <p>Climate changes in the Project area, such as possible changes in mean and extreme precipitation and temperature and related environmental conditions, may alter baseline conditions, which can have implications for</p>	<p>If the Project is designated under the IAA, further information would be required through the Tailored Impact Statement Guidelines (TISG) on how the Project is resilient to and at risk from the current and future impacts of a changing climate.</p> <p>More details are provided in the "Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience" published in March 2022.</p> <p>Links:</p> <p>"Strategic Assessment of Climate Change" https://www.strategicassessmentclimatechange.ca/</p> <p>"Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience"</p>	<p>The Project's resilience to future climate change should be described and, where relevant, considered in Project design.</p>

		climate sensitive aspects of Project design (such as water management infrastructure). The Proponent should identify where there is potential for climate change to affect the Project which, in turn, may have impacts on the surrounding environment (e.g. through accidents or malfunctions).	https://www.strategicassessmentclimatechange.ca/28896/widgets/117114/documents/77106	
ECCC-T1-5	Water quality	<p>The activities linked to the construction, operation, and decommissioning of pipelines and infrastructure can have adverse effects on the quality of groundwater and surface water, as well as on the hydrological regimes of watercourses and water bodies.</p> <p>Constructing watercourse crossings, conducting hydrostatic tests, constructing and maintaining access roads, excavating or reworking of soils, sediments or rocks, and drilling may result in the deposit of contaminants to watercourses and water bodies and result in adverse effects on water quality.</p> <p>Works near water and in-stream work during construction activities may result in disruption of soils, rock, and streambanks causing erosion and result in deposition of soils and sediments to waterbodies. Soils and sediments can also enter waterbodies through streambed disturbance. These suspended solids can have adverse effects on water quality.</p> <p>Contaminants may be introduced into waterbodies through stormwater discharge, groundwater resurgence, or spills resulting in adverse effects on water quality.</p> <p>The deposition of airborne particulate matter generated by the Project could also be a source of surface water contamination.</p> <p>Water impoundment or withdrawals (for example, for hydrostatic tests) and disturbances to the natural flow of surface water (for example, watercourse crossings) could have effects on the quantity, availability and hydrological regimes of watercourses and waterbodies.</p> <p>Adverse effects to water quality could, in turn, result in adverse effects to sensitive ecosystem receptors.</p>	Environment and Climate Change Canada (ECCC) is responsible for the administration of subsection 36(3) to (6) of the <i>Fisheries Act</i> which prohibits the deposit of a deleterious substance in waters frequented by fish unless authorized by regulations.	It is the Proponent's responsibility to be aware of its obligations stemming from the <i>Fisheries Act</i> and its regulations.

ECCC-T1-6	Wildlife, species at risk, and habitat	<p>The activities linked to the construction, operation, and decommissioning of the Project and associated infrastructure could have negative effects on terrestrial wildlife, migratory birds and species at risk (e.g. amphibians, arthropods, birds, lichens, terrestrial mammals, mosses, reptiles, and vascular plants) listed on the SARA, and their habitat (e.g. wetlands) and critical habitat.</p> <p>The nature of effects to wildlife and habitat (including residences and critical habitat defined under the SARA) can vary based on a number of factors, including: Project location, duration, scale, and configuration; ancillary Project activities (e.g., land clearing, dredging, and flaring); existing cumulative effects; the type of habitat that may be disturbed; and sensitivity of species found in the Project area.</p> <p>The pathway through which potential effects are conveyed will depend on the land, air, and water constituents associated with the site along with the behavioural adaptability, presence and interaction with the species limiting factor (e.g. habitat supporting staging, nesting, roosting or foraging) and population resilience.</p>	<p>The Proponent should identify all species at risk listed on Schedule 1 of the <i>Species at Risk Act</i> and any critical habitat, that may interact with the Project. How these species may be adversely affected by the Project should be described.</p> <p>The Proponent should describe the measures that will be taken to avoid or lessen the effects of each Project activity and stage on relevant species. A monitoring plan should also be included.</p> <p>Additionally, there is always the possibility that species assessed by COSWEIC may be added to Schedule 1 of SARA with potential critical habitat identified. As best practice it is recommended to also consider species assessed by COSEWIC.</p>	<p>The Proponent should identify all species at risk and any critical habitat that may interact with the Project. Potential adverse impacts on these species should be described. The measures that will be used to avoid or lessen these impacts should be included for each Project activity and stage.</p> <p>As best practice, the Proponent should also consider species assessed by COSWEIC.</p>
