May 5, 2026

Madeline Clarke
Project Manager, Atlantic Region
Impact Assessment Agency of Canada
200-1801 Hollis Street
Halifax, NS B3J 3N4

Transmitted via email: madeline.clarke@iaac-aeic.gc.ca

Re: Marshdale Natural Gas Power Generation Facility Project
Response to Summary of Issues

Dear Ms. Clarke:

IESO Nova Scotia, the Proponent for the Marshdale Natural Gas Power Generation Project, hereby provides its response to the Summary of Issues (SOI) issued by the Impact Assessment Agency of Canada on February 19, 2026.

Thank you for the opportunity to provide responses to the Agency's identified issues. These responses have been prepared to ensure that the issues raised are appropriately addressed within existing, applicable regulatory frameworks and by comprehensive commitments by the Proponent.

IESO Nova Scotia is committed to working transparently and collaboratively with local residents, Mi'kmaq communities and organizations, and other interested stakeholders, as well as the Agency and Nova Scotia Environment and Climate Change in support of an effective Project.

Following your review, please confirm the resumption of the Planning Phase Time limit and advise when it comes into effect. Should you have any questions, please contact me directly.

Sincerely,

<Original signed by>

Chris Milligan, P.Eng., MBA
Vice President, Planning & Procurement
IESO Nova Scotia
E: chris.milligan@ieso-ns.ca

IESO Nova Scotia – Reply to Summary of Issues: Marshdale Natural Gas Power Generation Facility Project

IESO Nova Scotia is committed to continuing our ongoing engagement with Mi'kmaw communities and organizations, municipal government, and additional non-governmental organizations with interest in the proposed project. IESO Nova Scotia is pleased to provide the following status update on our community outreach with respect to the proposed project and additional information in reply to the Impact Assessment Agency of Canada (IAAC) Summary of Issues.

IESO Nova Scotia has continued to engage with Mi'kmaw communities and organizations with respect to the proposed project and many of the issues identified by IAAC. This includes, but is not limited to, outreach to Pictou Landing First Nation, Millbrook First Nation, Paqtnkek Mi'kmaw Nation, the Sipekne'katik Governance Initiative, Kwilmu'kw Maw-klusuaqn (KMK), the Confederacy of Mainland Mi'kmaq, the Mi'kmaw Economic Benefits Office, the Mi'kmaw Employment Training Secretariat, and Wskijinu'k Mtmo'taqnuow Agency (WMA) Ltd., as well as other organizations including the Clean Foundation, the Atlantic Salmon Federation, the Ecology Action Centre, and the Municipality of Pictou County.

Following our outreach, meetings have been held with Pictou Landing First Nation Chief and Council, Paqtnkek Mi'kmaw Nation Chief and Council, the Sipekne'katik Governance Initiative, Kwilmu'kw Maw-klusuaqn (KMK), the Confederacy of Mainland Mi'kmaq, the Mi'kmaw Economic Benefits Office, Wskijinu'k Mtmo'taqnuow Agency (WMA) Ltd., the Mi'kmaw Employment Benefits Office, the Clean Foundation, Ecology Action Centre, the Municipality of Pictou County, and the Pictou County Chamber of Commerce. Our team has also held a series of drop-in office hours at the Pictou County municipal offices and hosted open house learning sessions for local community members.

Nova Scotia's Department of Environment and Climate Change has stipulated, as a condition of the provincial Environmental Assessment (EA) approval for this proposed project, IESO Nova Scotia's completion of a Mi'kmaq Communication Plan, which will set priorities, define communication goals, and outline methods and timelines for IESO Nova Scotia to communicate project information and gain input from the Mi'kmaq community. IESO Nova Scotia proposes to develop this plan in conjunction with the Mi'kmaq of Nova Scotia. As part of this plan, we will work closely with the Mi'kmaq of Nova Scotia to develop an effective model for ongoing information exchange around current and future activities and updates on this project. The model would outline long-term, regular liaison with Mi'kmaw communities and organizations for the proposed project to ensure it is constructed and operated in ways that are consistent with Mi'kmaw cultural, land, and resource management concepts.

IESO Nova Scotia will apply for consideration through the Sipekne'katik Governance Initiative under their consultation protocol. In addition, the Mi'kmaw Ecological Knowledge Study (MEKS) by Membertou Geomatics is nearing completion and will include future site visits to investigate and verify MEKS findings.

IESO Nova Scotia has initiated a two-year development of an organization-wide Indigenous Framework, a long-term commitment to ensure Indigenous engagement in all aspects of our work. For example, Integrated Resource Planning, a central function of IESO Nova Scotia, has been introduced to Mi'kmaw communities and organizations involved in energy planning,

economic development, and climate change through Mi'kmaw Educational Sessions to support ongoing participation in this long-term energy system planning process. In addition, the Request for Proposals for prospective proponents to build, own, and operate fast-acting generation facilities sets out formal processes to ensure Mi'kmaw inclusion, utilizing the Assembly of Nova Scotia Mi'kmaq Chiefs' Mi'kmaw First Program, as a mandatory component of all bids.

