

## Federal Authority Advice Record (FAAR)

Beacon AI Centers Heartland Project - Heartland Power Generation LP and its general partner Northbridge Power GPC Inc. (Heartland Power)  
Registry File: 90123

Department/Agency	Environment and Climate Change Canada
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1. Will your department or agency exercise a **power, perform a duty or function**, or provide **financial assistance**, related to the project to enable it to be carried out in whole or in part?

As relevant,

- a) Specify the power, duty or function, or financial assistance, and the likelihood that it will be required to construct the project, based on the Initial Project Description, as either Required, Potential, Likely, Unlikely or Not Required

### ***Species at Risk Act (SARA) permits***

Based on the information found in the Initial Project Description, a SARA permit is unlikely.

Please see Annex A: SARA Permitting 101 for further details.

### ***Migratory Birds Regulations (MBR) permits***

Based on the information found in the Initial Project Description, a MBR permit is unlikely.

Please see Annex B: MBR Permitting 101 for further details.

- b) Describe any associated Indigenous or public consultation, including timelines

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.

- c) Describe any associated information requirements (e.g., alternative means assessment, habitat offsetting), and specify those that may be coordinated with the impact assessment process, if an impact assessment is required

ECCC does not anticipate associated information requirements.

- d) Identify any associated project-specific guidance or issues of which the proponent should be aware, or information the proponent should provide

### **[Open Science Data Platform \(OSDP\)](#)**

The Open Science Data Platform (OSDP) provides information relevant to cumulative effects and development activities across Canada and is publicly available at the following website:

<https://osdp-psdo.canada.ca/dp/en>. More specifically, the platform provides a single window to access data and scientific knowledge relevant to understanding cumulative effects from existing federal, provincial, and territorial on-line databases and registries, including publications from the federal government and its scientists. It provides an interactive geospatial mapping tool to enable mapping of multiple datasets from multiple sources. It offers various features, including keyword-

based searching, interactive data visualization on maps, and educational resources covering key topics such as cumulative effects, water, air, climate, biodiversity, land, economy and industry, health, and society and culture.

OSDP information may be of value to persons preparing and reviewing projects assessments, including cumulative effects assessments. The following are some examples of ECCC information available on the OSDP.

### **Water – quality and quantity**

- [National long-term water quality monitoring data](#)
- [Real-time hydrometric data](#)
- [Canadian Aquatic Biomonitoring Network \(CABIN\)](#)
- National Pollutant Release Inventory (NPRI)
  - [Facilities that reported releases to water](#)
- Find [additional water-related resources \(including publications, datasets and monitoring stations\)](#) from ECCC on the OSDP here. [https://osdp-psdo.canada.ca/dp/en/search?search\\_share=&content\\_category=100001&sort=issued\\_no\\_rmalized|desc&page=0|10&search\\_option=exactall&published=|&isIncludeNonSpatialData=true&facets=subject\\_area|false|1100008|contributor\\_organization|false|GC:ECCC-ECCC|&extentInfo=](https://osdp-psdo.canada.ca/dp/en/search?search_share=&content_category=100001&sort=issued_no_rmalized|desc&page=0|10&search_option=exactall&published=|&isIncludeNonSpatialData=true&facets=subject_area|false|1100008|contributor_organization|false|GC:ECCC-ECCC|&extentInfo=)

### **Biodiversity (e.g., birds, species at risk, wetlands)**

- [Critical habitat for species at risk \(terrestrial\)](#)
- [Range map extents – Species at risk](#)
- [Canadian wetlands](#)
- [Canadian Protected and Conserved Areas Database \(CPCAD\)](#)
- [Canadian Breeding Bird Census plots](#)
- [Priority places for species at risk](#)
- Find [additional biodiversity-related resources \(including publications, datasets and monitoring stations\)](#) from ECCC on the OSDP here.

### **Air Quality**

- National Pollutant Release Inventory (NPRI), including:
  - [Facilities that reported release of criteria air contaminants](#)
- Canadian Environmental Sustainability Indicators (CESI), including
  - [Average ambient fine particulate matter concentrations](#)
  - [Peak ambient ozone concentrations](#)
  - [Ambient volatile organic compound concentrations](#)
  - [Average ambient sulphur dioxide concentrations](#)
  - [Peak ambient nitrogen dioxide concentrations](#)
- Find [additional air-related resources \(including publications, datasets and monitoring stations\)](#) from ECCC on the OSDP here.

### **Climate, including climate change**

- [Hourly and daily climate observations](#)
- [Monthly climate observation summaries](#)
- [Climate normals, averages and extremes 1981-2020](#)
- [Climate data: homogenized surface air temperature data - Canada.ca](#)
- [Canadian homogenized monthly precipitation](#)
- Find [additional climate-related resources \(including publications, datasets and monitoring stations\)](#) from ECCC on the OSDP here.

Beyond ECCC's mandate, the OSDP also contains resources on topics led by departments and other levels of government (e.g., human health, economy and industry). The OSDP also provides access to regulatory registries that list government authorizations of other developments (e.g., *Fisheries Act* Registry), which can be useful in understanding the cumulative pressures on an area.

- e) Indicate whether your department or agency has identified any power that it will not be exercising or may not be able to exercise to allow the project to be carried out, in whole or in part.