ECCC-T1-7	Migratory birds and species at risk and their habitat	<p>Individual mortality and the destruction of nests and eggs, young or any other structure necessary for the reproduction and survival of species at risk could occur during all Project phases.</p> <p>Construction of the Project and associated infrastructure will contribute to land clearing activities, which leads to destruction, disturbance and fragmentation of habitat (e.g., foraging, nesting, hibernating), habitat avoidance, sensory disturbance, and the inadvertent disturbance and destruction of individuals, nest and eggs of migratory birds and species at risk.</p> <p>There is a higher risk that these effects would be more severe for migratory birds that are also species at risk and species where habitat is sensitive to disturbance (e.g., wetlands) or where there is already a high degree of cumulative effects to habitat or individuals. Destruction and/or disturbance of habitat can have increased impacts on species at risk individuals, residence and their critical habitat, which can lead to changes in prey and predator dynamics, loss of food resources,</p>	<p>The <i>Migratory Birds Convention Act, 1994</i> (MBCA) and the <i>Migratory Bird Regulations, 2022</i> (MBR 2022) protect migratory birds and prohibit the disturbance or destruction of migratory bird nests when they contain a viable egg or a migratory bird themselves (young or adult). Schedule 1 of MBR 2022 provides year-round nest protection for 18 species. There is potential for Schedule 1 species, including pileated woodpecker and great blue heron to nest in the general Project area. The legislation and regulations apply to all lands and waters in Canada, regardless of ownership.</p> <p>Planning can help Proponents comply with the law and manage the risk of detrimental effects to migratory birds. Assessing risk is a first step for developing appropriate prevention and mitigation measures that help maintain sustainable populations of migratory birds. Depending on the location, the time of year, and the presence of nests that are protected year-round, some activities can pose a risk to migratory birds.</p> <p>With respect to disturbance or harm to nesting birds, the principal risk factors are location and time of year. The main sensitive period to consider is the breeding season. ECCC publishes a website (see links below to the "Avoiding harm to migratory birds" site) to aid in the planning of activities to reduce the risk of detrimental effects to migratory birds, and their nest and eggs in accordance with the purpose of the MBCA.</p> <p>More information on the MBR 2022 can be found on the ECCC web site.</p> <p>Links:</p> <p><i>New Migratory Birds Regulations, 2022:</i> https://www.canada.ca/en/environment-climate-change/services/migratory-game-bird-hunting/status-update-modernization-regulations.html</p>	<p>It is the Proponent's responsibility to be aware of its obligations stemming from the MBCA and its regulations.</p>

		<p>loss of breeding areas, changes in migration or movement, and increased risk of mortality. For example, migratory birds (e.g. Bank swallows, Common nighthawk) may nest in large piles of soil left unattended/unvegetated during the most critical period of breeding season.</p> <p>Where a Project requires new road infrastructure, such as an access road or an increase in capacity to existing road networks, the increase in road traffic volumes are likely to result in an increase in wildlife injury, mortality, and the introduction of invasive species. Although adverse direct effects to migratory birds and their nests are typically managed through appropriate scheduling of activities outside of the breeding season, collisions with vehicles and associated infrastructure can result in direct mortality of wildlife. Effects will be most acute during the operation phase as this is when the most pronounced and sustained increase in vehicle volume is expected.</p>	<p>Avoiding harm to migratory birds (note the “Guidelines to reduce risk to migratory birds” section within the provided link): https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html</p>	