IESO Nova Scotia has established a Community Liaison Committee with interested individuals from the Pictou County area and has held monthly meetings (in January, February, March, April, and May of 2026) to exchange information and gain community input on the proposed project. Based on input from the Municipality of Pictou County (MOPC) and the Community Liaison Committee, IESO Nova Scotia staff have also sought out community input from individuals during office hours, which were held multiple afternoon / evenings in March and April at the MOPC office. These have been widely advertised to create more awareness and understanding of the proposed project.

The following information is provided in reply to the specific issues identified in IAAC's Summary of Issues Report dated February 19, 2026.

Fish and Fish Habitat

Adverse effects to fish and fish habitat due to reduced groundwater-surface water baseflow in Cameron Brook and the West Branch East River due to groundwater withdrawal for operations.

Provide additional information on how groundwater and surface flow modelling will be conducted and validated, and measures that would be implemented to mitigate potential adverse effects to fish and fish habitat in Cameron Brook and the West Branch East River.

IESO Nova Scotia plans to undertake a hydrogeological study to provide an assessment of groundwater availability for the Project based on sustainable yields. This study was planned for January and February 2026, however unsuitable weather conditions have postponed the study window until later in the spring. The study includes documentation of stratigraphy to determine interconnectedness of the aquifer with surface water features. IESO Nova Scotia will utilize the results of this study to inform the ultimate configuration of the power plant and water consumption needs.

The Initial Project Description (IPD) was developed to model the most extreme power plant parameters of using water intense emissions management systems. If the results of the hydrological study identify that the groundwater aquifer cannot support a water intense emissions management system, the power plant will be designed to use less water-intensive emissions management technology at a greater cost, which will ultimately be recovered from Nova Scotia electricity customers.

Once water consumption needs are finalized, a water balance assessment that integrates groundwater-surface exchange will be performed to identify potential hydrological changes to local surface water features. Operational pumping scenarios will be simulated to quantify changes in baseflow, including changes in the timing and magnitude of baseflow contributions in potentially impacted watercourses. The model will be calibrated against on-site data to be collected through groundwater testing and hydrological monitoring stations (number and locations to be determined in consultation with Fisheries and Oceans Canada (DFO)). Consultation will be undertaken through DFO's Request for Review (RFR) process, managed by the Fish and Fish Habitat Protection Program (described below), to support the preparation of the information package to be submitted for DFO's review. Model validation will be performed using data from an independent time period.

In addition to modelling, IESO Nova Scotia will complete detailed fish habitat assessments to support the assessment of impacts to fish within these systems. These will include dedicated fish surveys to understand species presence and life stage composition, and the characterization and mapping of habitats throughout the watercourses, including temperature profiling and identification of thermal refuges. The results of water balance and habitat characterization will inform an updated effects assessment, which IESO Nova Scotia will outline in a Request for Review (RFR) submission to DFO. The RFR process is managed by the Fish and Fish Habitat Protection Program administered by DFO to ensure compliance with relevant provisions under the *Fisheries Act* and *Species at Risk Act.* The RFR will detail modelling methodologies, assumptions, results, and proposed mitigation and monitoring measures.

Furthermore, IESO Nova Scotia will seek permits for water withdrawal for the Project under the provincial water withdrawal application process in accordance with the *Activities Designation Regulations*, N.S. Reg. 47/1995 Clause 5A(1) made under Section 66 of the *Environment Act* and according to the Guide to Groundwater Withdrawal Approvals (NSECC, 2010). As per the

Guide, the application will include an evaluation of potential effects on the environment (and existing groundwater users) based on assessments of sustainable yield, well interference effects, water quality effects, and groundwater-surface water interaction. The information generated through the provincial water withdrawal permitting process will directly inform the evaluation of potential adverse effects to fish and fish habitat by:

- The evaluation of sustainable yield, well-interference, and groundwater–surface water interaction: these evaluations will collectively describe how pumping influences groundwater levels and the extent to which groundwater contributes to nearby surface water features. These results will be used to predict potential depletion of baseflow, the spatial extent of the depletion, and resulting changes to overall flow regimes in fish-bearing systems, including the magnitude and timing of such changes if any, as well as associated effects on thermal conditions, habitat availability, and habitat connectivity.
- Identifying potential water quality effects: this supports the understanding of whether changes in groundwater flow paths or mixing could influence surface water quality parameters relevant to fish and fish habitat (e.g., sediment mobilization or changes in contaminants).

Together, these assessments provide the hydrogeological data, monitoring information, and predictive understanding needed to evaluate potential hydrological pathways of effect on fish and fish habitat. This information will be integrated into the information package to be submitted through the RFR process to support DFO's assessment of potential adverse effects to fish and fish habitat.

Mitigation and monitoring actions based on industry standards and best practices include:

- Well siting: As informed by hydrogeological testing, approved and permitted production wells would be sited and designed to minimize hydraulic connection and reduce localized impacts to surface water features. By placing wells in locations with minimal hydraulic connection to streams, wetlands, and lakes, the project reduces the risk that groundwater pumping will draw baseflow away from fish-bearing habitats. Water recycling, alternate technologies, and alternate water supplies (rainwater harvest system) will also be considered to reduce overall water needs and reduce potential stress on aquatic systems.