ECCC has not identified any powers that we will not be exercising or may not be able to exercise to allow the project to be carried out, in whole or in part.

- 2. **Using Table 1**, identify project- and context- specific **key issues**, based on the expertise within your mandate<sup>1</sup> and the information in your possession, including the Initial Project Description, any exchanges with the proponent or others related to the project and known means to address the effects of the project. For each key issue:
  - a) Specify the key issue (e.g., specific species and location)
  - b) Specify the project component or activity linked to the key issue
  - c) Explain why it's a key issue based on:
    - i. biophysical effect pathway(s) from the specific project component or activity
    - ii. concern unique to the project or a priority within your mandate
    - iii. the issue being material<sup>2</sup> to decision making under the *Impact Assessment Act*
  - d) Identify how the issue could be resolved, including through means other than an impact assessment
  - e) Identify additional information the proponent could provide including to give confidence on how the issue can be addressed through other means.

Cristina Ruiu – Acting Regional Director, PNR EA South

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Name and title of Departmental /  
Agency Responder

January 23, 2026

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Date

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<sup>1</sup> Refer to the [Memoranda of Understanding with IAAC](#).

<sup>2</sup> An issue is material to decision making if its analysis is anticipated to affect the conclusions on (1) whether adverse effects within federal jurisdiction or direct and incidental adverse effects (collectively adverse federal effects) are likely not significant, or of low, medium or high significance; (2) appropriate mitigation measures for significant adverse federal effects; or (3) justification in the public interest.

**Table 1: Key Issues to inform the impact assessment process**

This table should outline key issues to inform the impact assessment process, including whether an impact assessment is required and, if so, the scope of the assessment and tailoring of the Tailored Impact Statement Guidelines.

Key issues are the major concerns directly related to a project component or activity, the analysis of which is anticipated to be material to decision-making under the *Impact Assessment Act*.

Federal authorities' advice should be guided by the identification and resolution of key issues. If an impact assessment is required, it will be focused on key issues.

Comment ID	a) Key issue	b) Project component or activity	c)(i) Biophysical effect pathway(s)	c)(ii) Concern unique to the project or a priority within your mandate	c)(iii) Material to federal decision-making	d) Means for issue resolution	e) Additional information from the proponent
ECCC-01	Air quality due to contaminants such as nitrogen oxides (NOx), and particulate matter (PM2.5, PM10 and PM).	The construction, operation and decommissioning of the project can result in adverse effects on air quality. Projects that involve on-road vehicles and mobile off-road machines for construction, operation and decommissioning, have the potential to adversely affect air quality. Activities such as the construction and operation of facilities, and activities associated with combustion can result in the emission of air contaminants such as NOx, and PM2.5, PM10 and PM. The bulk of emissions typically occurs during operations from sources such as stationary combustion. Activities that cause a physical disturbance to land, such as earth moving, land clearing, and transportation, can introduce particulate matter (e.g. dust and soot) to the surrounding region. Air contaminants could include PM2.5 and PM10 and PM, NOx, and other air contaminants.	ECCC provides expertise on the fate of air emissions to help support Health Canada's assessment of potential impacts on nearby Indigenous Peoples. These emissions can result in local or regional degradation of ambient air quality. 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. When contaminants settle out of the air in the surrounding environment, their deposition may result in adverse impacts to terrestrial and aquatic ecosystems.	Air Quality – a project of this type and size has the potential to lead to a non-negligible adverse change, including to the health, social or economic conditions of the Indigenous Peoples of Canada.	Air Quality impacts may present an adverse effect within federal jurisdiction that may be significant due to: <ul style="list-style-type: none"> <li>• the presence of sensitive human receptors, including Indigenous Peoples; and</li> <li>• the large magnitude of NOx and PM2.5 emissions.</li> </ul>	This key issue could be resolved or addressed by common, proven, well-understood or standard mitigation measures to mitigate the effect or effect pathways. For example, by the employment of best practices during construction including minimizing idling, keeping equipment well maintained, and by the use of construction equipment equipped with engines meeting Tier 4 emission standards.	Should impacts from the Project on air quality be shown to be an effect within federal jurisdiction and material to the Project decision, ECCC recommends the following be included in the Proponent's Impact Statement to assess potential impacts to air quality: <ul style="list-style-type: none"> <li>• Baseline and reference ambient air quality, including quantified emission sources for all relevant contaminants, including but not limited to: PM, metals, NOx, sulphur oxides (SOx), Volatile Organic Compounds (VOCs), any other products of fossil fuel combustion, and other relevant pollutants from mobile, stationary, and fugitive sources.</li> <li>• Consideration of the impact of wildfires on baseline air quality data. If applicable, refer to the <a href="#">Alberta Wildfire Status</a>.</li> <li>• Comparison of ambient baseline and reference air quality with applicable provincial and federal standards.</li> <li>• Inventory and description of project activities and equipment that have the potential to impact air quality.</li> <li>• Quantitative prediction of air pollutants that will be generated during all project phases, including for inversion events.</li> <li>• Comparison of the predicted levels of air pollutants with baseline air quality data, and the strictest federal (CAAQS) or provincial air quality standards; if applicable.</li> </ul>