ECCC-T1-8	Migratory birds and species at risk and their habitat	<p>The construction, operation and decommissioning of surface water management ponds for the Project may have direct or indirect impacts to migratory birds and other wildlife through changes in geomorphological processes (e.g., sedimentation processes, water quality and quantity). Additionally, birds that land on and/or frequent stormwater ponds have the potential to come into contact with toxic substances that can result in on and offsite mortality.</p>	<p>During construction, operation, maintenance and decommissioning of the Project, harmful substances may enter or be spilled into the receiving environment that may negatively affect birds, wildlife and their habitat. Depending on the nature of the release (e.g., toxicity, volume release, exposure pathways), effects to wildlife could be acute, chronic or both and can include effects such as bioaccumulation of contaminants or mortality. The Proponent should provide detail on how these potential impacts to birds and amphibians will be avoided or mitigated.</p>	<p>Impacts to birds and other wildlife may occur due to changes to water quality and quantity in the surface water management pond. The Proponent should detail how these impacts to birds and amphibians will be mitigated.</p>
ECCC-T1-9	Migratory birds and species at risk and their habitat	<p>Migratory birds and species at risk could be affected by sensory disturbances during the construction, operation, and decommissioning of the Project. Examples of potential sources of sensory disturbance are noise from various Project activities, lights, vibrations from excavation and blasting, operation of machinery, and the presence of workers. The amount, duration, frequency, and timing of noise are important factors that impact sensory disturbances. Sensory disturbances may make adjacent habitats unsuitable for use by wildlife and cause avoidance effects in many species.</p> <p>Noise, vibrations, artificial lighting and disturbances from construction, operation and decommissioning activities may result in injury, mortality, sensory disturbance and</p>	<p>Lighting required for the construction, operation and decommissioning of the Project should be controlled to avoid adverse effects on migratory birds, including species at risk. Such controls should include the direction, timing and intensity of light.</p> <p>Effective mitigations to reduce impacts to migratory birds are limiting lighting to areas where required for safety and installing lighting in a downward direction.</p>	<p>The Proponent should describe sources of sensory disturbances (including noise, lights) and mitigations.</p>

		change in habitat use. Attraction to lights at night or in poor visibility conditions may cause birds to collide with lit structures or their vertical support structures, resulting in injury or death. Birds can also become disoriented while circling an artificial light source and may deplete their energy reserves and either die of exhaustion or drop to the ground where they are at risk of predation.		
ECCC-T1-10	Migratory birds and species at risk and their habitat	<p>Linear features of the Project (i.e., transmission line, pipeline infrastructure) can cause loss, fragmentation, and alteration of habitat, which can negatively impact the reproduction, migration and wintering of affected species. These linear disturbances have the potential to remove habitat important for nesting, foraging, staging, and overwintering.</p> <p>Linear disturbances may also have other negative effects on wildlife, such as increasing predator abundance, distribution and hunting efficiency, creating habitat fragmentation or reducing habitat connectivity within the landscape.</p> <p>Collisions with transmission lines may pose a mortality risk to migrating birds, including species at risk.</p>	The Proponent should provide further detail on their intention to conduct operational mitigation and monitoring measures proposed to reduce the impacts on migratory birds from collisions with transmission lines.	The Proponent should provide details on potential impacts of linear Project features on migratory birds and other species. Proposed mitigation and monitoring measures should be described.
ECCC-T1-11	Environmental Emergencies	<p>The proposed Project includes a power generating facility, natural gas and carbon dioxide pipelines. As such, there is potential for adverse environmental effects from accidents and malfunctions, including pipeline ruptures and spills of hazardous materials. Adverse effects to air quality, water quality, wildlife and wildlife habitat could result from the accidental release of high concentrations of carbon dioxide, natural gas, and other contaminants to surrounding waters.</p> <p>Optimized spill prevention, preparedness and response measures and systems are important given the risk of spills of hazardous substances to the environment, especially to nearby waterways and environmentally sensitive areas.</p>	Part 8 of the <i>Canadian Environmental Protection Act, 1999</i> (CEPA 1999) on environmental emergencies (sections 193 to 205) addresses the prevention of, preparedness for, response to and recovery from environmental emergencies caused by uncontrolled, unplanned or accidental releases. It also addressed the reduction of any foreseeable likelihood of releases of toxic or other hazardous substances listed in 12 Schedule 1 of the Environmental Emergency Regulations. This act may apply if Schedule 1 substances onsite meet or exceed the threshold to be regulated under CEPA 1999.	The Proponent should refer to part 8 of CEPA 1999 on environmental emergencies (sections 193 to 205) when developing the emergency preparedness plan. The Proponent should also follow all storage limits and regulations within the Act.