- Withdrawal limits: Groundwater withdrawal rates that will be applied for in the provincial permit applications for ground water withdrawal will be constrained to a sustainable yield as determined by hydrogeological testing. Withdrawal limits based on sustainable yield ensure that groundwater extraction does not exceed the aquifer's natural recharge capacity, which helps maintain stable groundwater-surface water interactions and hydrological conditions that fish rely on.

- Groundwater and surface water monitoring: the Surface Water Monitoring and Management Plan and Groundwater Monitoring and Management Plan will align to establish a monitoring program to track actual stream responses to groundwater withdrawal. Monitoring plans will be directly informed by the effects assessment and coordinated for maximum effectiveness. Monitoring plans will be developed in consultation with Nova Scotia Environment and Climate Change (NSECC) and DFO and will be submitted and reviewed through the provincial Industrial Approval process (described below) and RFR process, respectively. Monitoring program designs to be detailed in the plans will include sampling locations, sampling frequency, parameters to

be sampled, analytical methods, and quality assurance / quality control procedures. Real-time monitoring will allow for early detection of stress in surface water systems, such as declining water levels or reduced streamflow, and support adaptive management measures if adverse effects to fish or fish habitat is anticipated.

- Contingency options: the Surface Water Monitoring and Management Plan and Water Conservation Plan will establish contingency measures (e.g., temporary reduction/cessation of pumping) if monitoring indicates potential adverse effects to fish and fish habitat.

The provincial Industrial Approval process is administered under NSECC's Inspection, Compliance, and Enforcement Division in accordance with the *Activities Designation Regulations*, N.S. Reg. 47/1995 Clause 20 made under Section 66 of the *Environment Act.* An Industrial Approval is a regulatory document that is enforceable as per Part V of the *Environment Act* and contains terms and conditions that an approval holder must follow to prevent adverse effects to the environment.

As part of the provincial Industrial Approval permitting process, IESO Nova Scotia will submit the following water-related management and monitoring plans for review to NSECC prior to Project development. These documents will also be submitted to DFO through the RFR process. All plans will be informed by the quantity of groundwater withdrawal required, updated effects assessment of groundwater withdrawal on fish and fish habitat, and will be coordinated for maximum effectiveness:

- Surface Water Monitoring and Management Plan and Groundwater Monitoring and Management Plan, to describe baseline surface and groundwater conditions; potential Project-related effects on both water quantity and quality; water management and treatment strategies; monitoring program design; data evaluation and reporting; and contingency and corrective actions if monitoring indicates adverse effects/regulatory non-compliance.

- Water Conservation Plan, to include information on baseline water availability and hydrologic context; projected water demand and justification; water saving techniques and operational practices; recycling and/or reuse strategies; monitoring and reporting commitments; and contingency measures for drought or supply shortages.

Adverse effects to fish and fish habitat due to effluent discharge into Watercourse 1.

Provide additional information on the extent of potential adverse effects to fish and fish habitat from effluent discharge and measures that would be implemented to mitigate any adverse effects to the fish and fish habitat in Watercourse 4, Cameron Brook and the West Branch East River.

As stated in the IPD, the quality (and quantity) of process water that would be generated by the Project is currently unknown, as this will vary depending on the quality and quantity of water withdrawn, and on the specific technologies chosen for operation of the Facility and demineralized water production. Prior to facility design, IESO Nova Scotia will complete baseline groundwater quality testing to identify naturally occurring contaminants of concern and guide process water treatment designs.

The Initial Project Description (IPD) was developed to model the most extreme power plant parameters of using water-intense emissions management systems. If the results of the hydrological study identify that the groundwater aquifer cannot support a water-intense emissions management system, the power plant will be designed to use less water-intensive emissions management technology at a greater cost, which will ultimately be recovered from Nova Scotia electricity customers. Less water-intensive emissions management technology, if it is required to be used, would also generate less process water. The timeline to design the process water treatment system is anticipated to be in the months preceding the Industrial Approval application to NSECC.

Once baseline groundwater quality and demineralized water production technologies are confirmed, the volume and frequency of treated process water released will be defined and characterized for relevant physical, chemical, and biological parameters (e.g., temperature, TSS, nutrients, metals, pH). Based on these analyses, IESO Nova Scotia will design and operate the process water treatment system to meet or exceed applicable federal and provincial water quality standards, including the Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines for the Protection of Aquatic Life (FWAL) and the NS Tier 1 Environmental Quality Standards (EQS).

After treatment, process water would be directed through a quality monitoring system that will ensure it is safe to release (tested to ensure CCME FWAL guidelines and NS Tier I EQS are met), then directed to a retention pond. The retention pond will be designed and constructed to ensure it is appropriately sized to handle the expected volume of process water produced and will include elements like baffles and a liner to prevent the re-suspension of settled sediments and seepage. Regular inspection and maintenance will ensure the retention pond continues to operate effectively and maintains its designed capacity. The discharge would be located and designed to avoid sensitive fish habitats (e.g., spawning areas) and promote rapid mixing, and erosion and sediment control measures will be incorporated on discharge structures.