							<ul style="list-style-type: none"> <li>An air quality management plan that includes a dust management plan. This should encompass sources of air pollution, common mitigation measures for air contaminants (including a detailed complaint resolution process), the performance effectiveness of air contaminant control devices, best practice programs, as well as monitoring and follow-up.</li> </ul>
ECCC-02	Greenhouse Gas (GHG) Emissions Assessment	The construction, operation, and decommissioning of the proposed Project will result in GHG emissions or impacts to carbon sinks. GHG emissions during operations is estimated by the Proponent to be 4,401,000 t CO <sub>2</sub> /yr.	N/A	<p>The assessment of GHG emissions (including upstream emissions) and carbon sinks from this Project would be relevant in considering the extent to which the effects of the designated Project contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change (<i>Impact Assessment Act</i> (IAA) paragraph 22(1)(i) Factors To Be Considered).</p> <p>Due to the high emissions from project operations, ECCC recommends the Project follow the Strategic Assessment of Climate Change (SACC) in the estimation of GHG emissions, with an emphasis on the full consideration and evaluation of GHG mitigation measures.</p>	<p>Designated projects that require an Impact Assessment (IA) under the IAA, regardless of whether they are federally or provincially regulated, must consider the Project's GHG emissions in terms of the Projects' contribution to Canada's ability to meet its environmental obligations and its commitments in respect of climate change.</p> <p>Application of the Strategic Assessment of Climate Change (SACC), as determined by IAAC, would generate the information to determine if the Project will contribute to Canada's climate change objectives and will inform the federal Minister's IA decision for the Project.</p> <p>This information may assist in determining if the Project will contribute to Canada's ability to meet its environmental obligations and its commitments in respect of climate change.</p>	<p>The SACC was published in 2020 and works in conjunction with the IAA to provide guidance on how to consider climate change throughout federal impact assessments.</p> <p>Proponents may find the technical guidance of the SACC helpful in assessing the impacts to climate change and in ensuring consistent, predictable, efficient and transparent consideration of impacts to climate change. Information typically requested for the project description is outlined in the SACC (including section 4.1) and the draft <a href="#">Technical Guide</a> (including sections 2.4, 3.3, and 4.2).</p> <p>Should IAAC determine an IA under the IAA is required for the Project, the SACC would apply, as circumstances warrant, to determine the extent to which the effects of the Project contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change.</p>	<p>Due to high GHG emissions from project operations, ECCC recommends that the Project's GHG emissions and climate change impacts be assessed and mitigated consistent with guidance in the SACC.</p> <p>The Proponent is encouraged to provide more information on the measures being considered to reduce the Project's GHG emissions on an ongoing basis.</p> <p>Technical guidance on the SACC can be found at: <a href="https://www.strategicassessmentclimatechange.ca/24391/widgets/98155/documents/62220">https://www.strategicassessmentclimatechange.ca/24391/widgets/98155/documents/62220</a></p>
ECCC-03	Climate Change Resilience	<p>Climate over the lifetime of the project is likely to be different from past and current climate in the project area.</p> <p>For example, project components and activities for which climate change resilience could be important for this project</p>	<p>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).</p> <p>Climate changes in the project area, such as possible changes in mean and extreme precipitation and temperature and related</p>	<p>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).</p>	<p>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).</p>	<p>The <a href="#">Strategic Assessment of Climate Change (SACC)</a> was published in 2020 and works in conjunction with the <i>Impact Assessment Act</i> to provide guidance on how to consider climate change throughout federal impact assessments.</p>	<p>Relevant information is 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: "Strategic Assessment of Climate Change" <a href="https://www.strategicassessmentclimatechange.ca">https://www.strategicassessmentclimatechange.ca</a></p>