Please insert additional rows as necessary.

Table 2. Clarifications or additional information the Proponent could include in the Detailed Project Description or in the response to Summary of Issues

Comment ID	Relevant section of the Initial Project Description	Description of Issue, Concern or Uncertainty	Clarification or additional information	Plain language summary for inclusion in Summary of Issues
<p>Please identify comments by organization and comment number.</p> <p>e.g.: IAAC-01</p>	<p>If the comment is related to a specific section of the Initial Project Description, please provide a reference.</p> <p>You may also choose to copy the relevant text here.</p>	<p>Provide a description of the issue, concern or uncertainty the proponent could address in their detailed project description that would give confidence that the issue will be addressed and managed, or which could aid in tailoring the Guidelines</p>	<p>Provide recommended clarification or additional information to be included in the Detailed Project Description to address the issue, concern or uncertainty, for example</p> <ul style="list-style-type: none"> • Clarifications to project description (e.g. components, activities, locations or alternatives); • Project design changes that could avoid effects; • Evidence that could be presented to demonstrate there is no effect pathway or that effects will be negligible; • Evidence that standard mitigations will address potential effects; • Commitments the proponent could make to respond to the issue, including the implementation of federal operational policies or guidance documents. 	<p>For issues to be included in the Summary of Issues, provide a concise, plain language synopsis of the issue and of the question or direction for the proponent.</p>
<p>ECCC-T2-1</p>	<p>Table 14.4</p> <p>Federally-Listed Species at Risk that may Occur in the Project Vicinity</p>	<p>Table 14.4 lists that bank swallow and common nighthawk may occur in the Project area.</p>	<p>Common nighthawk (listed as <i>Threatened</i> under SARA) nest in open areas, such as gravel pits and forest clearings. As the proposed Project is to be built on a former gravel pit site and the linear infrastructure are being built along cleared utility right of ways, there is potential for common nighthawk to be nesting within Project footprint.</p> <p>Bank swallow (listed as <i>Threatened</i> under SARA) may be present at the former quarry site as they are known to nest in gravel pits or stockpiles of sand and gravel.</p> <p>If construction activities are undertaken during breeding season, there is a risk of nest destruction for common nighthawk and bank swallow. As detailed in question 1 of the FAAR response, a SARA permit may be required.</p>	<p>The Proponent should provide details on mitigation and monitoring measures that will be utilized for species at risk that nest in human infrastructure, including common nighthawk and bank swallow.</p>
<p>ECCC-T2-2</p>	<p>Sections 19.6.1 and 19.6.2</p> <p>Effect Pathways and Mitigation</p>	<p>Section 19.6.1 states: <i>“While there are no known wetlands within the PGF [Power Generation Facility] site, wetlands will be crossed by the natural gas pipeline, CO₂ pipeline and power transmission line.”</i></p> <p>And</p> <p><i>“During construction of the pipelines and transmission line, natural vegetation will be cleared and wetlands may be temporarily disturbed.”</i></p> <p>Section 19.6.2 states: <i>“Following implementation of mitigation measures, Project construction will have temporary residual adverse effects on native vegetation and wetlands where they are cleared and disturbed, however, these effects are reversible following reclamation.”</i></p>	<p>The activities linked to the construction, operation, and decommissioning of the Project could have negative effects on wetlands and their ecological functions. The Project, particularly construction and decommissioning activities, are likely to alter existing hydrological regimes that are essential for maintaining wetlands. These alterations could impact the quality and/or availability of habitat for migratory birds and other wildlife. The destruction and modification of wetlands would likely result in negative effects to the migratory birds and species at risk that use these areas for breeding, migration, foraging or resting.</p> <p>Linear disturbances are more likely to create pathways for the introduction and dispersal of</p>	<p>The Proponent should provide additional details on potential impacts to wetlands in the Project Development Area (PDA) and Local Assessment Area (LAA) including:</p> <ul style="list-style-type: none"> • The amount of direct wetland loss, including types of wetlands. • Wetland alterations that could impact wetland function. • Mapping of wetland areas in respect to Project components and