The precise discharge location would be guided by a field program to quantify and describe existing conditions in the receiving environment. Detailed fish habitat assessments will be used to describe quality of habitat for each life history stage of the species that are present, allowing for particularly sensitive or rare habitats to be identified and avoided (e.g., thermal refuge, spawning habitat). Coupled with modelling to predict flows and other parameters of the process water, IESO Nova Scotia will describe any potential Project-related impacts in the receiving watercourse(s) (including spatial extent, timing, magnitude, and likelihood of effects) and apply mitigation measures as required. The methods and results of detailed fish habitat assessments

and modelling, as well as descriptions of any Project-related impacts to the receiving watercourse(s), will be included in the RFR submission under DFO's Fish and Fish Habitat Protection Program. If monitoring identifies water quality exceedances, corrective actions would be implemented (e.g., treatment optimization, discharge modification, temporary reduction/cessation of pumping) prior to any controlled release. The data collection through the assessment will also allow for an evaluation of the effectiveness of site discharge as a mitigation measure to offset potential reductions in baseflow.

IESO Nova Scotia will complete an assimilative capacity study (such as a CORMIX model) if necessary, to predict how the treated process water will be gradually released, diluted, and moved downstream under both high-flow and critical low-flow conditions. This study would be completed under conditions where there is any reasonable possibility for the treated process water discharge to alter the physical, chemical, or thermal characteristics of the receiving watercourse in ways that could adversely affect fish or fish habitat.
The potential for some sediment accumulation in the release stream will be included in this study. If process water and treatment characterization indicate higher model temperatures than those of the receiving watercourse, the study can be used to estimate the size and magnitude of the predicted thermal plume at the discharge location. Any temperature changes would be due to the exposure to atmospheric conditions; there are no increases in temperature during the water treatment process. The assessment of impacts on fish and fish habitat will focus on the spatial extent of predicted temperature changes relative to the thermal preferences of the existing fish community, baseline temperature regime of the watercourse, and potential impacts to thermal refuge (as verified through field assessments). Should potential thermal effects from the release of treated process water be identified, IESO Nova Scotia will implement mitigation measures to remediate any thermal impacts, including but not limited to cooling trenches or engineered wetlands at retention pond discharge location. If conducted, the assimilative capacity study would be included in the RFR submission to DFO's Fish and Fish Habitat Protection Program.

The treated process water characterization and impact studies described above will guide IESO Nova Scotia in the development of the Surface Water Monitoring and Management Plan, and Erosion and Sediment Control Plan, all of which will be submitted for review during the provincial Industrial Approval permitting process. The Surface Water Monitoring and Management Plan will fully describe the on-site water management system, including retention pond design specifications and the final discharge location, and will detail the discharge monitoring system and the water quality monitoring program for WC4 and any other watercourses that may be directly or indirectly affected. In addition, the Plan will identify corrective actions for the protection of fish and fish habitat in the event that exceedances were observed. The Surface Water Monitoring and Management Plan will be designed to ensure that discharge water from site is protective of fish and fish habitat, including cold-water refugia for salmon and other cold-water species. These plans, along with the Groundwater Monitoring and Management Plan and Water Conservation Plan, will be developed in consultation with NSECC and DFO and will be coordinated to ensure they function effectively as an integrated system. IESO Nova Scotia will also consult with Environment and Climate Change Canada (ECCC) on the development of the Surface Water Monitoring and Management Plan specifically as it relates to the temperature of process discharge water to the receiving environment and potential resulting adverse effects to fish and fish habitat. Plan inclusions are described in response to the bullet above.

Adverse effects to Atlantic salmon and other cold-water species, including availability and effectiveness of cold-water refugia, due to changes to groundwater recharge, baseflow, hydrological connectivity, and downstream thermal regimes that may be caused by vegetation clearing, soil disturbance and wetland alteration.

Provide further information on measures to manage any adverse effects to Atlantic salmon and other
cold-water species in Watercourse 4, Cameron Brook, and the West Branch East River.

IESO Nova Scotia recognizes that Atlantic salmon and other coldwater species are highly sensitive to increases in water temperature, particularly when those increases combine with declines in the condition or availability of cold-water refugia.

As described above, a water balance assessment will be performed to predict potential effects of groundwater drawdown on streamflow. In addition to modelling, IESO Nova Scotia will complete detailed fish habitat assessments to support the assessment of impacts to fish within these systems, including dedicated fish surveys, characterization and mapping of habitats, and temperature profiling/identification of thermal refuges. The results of detailed habitat assessment, coupled with the results of the water balance assessment, will inform the updated effects assessment, all of which will be included in the RFR submission to DFO's Fish and Fish Habitat Protection Program.

It should be noted that water withdrawal requirements, and any associated effects on baseflow, would be tied to the Facility's limited operating hours. The Project is being designed to operate on an as-needed basis to meet peak electricity system demand, as well as providing dispatchable generation and ancillary grid services in response to increased variable renewable energy on the system. In Nova Scotia, peak electricity demand typically occurs during winter heating periods in December, January, and February, which coincides with a seasonal window when thermal stress in fish is minimal, relative to summer conditions.