		include those related to surface water management.	environmental conditions, may alter baseline conditions, with implications for climate sensitive aspects of project design and associated effects within federal jurisdiction.				“Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience” <a href="https://www.strategicassessmentclimatechange.ca/28896/widgets/117114/documents/77106">https://www.strategicassessmentclimatechange.ca/28896/widgets/117114/documents/77106</a>
ECCC-04	Water Quality and Quantity	The activities linked to the construction, operation, and decommissioning of the Project could have adverse effects on the quality of groundwater and surface water, as well as affect the hydrological regime within nearby wetlands, watercourses and channel morphology through site recontouring, changes in land cover, stormwater and surface water management structures (i.e. ponds, ditches, and water treatment facilities).	<p>The Project proposes construction of a stormwater pond for site water management. Undersized water conveyance structures such as stormwater ponds, stormwater ditches and effluent channels may overflow during extreme flood events also resulting in the potential release of contaminants to the receiving environment through runoff, erosion, infiltration into groundwater, and sedimentation processes. Water management must consider the presence of the two confirmed ephemeral drainages and the semi-permanent wetland.</p> <p>Project activities may produce airborne particulate matter, which could be a source of surface water contamination upon deposition.</p> <p>Surface water quality may be degraded by interactions between groundwater and surface waters in the project area. The use and storage of water by the Project presents the potential for contaminants to enter groundwater through seepage from process water impoundments. These contaminants could then be transported to aquatic receiving environments, resulting in possible adverse effects to water quality.</p>	Impacts to Water Quality and Quantity affecting fish and fish habitat are within the mandate of Environment and Climate Change Canada.	Changes to Water Quality and Quantity can result in adverse impacts to fish and fish habitat, which are effects within federal jurisdiction.	<p>The Proponent has stated that all stormwater discharges would meet <i>Environmental Protection and Enhancement Act</i> (EPEA) water quality guidelines before being released but no information is provided on the location or pathway of the discharge. ECCC recommends that additional measures are considered to ensure that all waters discharged from the site do not cause impacts to aquatic life.</p> <p>The Proponent can apply best practices to mitigate erosion and manage stormwater, such as:</p> <ul style="list-style-type: none"> <li>• selecting a design storm that provides adequate erosion protection and accommodation of extreme runoff events;</li> <li>• protecting easily erodible surfaces until local vegetation re-establishes;</li> <li>• retaining surface water runoff generated from the proposed works in stormwater ponds;</li> <li>• grading the ground surface so that runoff quickly drains to channels, through culverts, and into stormwater ponds, rather than pooling;</li> <li>• regularly inspecting the project area, repairing and protecting surfaces that have begun to erode; and</li> <li>• ensure stormwater discharges do not have the potential to enter fish-bearing waters.</li> </ul> <p>The Proponent should consider effects to the groundwater-surface water interaction regime. This</p>	<p>The Proponent can provide:</p> <ul style="list-style-type: none"> <li>• rationale on the selection of the design storm event (including peak discharge and runoff depth);</li> <li>• a stormwater management plan including designs for hydraulic structures (drainage ditches, effluent channels, stormwater ponds, etc.);</li> <li>• details on the proposed stormwater discharge location and pathway to ensure that discharges do not enter fish-bearing waters;</li> <li>• detailed erosion and sediment control measures proposed during construction and operation; and</li> <li>• a groundwater monitoring and management plan to avoid seepage of contaminants into the groundwater system.</li> </ul> <p>Should the Project be subject to an assessment under the <i>Impact Assessment Act</i> (IAA), ECCC recommends that the Impact Statement describe all potential effects, including direct and indirect effects, of project components or activities, including changes to surface water quality and quantity at a suitable spatial and temporal scale. This should include a detailed characterization of the receiving environment, both under baseline conditions as well as project-affected conditions through each phase of the Project for all watercourses and wetlands adjacent to the project site and potentially affected by the Project.</p> <p>In addition, project effects should take into consideration the hydrological impacts caused by climate change. The Impact Statement should also describe mitigation strategies and assess applicability and functionality of these</p>

						could include an assessment of potential groundwater impacts, including hydrogeological investigations, monitoring well networks, and contingency measures in the event of contaminant migration.	strategies to the Project and propose a contingency plan to mitigate potential effects that may result from the overflow of stormwater and surface water management structures during extreme flood events.
ECCC-05	Migratory birds, including Schedule 1 Migratory Birds: killing, harming or harassing migratory birds, including Disturbing or destroying active nests.	The activities linked to the construction, operation, and decommissioning of the Project and associated infrastructure could result in individual mortality and the destruction of nests and eggs.	<p>Vegetation clearing, wetland drainage, noise, vibrations, artificial lighting/flaring and disturbances from construction, operation and decommissioning activities may result in injury, mortality, sensory disturbance and 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.</p> <p>Accidental release of harmful substances to the onsite stormwater ponds could also have adverse effects on migratory birds that frequent the ponds.</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, such as in this geographic area (i.e., Industrial Heartland region). Pileated Woodpecker, a Schedule 1 migratory bird, has the potential to occur in the project area. Destruction and/or disturbance of habitat can have increased impacts on species at risk individuals, residences and their critical habitat, which can lead to changes in prey and predator dynamics, loss of food resources, loss of breeding areas, and changes in migration or movement. In some cases, construction can create features that are attractive for species and increase their mortality risk. For example, certain migratory bird</p>	Migratory birds are within the mandate of Environment and Climate Change Canada under the <i>Migratory Birds Convention Act, 1994</i> (MBCA) and the <i>Migratory Bird Regulations, 2022</i> (MBR).	Migratory birds are a key issue as potential impacts to migratory birds would be an adverse effect within federal jurisdiction.	<p>Well-understood mitigation measures would typically be required to resolve the issue. Typical mitigation measures recommended by ECCC include but are not limited to:</p> <ul style="list-style-type: none"> <li>• undertaking vegetation and habitat clearing activities outside of the migratory bird nesting season to prevent the destruction of migratory birds and their eggs and nests in order to be compliant with the MBCA and MBR;</li> <li>• management of lighting required for the construction, operation and decommissioning of the Project to minimize attraction of birds to reduce collision risk; and</li> <li>• deleterious substance mitigation measures, including deterrents if stormwater and process ponds contain substances harmful to migratory birds.</li> </ul> <p>MCBA permits, which as discussed in Question 1 of the FAAR, are considered possible but unlikely for the Project.</p>	The main sensitive period to consider is the breeding season. With respect to disturbance or harm to nesting birds, the principal risk factors are location and time of year. ECCC publishes a web site: <a href="https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html">https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html</a> ) to aid in the planning of activities in order to reduce the risk of detrimental effects to migratory birds, their nest and eggs, in accordance with the purpose of the MBCA.