		<p>And</p> <p><i>“Mitigation measures similar to those implemented during construction would be employed during decommissioning or abandonment activities to reduce potential temporary residual effects on native vegetation and wetlands, limited to the PGF and transmission line, as pipelines would be abandoned in place. Potential residual effects are reversible following reclamation for vegetation.”</i></p>	<p>invasive species. The resulting spread of invasive species may pose a threat to wetlands.</p> <p>Abandoned pipelines may corrode or collapse and become water conduits. If these are under a wetland, impacts may include changes to the hydrology and associated alteration of wetland function.</p>	<p>known and/or potential routing options.</p> <ul style="list-style-type: none"> • The long-term or permanent impacts to wetlands that could occur if pipelines are abandoned in place following decommissioning. • Detail mitigation measures and monitoring that will be utilized for abandoned pipelines.
ECCC-T2-3	<p>Table 19.21</p> <p>Potential Construction Phase Mitigation Measures for Wildlife and Wildlife Habitat</p>	<p>Table 19.21 states that the Proponent will:</p> <p><i>“Establish gaps in windrows (e.g., soil, snow) and strung pipe where features such as wildlife trails and drainages cross the ROW [right of way] to allow wildlife to cross the construction footprint. Locations where wildlife gaps should be established will be determined in the field by the Environmental Inspector. Gap associated with multiple barriers should align.”</i></p> <p>And</p> <p><i>“Limit the amount of time that a trench is left open, or a barrier is left in place.”</i></p>	<p>Physical barriers such as pipes laying on the ground prior to installation (or other laydown areas), tree stumps not cut to ground level, windrows of cut vegetation, soil or snow and open trenches can all cause barriers to wildlife movement. Having clear information on wildlife movement around the Project area is important for successfully mitigating the impact of these barriers.</p>	<p>The Proponent should provide additional information on:</p> <ul style="list-style-type: none"> • Wildlife species that will be affected by barriers. • Methods used to determine the locations of wildlife trails. • Details of the types of physical barriers that will be created and how long they will be in place.
ECCC-T2-4	<p>Table 19.21 Potential Construction Phase Mitigation Measures for Wildlife and Wildlife Habitat</p>	<p>Table 19.21 states:</p> <p><i>“If construction activities or clearing are planned during the active bat period, complete bat roost surveys in patches of suitable trees that will be cleared. If an active roost is found, implement setback buffers according to the direction of a qualified wildlife professional.”</i></p>	<p>Little Brown Myotis and Northern Myotis, which are both listed as <i>Endangered</i> under Schedule 1 of SARA, range within the Project area. All species at risk that are expected to be present in the Project area must be assessed and species-specific mitigations detailed.</p> <p>No information is presented in the IPD on bat presence, or the potential for their presence within the Project development area. This information is required to be able to mitigate Project impacts.</p>	<p>The Proponent should provide the methods for baseline and pre-construction/pre-clearing surveys that will be conducted to identify any hibernaculum and maternal roosting sites.</p>
ECCC-T2-5	<p>Table 19.21 Potential Construction Phase Mitigation Measures for Wildlife and Wildlife Habitat</p>	<p>Table 19.21 states:</p> <p><i>“If construction activities or clearing are planned during the migratory bird nesting period or raptor/owl nesting period, complete nest searches no more than 7 days prior to undertaking the activity. If an active nest is found, implement setback buffers according to the direction of a qualified wildlife professional.”</i></p>	<p>ECCC recommends that clearing and grubbing activities not be conducted during the breeding bird season. Information on avoiding harm to migratory birds can be seen in the link below.</p> <p>The Proponent should provide details on how vegetation clearing will be conducted and clarify the timing window for vegetation removal to minimize risk to migratory birds and species at risk.</p> <p>Link:</p> <p>Avoiding harm to migratory birds: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html</p>	<p>The Proponent should provide details on how vegetation clearing will be conducted, including the proposed timing window.</p>

ECCC-T2-6	Table 7.3 Indicative Annual CO ₂ Emissions – Project and Wind-Gas Alternatives	The GHG emission estimate shown in Table 7.3 (73,300 tonnes per year) is different than the value presented in section 23, table 23.1 (95,821 tonnes per year). The GHG emissions intensity is also different between these two tables.	ECCC recommends the Detailed Project Description corrects the discrepancy in the GHG estimate and emission intensity values.	GHG emission estimate and emissions intensity values are different between Table 7.3 and Table 23.1. ECCC recommends these discrepancies be resolved in the Detailed Project Description.