Measures to manage adverse impacts to Atlantic salmon and other cold-water species include:

- Maintaining an undisturbed riparian buffer: It should be noted that WC4 is situated, at a minimum, 70 m away from the Project footprint (where ground Project disturbance/clearing is expected to occur). Riparian vegetation and habitats, including wetlands, will be left intact, which is expected to aid in the maintenance of downstream thermal regimes. Potential impacts to wetlands as a result of groundwater withdrawal will be analyzed through the water balance assessment and will be assessed through the provincial wetland permitting process.

- Minimize impacts to headwater wetlands: Further efforts will be made to microsite project infrastructure away from wetlands.

- Minimize overall clearing: Vegetation clearing will be limited to the smallest practicable footprint.

- Groundwater and surface water monitoring: the Surface Water Monitoring and Management and Groundwater Monitoring and Management Plans will establish monitoring programs to track actual stream responses to groundwater withdrawal, including assessments of temperature or spatial changes of cold-water refuges. These

plans will be informed by the results of hydrogeological testing, the water balance assessment, detailed fish habitat and fish community assessments, and treated process water characterization, and will be coordinated for maximum effectiveness. The plans will be designed to ensure that discharge from the site is protective of fish and fish habitat, including cold-water refugia for salmon and other cold-water species. The Plans will be developed in consultation with NSECC, DFO, ECCC and submitted and reviewed through the provincial Industrial Approval application process and RFR process.

- Contingency options: the Surface Water Monitoring and Management Plan and Water Conservation Plan will establish contingency measures (e.g., temporary reduction/cessation of pumping, use of alternative water sources) if monitoring indicates potential adverse effects to fish and fish habitat.

The RFR that IESO Nova Scotia will submit to DFO will include an assessment of potential effects to cold-water refugia from Project activities, and descriptions of how those potential effects will be mitigated and managed.

Recent field assessments of local aquifers have confirmed that groundwater is limited. IESO Nova Scotia continues to explore alternative emission control technologies that use significantly less water while continuing to keep emissions below permitting requirements and government regulated limits. The use of significantly less water will reduce the potential impacts due to water withdrawal and significantly reduce the quantity of treated process water to be released. These reductions will reduce and further minimize the potential impacts to fish and fish habitat.

Health Conditions of Indigenous Peoples

Adverse effects to Mi'kmaw communities' health and wellbeing due to exposure to hazardous emissions during accidents and malfunctions.

Provide information on how this will be considered in communication and emergency response plans, how the Mi'kmaq will be engaged in the development of these plans, and how input received will be included in such plans.

IESO Nova Scotia has undertaken and will continue direct outreach to several nearby Mi'kmaw communities and representative organizations to establish two-way communication channels for project awareness and to learn how communities may be impacted. The communities and organizations with which IESO Nova Scotia has undertaken outreach include:

- Kwilmu'kw Maw-klusuaqn
- Pictou Landing First Nation
- Paqntkek First Nation
- Millbrook First Nation
- Sipekne'katik First Nation and the Sipekne'katik Governance Initiative
- Confederacy of Mainland Mi'kmaq
- Mi'kmaw Economic Benefits Office
- Wskijinu'k Mtmo'taqnuow Agency, Ltd.
- Native Council of Nova Scotia

NSECC has stipulated, as a condition of the provincial Environmental Assessment (EA) approval for this proposed project, IESO Nova Scotia's completion of a Mi'kmaq Communication Plan, which will set priorities, define communication goals, and outline methods and timelines for IESO Nova Scotia to communicate project information and gain input from the Mi'kmaq community. IESO Nova Scotia proposes to develop this plan in conjunction with the Mi'kmaq of Nova Scotia through continued outreach with the Mi'kmaw communities and organizations listed above. This plan will include communications with respect to emergency response planning.

Through IESO Nova Scotia's direct outreach to date with the Mi'kmaq of Nova Scotia, some individuals have expressed concerns regarding project risks which might lead to emergency situations. IESO Nova Scotia will implement emergency response plans that incorporate many key communities, including nearby Mi'kmaw communities. IESO Nova Scotia will identify and engage with community planning staff, provide operational briefings prior to facility commissioning, and seek input on each community's needs and facility emergency response plans, prior to finalization. IESO Nova Scotia will incorporate community feedback that is shared by planning staff; establish regular communication protocols; and engage planning staff in a review of the emergency response plans on a regular basis. This review shall include external telephone communications testing, reviews of emergency planning exercises staged to ensure community readiness, lessons learned and debriefs.

Indigenous Peoples' Current Use of Lands and Resources for Traditional Purposes

Adverse effects to Atlantic salmon, American eel, and brook trout and related impacts to Mi'kmaq Aboriginal and treaty rights to fish.

Provide information on how potential adverse effects to these species would be addressed with the Mi'kmaq, and how Mi'kmaq Knowledge from all potentially impacted Mi'kmaw communities will be considered.