			species at risk (e.g. Bank Swallow, Common Nighthawk) may nest in large piles of soil or open gravelled areas left unattended/unvegetated during the most critical period of the breeding season, making them vulnerable to construction activities.				
ECCC-06	Species at risk: killing, harming or harassing species, habitat disturbance or destruction, disturbing or destroying residences.	The activities linked to the construction, operation, and decommissioning of the Project and associated infrastructure could adversely affect species at risk (e.g. amphibians, arthropods, birds, lichens, terrestrial mammals, mosses, reptiles, and vascular plants) listed on the <i>Species at Risk Act</i> (SARA), and their habitat (e.g. wetlands) and critical habitat.	<p>During construction, loss or disturbance of habitat for species at risk or their residences could occur. Habitat destruction may also lead to increased mortality risk. For example, drainage and filling of wetlands may kill, harm or harass Northern Leopard Frog and Western Tiger Salamander species at risk. Little Brown Myotis rely on summer and fall roosts that may be disturbed or removed during construction (i.e., tree roosts), potentially harming or killing the bats. They may also roost in anthropogenic structures, where during operations the bats can be disturbed. Vegetation clearing during the bird nesting season may kill, harm or harass bird species at risk. The timing of habitat destruction and disturbance is important in understanding risk of mortality for species at risk.</p> <p>In addition, species at risk could be affected by sensory disturbances during the construction, operation, and decommissioning of the Project. Some examples of potential sources of sensory disturbance include noise from various project activities, lights, vibrations from grading and compaction, the operation of machinery, and the presence of workers. The duration, frequency, and timing of noise are important to understand potential effects. Sensory disturbance may make adjacent habitats unsuitable for use by species at risk and cause avoidance effects in many species.</p>	Species at risk and their habitat, are within the mandate of Environment and Climate Change Canada under the SARA.	Regulatory authorities have obligations under s.79 of SARA to ensure that measures are taken to lessen or avoid impacts and monitor effects to listed species at risk in a manner that is consistent with existing recovery strategies or action plans.	<p>Mitigation measures would typically be required to resolve the issue, which would be determined based on the specifics of both the identified species at risk and project activities. Relevant mitigation measures would vary depending on project specifics. Standard mitigation measures that may be applicable include the following examples:</p> <ul style="list-style-type: none"> <li>• applying activity restriction guidelines for sensitive wildlife;</li> <li>• limiting and orienting lighting to minimize light pollution;</li> <li>• placement of deterrents for stormwater ponds;</li> <li>• giving wildlife the right of way and adjusting speed limits; and</li> <li>• applying exclusion techniques to prevent access to project infrastructure.</li> </ul> <p>SARA permits, which as discussed in Question 1 of the FAAR, are considered possible but unlikely for the Project.</p>	<p>The Proponent should identify all species at risk listed on Schedule 1 of SARA and any critical habitat that may interact with the Project and describe how they may be adversely affected by the Project. They should describe what measures will be taken to avoid or lessen the effects of each project activity and stage, and how these measures will be implemented, and effects be monitored to ensure they are avoided, minimized or whether adaptive management may be required.</p> <p>Additionally, there is always the possibility that species assessed by COSEWIC 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 to implement measures to lessen or avoid impacts and to monitor them.</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 factors (e.g. habitat supporting staging, nesting, roosting or foraging) and population resilience.				
ECCC-07	<p>Accidents and malfunctions</p> <p>Potential releases of hazardous substances during construction, operation, and decommissioning resulting in adverse effects on water quality, fish and fish habitat, and migratory birds.</p>	<p>The Beacon AI Centers – Heartland Project is a 920 MWe natural-gas-fired reciprocating engine power generation facility comprising:</p> <ul style="list-style-type: none"> <li>• 200 INNIO Jenbacher J624 lean burn natural gas engines in 40 QPAC (Quick-deploy Power and Containerized) modules with integrated air-cooled radiators and SCR (selective catalytic reduction) systems.</li> <li>• Natural gas delivered via a new pipeline.</li> <li>• New substation and transmission line.</li> <li>• Construction and operation of four data halls.</li> <li>• Construction related equipment use, including heavy equipment operations, fuel handling, and hazardous materials management.</li> <li>• On site stormwater management facilities.</li> </ul> <p>Given these activities, hazardous substances likely to be present include diesel, gasoline, hydraulic fluids, ammonia (SCR reagent), natural gas, solvents, lubricants, oils, antifreeze, wastewater, and process chemicals associated with power generation, cooling</p>	<p>Accidental releases could occur during construction, operation, or decommissioning through:</p> <ul style="list-style-type: none"> <li>• spills or leaks of fuel, lubricants, ammonia, hydraulic fluid, natural gas condensates, or cooling/water treatment chemicals;</li> <li>• equipment failure leading to releases of oils, antifreeze, or other mechanical fluids;</li> <li>• pipeline failures, including rupture or leakage along the new natural gas connection;</li> <li>• structural or containment failures at fuel storage areas, mechanical rooms, or chemical storage facilities;</li> <li>• releases of contaminated stormwater due to improper handling or berm failure;</li> <li>• accidents during transport of construction materials, fuels, or chemicals on access roads and highways; and</li> <li>• fires, catastrophic failure and explosions related to high voltage equipment, natural gas systems, or turbine infrastructure.</li> </ul> <p>Potential pathways for non negligible effects to federal jurisdiction components (e.g., migratory birds, aquatic species, fish habitat) include:</p> <ul style="list-style-type: none"> <li>• contamination of surface water from accidental spills;</li> </ul>	<p>Key concerns specific to this Project include:</p> <ul style="list-style-type: none"> <li>• risks of spills involving ammonia, oils, glycol, or hydrocarbons during construction and operation;</li> <li>• fire/explosion hazards from high pressure natural gas systems producing air contaminants (NOx, CO, PM2.5) or thermal impacts affecting wildlife;</li> <li>• pipeline related risks, including third party strikes, corrosion, or pressure anomalies; and</li> <li>• risks associated with high voltage electrical infrastructure, including fire hazards, transformer oil releases, and electrocution related wildlife mortality.</li> </ul> <p>ECCC provides environmental emergency management planning advice and guidance related to potential accidents and malfunctions involving unplanned or uncontrolled releases or spills of hazardous substances into the environment, including scenarios where such releases could result in non-negligible adverse</p>	<p>Accidents and malfunctions involving chemical releases, equipment failures, natural gas leaks, transformer oil spills, stormwater contamination, or fires could result in non-negligible adverse effects on:</p> <ul style="list-style-type: none"> <li>• migratory birds, including those using wetlands and forest patches;</li> <li>• water quality, including within wetlands and ephemeral drainage features connected to the watershed; and</li> <li>• fish and fish habitat, through downstream pathways to tributaries of the North Saskatchewan River.</li> </ul> <p>Accident relevant project components requiring robust mitigation include:</p> <ul style="list-style-type: none"> <li>• ammonia SCR reagent storage and handling;</li> <li>• engine lube oil systems and waste oil flows;</li> <li>• closed loop glycol cooling systems;</li> <li>• high pressure natural gas systems;</li> <li>• stormwater pond integrity and drainage control; and</li> <li>• transformer and electrical infrastructure fire/oil release hazards.</li> </ul> <p>Federal decision makers will need to assess the adequacy of proposed mitigation measures including:</p> <ul style="list-style-type: none"> <li>• spill prevention and containment systems;</li> </ul>	<p>Optimized spill prevention, preparedness, and response measures and systems will be important during all activities associated with the construction and operation of the project, given the risk of release of hazardous substances to the environment. This includes:</p> <ul style="list-style-type: none"> <li>• Containment and storage controls: <ul style="list-style-type: none"> <li>○ secondary containment for fuel tanks, transformers, and chemical storage;</li> <li>○ double walled tanks or piping where feasible;</li> <li>○ spill/leak detection systems for generators, transformers, and natural gas infrastructure; and</li> <li>○ spill kits placed at high risk areas (fuel handling zones, turbine buildings, pipeline construction zones, transformer yards).</li> </ul> </li> <li>• Site controls and best practices: <ul style="list-style-type: none"> <li>○ designated, bermed, and lined refuelling and maintenance areas located 30m away, at minimum, from waterbodies;</li> <li>○ standardized procedures for handling oils and hazardous chemicals; and</li> <li>○ preventive maintenance programs</li> </ul> </li> </ul>	<p>The Proponent could commit to the following items, which would provide confidence that potential accident and malfunction scenarios associated with the project have been adequately considered and prepared for, and that the risks of adverse impacts to components of the environment under federal jurisdiction are minimized:</p> <ul style="list-style-type: none"> <li>• conducting a risk assessment of plausible accident and malfunction scenarios: <ul style="list-style-type: none"> <li>○ that could result from the activities proposed in the project; and</li> <li>○ that could result from the impact of natural hazards or environmental conditions at the proposed project site.</li> </ul> </li> <li>• adopting all relevant industry best-practices regarding prevention, mitigation, preparedness, response, and recovery in the context of spills resulting from accidents and malfunctions.</li> </ul>