ECCC-T2-7	Section 9.1.4 Project Activities and Physical Works – Natural Gas Pipeline	Section 9.1.4 states that approximately 85,000 gigajoules of natural gas will be provided per day. ECCC requests additional details to clarify natural gas usage. Detailed information on natural gas usage is needed to assess the potential upstream GHG emissions of the Project and whether the natural gas usage by the Project will be incremental.	ECCC recommends the Proponent clarify if natural gas usage is expected to vary year-over-year and confirm the number of days per year that natural gas will be delivered. For example, will gas be delivered 365 days per year for a total of 31,025,000 gigajoules per year? Additionally, the Proponent should confirm that the delivered amount is what will be combusted daily in the power generation facility. The amount of natural gas combusted per year should be clearly stated as part of the GHG section in the Detailed Project Description.	ECCC requests additional details related to the amount of natural gas combusted per year by the power generation facility.
ECCC-T2-8	Section 23 Greenhouse Gas Emissions Associated with the Project	The Proponent indicates that the Project would be in operation past 2068. The Proponent did not make a commitment to be net-zero by 2050 for any activity that goes beyond 2050 (however, the Proponent made a commitment that the Project will be compliant with the forthcoming Clean Electricity Regulations). If the Project is designated, the SACC would apply. Among other information requirements, the SACC describes the circumstances in which a credible plan to achieve net-zero emissions by 2050 will be required, including for those projects that have a lifetime beyond 2050. ECCC acknowledges the Proponent provided preliminary options to achieve net-zero by 2050.	If the Project is subject to an Impact assessment, the Proponent should provide a net-zero plan for any activities beyond 2050, including further exploring the options identified in Section 23.	ECCC recommends the Proponent proactively make considerations for a net-zero plan for any activities beyond 2050, if the Project is designated.
ECCC-T2-9	Section 12.2 Alternative to the Project	ECCC acknowledges the Proponent's statement that currently there are no technically and economically feasible alternatives to the Project. According to the requirements in the SACC, the Detailed Project Description should describe the potential alternative means of carrying out the Project that are technically and economically feasible, including through the use of best available technologies. This can include options for mitigating other GHG emissions, such as CH ₄ and N ₂ O that may not be sequestered as part of the carbon capture unit.	ECCC recommends that the Detailed Project Description includes a description of the potential alternative means of carrying out the Project that are technically and economically feasible, including through the use of best available technologies. When evaluating alternative means of carrying out the Project, the Proponent should discuss the potential impacts of the alternatives on GHG emissions and how GHG emissions were considered as a criterion in the alternatives selection. Project proponents are also encouraged to provide information on the measures being considered to reduce the Project's GHG emissions on an ongoing basis. These measures could include technologies and practices to reduce the Project's GHG emissions. Since this Project will go beyond 2050, the Proponent is encouraged to provide an overview of the measures being considered to ensure the Project will have net-zero emissions by 2050.	ECCC recommends that the Detailed Project Description re-evaluates the potential alternative means of carrying out the Project according to the SACC, including an overview of measures being considered to ensure the Project has net-zero emissions by 2050.

Please insert additional rows as necessary.