IESO Nova Scotia has undertaken and will continue direct outreach to several nearby First Nation communities to establish two-way communication channels for project awareness and learning how communities may be impacted. The communities and organizations with which IESO Nova Scotia has undertaken outreach include:

- Kwilmu'kw Maw-klusuaqn
- Pictou Landing First Nation
- Paqntkek First Nation
- Millbrook First Nation
- Sipekne'katik First Nation and the Sipekne'katik Governance Initiative
- Confederacy of Mainland Mi'kmaq
- Mi'kmaw Economic Benefits Office
- Wskijinu'k Mtmo'taqnuow Agency, Ltd.
- Native Council of Nova Scotia

NSECC has stipulated, as a condition of the provincial EA approval for this proposed project, IESO Nova Scotia's completion of a Mi'kmaq Communication Plan, which will set priorities, define communication goals, and outline methods and timelines for IESO Nova Scotia to communicate project information and gain input from the Mi'kmaq community.

Concerns on potential adverse effects to Atlantic salmon, American eel, and brook trout, as well as related information from the Mi'kmaq Ecological Knowledge Study (MEKS), once completed, will be addressed as part of the Mi'kmaq Communication Plan. IESO-Nova Scotia will contact the Mi'kmaw communities and organizations listed above to provide, review, and gather input on the detailed information noted in the responses in the Fish and Fish Habitat section of this response to address concerns about the potential adverse effects. This includes the Surface Water Monitoring and Management Plan, the Groundwater Monitoring and Management Plan, and the Water Conservation Plan.

IESO Nova Scotia has contracted Membertou Geomatics, a Mi'kmaq-owned company, to complete a MEKS related to the proposed project. The MEKS will consider the land and water areas in which the proposed project is located to identify what Mi'kmaq traditional use activities have occurred or are currently occurring within the study area; and what Mi'kmaq ecological knowledge presently exists with respect to the area, including traditional fishing areas or otherwise important or sensitive fish habitats, such as known areas of refuge where fish may congregate during periods of thermal stress. IESO Nova Scotia has committed, through its outreach to Mi'kmaw communities and organizations, to share the MEKS, once completed, which is anticipated to be during the first half of 2026, with the Mi'kmaw communities and organizations listed above.

Relevant findings from the MEKS will be integrated into the RFR submission to DFO's Fish and Fish Habitat Protection Program, including the identification of traditional fishing areas, species presence, and sensitive habitat features that may not be captured through scientific surveys. This information may be used to inform the fish and fish habitat characterization of the Project Area, the assessment of potential project interactions, and the development of appropriate avoidance and mitigation measures. In addition, IESO Nova Scotia is required by NSECC to apply for Water Withdrawal permits, in accordance with the *Activities Designation Regulations*, N.S. Reg. 47/1995 Clause 5A(1) made under Section 66 of the *Environment Act* and as part of this permitting process, will engage with the Mi'kmaq on potential impacts on these species. As per Section 6(1)(u) of the *Approval and Notification Procedures Regulations,* N.S. Reg. 17/2013 and specified within the provincial water withdrawal application form, applicants must submit a description of any public consultation undertaken or proposed. IESO Nova Scotia will include in this description any completed or planned engagement with the Mi'kmaq in Nova Scotia.

Direct and cumulative adverse effects on culturally significant species for the Mi'kmaq, including mainland moose that has core habitat within 2 kilometres of the project, and black ash that are present on the project site.

Provide additional information on how potential adverse effects to these species of importance would be mitigated and how Mi'kmaq Knowledge will be considered.

IESO Nova Scotia has undertaken and will continue direct outreach to several nearby First Nation communities to establish two-way communication channels for project awareness and learning how communities may be impacted. The communities and organizations with which IESO Nova Scotia has undertaken outreach include:

- Kwilmu'kw Maw-klusuaqn
- Pictou Landing First Nation
- Paqntkek First Nation
- Millbrook First Nation
- Sipekne'katik First Nation and the Sipekne'katik Governance Initiative
- Confederacy of Mainland Mi'kmaq
- Mi'kmaw Economic Benefits Office
- Wskijinu'k Mtmo'taqnuow Agency, Ltd.
- Native Council of Nova Scotia

NSECC has stipulated, as a condition of the provincial EA project approval, IESO Nova Scotia's completion of a Mi'kmaq Communication Plan, which will set priorities, define communication goals, and outline methods and timelines for IESO Nova Scotia to communicate project information and gain input from the Mi'kmaq community.

IESO Nova Scotia has contracted Membertou Geomatics, a Mi'kmaq-owned company, to complete a Mi'kmaq Ecological Knowledge Study (MEKS) related to the proposed project. The MEKS will consider the land and water areas in which the proposed project is located to identify what Mi'kmaq traditional use activities have occurred or are currently occurring within the study area; and what Mi'kmaq ecological knowledge presently exists with respect to the area. IESO Nova Scotia has committed through its outreach to Mi'kmaw communities and organizations to

share the MEKS once it is completed, which is anticipated to be which is anticipated to be during the first half of 2026, with the Mi'kmaw communities and organizations listed above.

IESO Nova Scotia, in its field work to date, has identified that black ash are present on the site of the proposed project, and also recognizes that mainland moose core habitat exists within two kilometres of the proposed site. No moose observations were recorded during biophysical surveys completed to support the EARD/IPD, which included wildlife camera deployment as recommended by NSDNR, and the Project is not located within core habitat for the species. As a result, no follow up monitoring is proposed to detect mainland moose; however standard mitigation measures are outlined in the EARD/IPD to protect mainland moose in the unexpected event that they are found within the Project Area.