		<p>systems and power transmission systems.</p> <p>The presence of high-pressure gas systems, chemical storage, and thermal systems, accidental events involving hazardous substances are plausible and could produce non-negligible effects within federal jurisdiction.</p>	<ul style="list-style-type: none"> <li>• changes to water quality associated with the stormwater pond management and accidental releases during high flow events; and</li> <li>• indirect effects to migratory birds via contaminated wetland habitat, ingestion risks, or oiling.</li> </ul>	<p>environmental effects within ECCC's mandate. These effects include impacts to air quality, water quality, species at risk, fish and fish habitat, migratory birds, or changes to the environment resulting in non-negligible adverse impacts to Indigenous Peoples of Canada. Additionally, ECCC coordinates expert review of atmospheric transport and dispersion modelling of airborne contaminants, fate and behaviour of contaminants, and hydrologic trajectory modelling of contaminants in water.</p>	<ul style="list-style-type: none"> <li>• emergency response capacity; and</li> <li>• hazardous materials storage and handling systems.</li> </ul>	<p>for turbines, transformers, pipelines, stormwater pond and cooling systems.</p> <ul style="list-style-type: none"> <li>• Plans and programs: <ul style="list-style-type: none"> <li>○ comprehensive Spill Contingency Plan, Emergency Response Plan, and Waste Management Plan, covering fuel, natural gas systems, oils, chemicals, and wastewater; and</li> <li>○ clear roles, communication procedures, and training requirements.</li> </ul> </li> <li>• Monitoring and adaptive management: <ul style="list-style-type: none"> <li>○ regular Inspection of pipeline ROWs, transmission structures, stormwater pond, and chemical storage infrastructure; and</li> <li>○ adaptive management triggers for early signs of contamination, erosion, or equipment failure.</li> </ul> </li> </ul> <p>Although the Proponent has proposed certain measures in the IPD that may be adequate, the response plans, mitigation strategies, project components, and systems are currently outlined only in broad terms. Given the risk of a significant accident or malfunction, a federal review would provide an opportunity for a more comprehensive assessment of these plans, thereby enhancing the protection of federal valued components and better safeguarding the environment.</p> <p>Part 8 of the <i>Canadian Environmental Protection Act, 1999</i> on environmental emergencies (sections 193 to 205) addresses the prevention of, preparedness for, response to, and recovery from environmental emergencies caused</p>	
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						<p>by uncontrolled, unplanned, or accidental releases. It also addresses the reduction of any foreseeable likelihood of releases of toxic or other hazardous substances listed in Schedule 1 of the <i>Environmental Emergency Regulations, 2019</i>. This act may apply if Schedule 1 substances onsite meet or exceed the threshold to be regulated under the <i>Canadian Environmental Protection Act, 1999</i>. Technical Guidelines for the <i>Environmental Emergency Regulations, 2019</i> may be found at: <a href="https://www.canada.ca/en/environment-climate-change/services/environmental-emergencies-program/regulations/technical-guidelines.html">https://www.canada.ca/en/environment-climate-change/services/environmental-emergencies-program/regulations/technical-guidelines.html</a></p>	
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## Annex A