IESO Nova Scotia is required by NSECC to make to Nova Scotia Department of Natural Resources (NSDNR) aware of any species listed under the *Species at Risk Act* (SARA) and/or *Endangered Species Act* (ESA), as well as Species of Conservation Interest, that it has identified in the study area of the proposed project sites during field work. Additionally, as a condition of the provincial EA, IESO Nova Scotia is required to submit a Wildlife Management plan to NSECC, NSDNR, and Environment and Climate Change Canada (ECCC). Part of the Wildlife Management Plan will involve a communication protocol for rare species observations, and an awareness program for site personnel during construction activities. IESO Nova Scotia proposes to engage with Mi'kmaq communities and organizations to support in preparation of the site personnel awareness program, which can be advised by findings in the MEKS Mi'kmaw monitors will be asked to review rare species observations and draw any connections between observations on site and traditional knowledge described in the MEKS. This information will be used by IESO Nova Scotia to inform adaptive management measures if/as necessary.

Concerns on potential impacts to these and other culturally significant species for the Mi'kmaq, as well as related information from the MEKS, once completed, will also be addressed as part of the Mi'kmaq Communication Plan.

Black ash was established as a constraint in project siting. As a result, the footprint for the project, as identified in the Initial Project Description, was located to avoid the black ash that was found at the site during field surveys.

IESO Nova Scotia is also required as a condition of the provincial EA by NSECC to apply for a Wetland Alteration permit, in accordance with the *Activities Designation Regulations*, N.S. Reg. 47/1995 Clause 5A(2) made under Section 66 of the *Environment Act,* and to provide to NSDNR with digital way points and shape files revealing precise locations for wetlands. This data, and information related to black ash present on the project site, will form the basis of a black ash management plan, which IESO Nova Scotia proposes to co-develop with the Mi'kmaq of Nova Scotia, and which will be shared with Mi'kmaw organizations as part of the Mi'kmaq Communication Plan. The black ash management plan will be included in the Wildlife Management Plan to be completed prior to Project commencement as per condition 5.2 of the provincial EA approval. As per the condition, the Wildlife Management Plan will be submitted to NSECC, NSDNR, and ECCC and must describe how the Proponent intends to meet the requirements of relevant federal and provincial legislation, including but not limited to, the provincial ESA, *Migratory Birds Convention Act*, and SARA.

Indigenous Peoples' Spiritual, Physical and Cultural Heritage

Adverse effects, such as damage or disturbance to undiscovered Mi'kmaq archaeological resources due to ground disturbance, site clearing, and construction activities.

Provide further information on how the proponent will engage with the Mi'kmaq to consider Mi'kmaq Knowledge in protocols for chance finds, how the Archaeological Resource Impact Assessment (ARIA) will be used to inform conclusions on potential adverse effects, how the information in the ARIA will be validated by potentially impacted Mi'kmaw communities, and how issues raised will be addressed in collaboration with the Mi'kmaq.

IESO Nova Scotia has undertaken and will continue direct outreach to several nearby First Nation communities to establish two-way communication channels for project awareness and learning how communities may be impacted. The communities and organizations with which IESO Nova Scotia has undertaken outreach include:

- Kwilmu'kw Maw-klusuaqn
- Pictou Landing First Nation
- Paqntkek First Nation
- Millbrook First Nation
- Sipekne'katik First Nation and the Sipekne'katik Governance Initiative
- Confederacy of Mainland Mi'kmaq
- Mi'kmaw Economic Benefits Office
- Wskijinu'k Mtmo'taqnuow Agency, Ltd.
- Native Council of Nova Scotia

NSECC has stipulated, as a condition of the provincial EA project approval, IESO Nova Scotia's completion of a Mi'kmaq Communication Plan, which will set priorities, define communication goals, and outline methods and timelines for IESO Nova Scotia to communicate project information and gain input from the Mi'kmaq community.

IESO Nova Scotia has contracted Membertou Geomatics, a Mi'kmaq-owned company, to complete a Mi'kmaq Ecological Knowledge Study (MEKS) related to the proposed project. The MEKS will consider the land and water areas in which the proposed project is located to identify what Mi'kmaq traditional use activities have occurred or are currently occurring within the study area, and what Mi'kmaq ecological knowledge presently exists with respect to the area. IESO Nova Scotia has committed through its outreach to Mi'kmaw communities and organizations to share the MEKS once it is completed.

IESO Nova Scotia has completed an Archaeological Resource Impact Assessment (ARIA), which is being made available to Mi'kmaw organizations for their review and to gather their input. The ARIA outlines the potential for future impacts during site preparation, clearing and grubbing, and site civil work, and IESO Nova Scotia will conduct additional subsurface archaeological assessment at the proposed project sites during those phases. IESO Nova Scotia also proposes to work with Mi'kmaw knowledge holders or specialists to contract Mi'kmaw monitors in the completion of field work related to subsurface archaeological assessment. Through the Mi'kmaq Communication Plan, IESO Nova Scotia will develop a Chance Find protocol by engaging with the Mi'kmaw community, the Assembly of Nova Scotia

Mi'kmaq Chiefs, and the Nova Scotia Department of Communities, Culture, Tourism and Heritage (NSCCTH). A Chance Find Protocol is a formal procedure used during construction and ground-disturbing activities to ensure that any previously unidentified archaeological, cultural, or Mi'kmaw heritage resources discovered unexpectedly are handled appropriately. Its objectives include protecting archaeological and Mi'kmaw cultural resources, ensuring timely notification of authorities and Mi'kmaw communities and/or organizations, and guiding decision-making on next steps. The Protocol will also be developed in accordance with Condition 6.1 of the provincial EA approval and the NS *Specials Place Protection Act,* administered by NSCCTH.