### Project planning: Applying for a Species at Risk Act (SARA) permit administered by Environment and Climate Change Canada (ECCC)

#### Context

This Project Planning document provides an overview of [Species at Risk Act \(SARA\) permitting process administered by Environment and Climate Change Canada \(ECCC\)](#) and outlines the key requirements for the permit application, as well as some tips to support applicants in providing a timely and complete permit application.

Section 73 of SARA allows a competent minister, under certain conditions, to issue a permit for an activity affecting a listed wildlife species, any part of its critical habitat or the residences of its individuals. The Minister of Environment and Climate Change is the competent minister with respect to individuals of all species other than aquatic species (as defined under the Fisheries Act) and individuals found on lands administered by the Parks Canada Agency.

#### Do You Need a SARA Permit?

Permits are required by any person engaging in an activity affecting a species listed on Schedule 1 of SARA as Extirpated, Endangered, or Threatened (hereafter, listed species), that would contravene any SARA prohibitions.

Where multiple individuals will engage in activities requiring a permit, on behalf of an entity (e.g., the employees or contractors of a company), the entity may apply for a permit that will cover all the individuals.

#### Species at Risk Act Prohibitions

##### General Prohibitions

Under s. 32 and s.33 of SARA, it is prohibited to:

- Kill, harm, harass, capture or take an individual of listed species,
- Possess, collect, buy, sell or trade an individual of a listed species, or
- Damage or destroy the residence of one or more individuals<sup>3</sup> of a listed species.

These general prohibitions automatically apply for terrestrial species upon listing under SARA, except on lands in the provinces that are not [federal lands](#) or lands in the territories that are not lands under the authority of the Minister or Parks Canada. For Migratory Birds (identified under the Migratory Birds Convention Act [MBCA]), these prohibitions apply everywhere in Canada<sup>4</sup>.

##### Additional SARA Prohibitions:

Critical Habitat<sup>5</sup>, identified in recovery strategies or action plan, can be protected through a range of mechanisms. Where a critical habitat prohibition applies, SARA makes it an offence to destroy any part of the critical habitat of a species listed under SARA. For information about specific critical habitat protection on federal and non-federal lands in the province and territories, please visit: [Your responsibilities under the Species at Risk Act](#).

Additional specific prohibitions may be in force as a result of an Emergency or Protection Order issued under s.34, 61, or 80 of SARA, and regulations made under s. 53, 59, or 71 of SARA – such orders and regulations are published on the [SARA public registry](#).

#### SARA Permit Eligibility

If your project requires undertaking an activity that is likely to affect a listed species in a manner that is prohibited under SARA, you may need a SARA permit to proceed. Certain conditions must be met in order for a SARA permit to be issued, notably:

- All reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution, with the conservation of the species in mind, has been adopted;
- All feasible measures will be taken to minimize the unavoidable impacts of the activity on the species, its critical habitat or the residences of its individuals; and
- The residual impacts of the activity, after avoidance and mitigation is applied, must not jeopardize the survival or recovery of the species.

#### Applying for a SARA Permit

Complete applications for a SARA permit can be submitted via ECCC's [Species at Risk Act E-Permitting System](#). A complete and adequate application contains all of the documentation and information set out in the:

- [Guidelines for permitting under Section 73 of Species at Risk Act](#) and
- [Permits Authorizing an Activity Affecting Listed Wildlife Species Regulations](#).

Sufficient detail must be included in the application for the Minister to decide whether or not to issue a SARA permit. The tips will help you submit a complete application, reducing the likelihood of delays.

Applicants are encouraged to proactively engage with the [species at risk permit regional offices](#) with expertise in the SARA regulatory process for additional advice on preparing a complete and adequate application for review.

#### Time Limits for Processing SARA Permits

The time limit for ECCC to process an application is established in the [Permits Authorizing an Activity Affecting Listed Wildlife Species Regulations](#) (the Regulations).

ECCC has 90 days to either issue or refuse to issue a SARA permit. This timeline starts on the date ECCC sends the applicant a written notice indicating that the application was received. This time limit will be suspended if additional information is needed to assess the proposed activity. The time limit is suspended on the day when ECCC sends the information request to the applicant and resumes once ECCC receives all the missing information.

The Regulations also list the circumstances under which the 90-day time limit does not apply, including when the following is required:

- Indigenous consultation
- A decision under another act of parliament, such as the Impact Assessment Act

#### Tips for a Successful Application

<sup>3</sup> Under SARA, a residence is a dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles.

<sup>4</sup> NOTE: Migratory Birds (both SARA-listed species, and non-SARA listed species), their nests, and eggs are protected under the MBCA and its Regulations.

<sup>5</sup> Critical habitat is the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or action plan for the species.

### *Tip 1: Plan Activities with Species at Risk in Mind*

#### Common mistake

- Not considering impacts to species at risk during project planning.

#### Best practices

1. Determine whether any species at risk and/or critical habitat is found in the area of the proposed activity through resources such as: Critical Habitat for Species at Risk National Dataset
  - a. Provincial conservation data centers
  - b. Other publicly available data sets
  - c. Consultation with a qualified professional
  - d. Discussions with ECCC
2. Consult the recovery strategy or action plan of the species in question if available.
  - a. These documents will help identify the most sensitive life cycles of the species affected, as well as how to avoid negatively affecting the recovery objectives of the species or jeopardize the recovery or survival of the species (see Permit Eligibility above).
  - b. You will find important information in these documents to better understand the species and their needs, the threats to their survival or recovery, their critical habitat (including examples of activities that are likely to result in its destruction).
  - c. These documents are available on the [Species at risk public registry](#). For listed species at risk that do not yet have a published recovery strategy or action plan, you can also consult the species' [Committee on the Status of Endangered Wildlife in Canada \(COSEWIC\) assessment](#) and other best available information.
3. Verify if best management practices, residence descriptions and other species documents are available for the species.
4. Integrate considerations related to species at risk into project planning from the start, including the implementation of the mitigation hierarchy (e.g., avoid, minimize, restore, offset) in project planning.

#### Benefit to applicant

- Demonstrating avoidance and minimization of impacts to species at risk is necessary to meet the mandatory preconditions, particularly that a species' survival or recovery is not jeopardized.

### *Tip 2: Ensure sufficient detail in permit application*

#### Common mistake

- The permit application contains an insufficient level of information on the potential effects of your activity on species at risk, the residence of its individuals, or their critical habitat.
- The permit application does not consider impacts to individuals and residences outside of areas that have been identified as Critical Habitat.

#### Best practices

Use the [Guidelines for permitting under Section 73 of Species at Risk Act](#) to build your application, ensuring the details you provide:

- Reflect the scale and complexity of your project and its activities, as well as timing and schedule of activities.
- Explain the measures taken to avoid, mitigate and offset impacts to species at risk and their habitat.
- Demonstrate how you meet the purpose of SARA and the permitting preconditions in s.73.

#### Benefit to applicant

- This will reduce the likelihood of delays created by information requests as ECCC reviews your application for completeness and adequacy.

### *Tip 3: Engage Indigenous Peoples early*

#### Common mistakes

- The permit application does not account for Indigenous concerns.
- Indigenous communities are engaged only after the project design is completed.

#### Best practices

- Begin communication with Indigenous Peoples early during the project design phase (including offsetting measures). Engage and work with Indigenous Peoples to identify and address concerns throughout the development of project plans.

#### Benefit to applicant

A project that has the consent (or non-opposition) of Indigenous groups would reduce the time it takes for:

- ECCC to consult with Indigenous Peoples whose Aboriginal and treaty rights may potentially be adversely affected by your project.
- ECCC and the applicant to ensure accommodations are made where necessary.

#### **Contact Information**

For further details or assistance, reach out to the [species at risk permit regional offices](#).

#### **Disclaimer**

This document is not intended to be a substitute for the SARA or its regulations. In the event of an inconsistency between this document and the SARA or its regulations, the SARA and associated regulations would prevail. For the most up-to-date versions of the SARA, please consult the [Department of Justice website](#).

## **Annex B**

Please note that the MBR Permitting 101 is currently in progress and not yet available.

The *Migratory Birds Convention Act* (MBCA) and its July 2022 regulations protect migratory birds and their eggs and prohibit the disturbance, damage, destruction or removal of migratory bird nests that contain a live bird or a viable egg. Migratory birds are protected at all times, all migratory bird nests are protected when they contain a live bird or viable egg, and the nests of 18 species listed in Schedule 1 of the Migratory Birds Regulations (MBR) 2022 are protected year-round. These general prohibitions apply to all lands and waters in Canada, regardless of ownership. The MBCA also prohibits the deposit of substances that are harmful to migratory birds in waters, or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.