Direct and cumulative adverse effects to culturally significant species, habitats, and land-based practices adversely impacting Mi'kmaq Aboriginal and treaty rights and cultural continuity.

Provide further information on how Mi'kmaq Knowledge from all potentially impacted Mi'kmaw communities will be meaningfully integrated into the Mi'kmaq Ecological Knowledge Study (MEKS) during project planning, how the results of the MEKS and Mi'kmaq Knowledge shared by potentially impacted Mi'kmaq First Nations will be used to inform conclusions on potential adverse effects, how the information will be validated by potentially impacted Mi'kmaw communities, and how issues raised will be addressed in collaboration with the Mi'kmaq.

IESO Nova Scotia has contracted Membertou Geomatics, a Mi'kmaq-owned company, to complete a Mi'kmaq Ecological Knowledge Study (MEKS) related to the proposed project. The MEKS will consider the land and water areas in which the proposed project is located to identify what Mi'kmaq traditional use activities have occurred or are currently occurring within the study area, and what Mi'kmaq ecological knowledge presently exists with respect to the area. The MEKS is subject to review and possible recommended amendment by the Assembly of Nova Scotia Mi'kmaq Chiefs to ensure its consistency with its Mi'kmaq Ecological Knowledge Protocol, 2nd Edition. The MEKS considers cumulative effects through a holistic interpretation of Mi'kmaw connection to a specific place, which is informed by multi-generational ecological knowledge, historical and contemporary land-use comparison, and broad understanding of ecological trends. IESO Nova Scotia has committed through its outreach to Mi'kmaw communities and organizations to share the MEKS once it is completed. MEKS traditional knowledge, data analysis, and proposed project site visits will inform the project team's understanding of the potential for impacts to culturally significant species, habitats, and land-based practices, which could impact Mi'kmaq Aboriginal and Treaty rights and cultural continuity. Potential adverse effects, both direct and cumulative, may be mitigated through avoidance of culturally significant areas identified through the MEKS or community engagement by further micro-siting of infrastructure, and support for economic reconciliation. IESO Nova Scotia will work collaboratively with Mi'kmaw groups to identify and implement additional, mutually agreed-upon mitigation measures. Opportunities for Mi'kmaw participation in environmental monitoring programs during construction and operation may also be explored.

The provincial EA approval includes a condition for this proposed project that IESO Nova Scotia's complete a Mi'kmaq Communication Plan, which will set priorities, define communication goals, and outline methods and timelines for IESO Nova Scotia to communicate project information and gain input from the Mi'kmaq communities and organizations. The MEKS will be shared with potentially impacted Mi'kmaw communities and organizations as part of the Mi'kmaq Communication Plan to inform conclusions and validate MEKS learnings. The MEKS, once completed, may inform the need or direction of additional studies related to the proposed project sites.

The MEKS will also be utilized by proposed Mi'kmaw monitors to relate the traditional knowledge contained in the MEKS to observations made during field studies and construction.

Indigenous Peoples' Rights

Concerns about how the Mi'kmaq have been engaged and how impacts on Aboriginal and treaty rights have been considered.

Provide further information on engagement efforts that will be carried out with all Mi'kmaw communities who may be impacted by the project and have interests in the area, how concerns raised will be addressed in collaboration with the Mi'kmaq, and how opportunities for economic benefits to the Mi'kmaq could be achieved throughout the life of the project.

IESO Nova Scotia has undertaken and will continue direct outreach to several nearby First Nation communities to establish two-way communication channels for project awareness and learning how communities may be impacted. The communities and organizations with which IESO Nova Scotia has undertaken outreach include:

- Kwilmu'kw Maw-klusuaqn
- Pictou Landing First Nation
- Paqntkek First Nation
- Millbrook First Nation
- Sipekne'katik First Nation and the Sipekne'katik Governance Initiative
- Confederacy of Mainland Mi'kmaq
- Mi'kmaw Economic Benefits Office
- Wskijinu'k Mtmo'taqnuow Agency, Ltd.
- Native Council of Nova Scotia

NSECC has stipulated, as a condition of the provincial EA approval for this proposed project, IESO Nova Scotia's completion of a Mi'kmaq Communication Plan, which will set priorities, define communication goals, and outline methods and timelines for IESO Nova Scotia to communicate project information and gain input from the Mi'kmaq community. IESO Nova Scotia will continue to engage with all Mi'kmaw communities and organizations who may potentially be impacted by the project and have interests in the area.

IESO Nova Scotia has contracted Membertou Geomatics, a Mi'kmaq-owned company, to complete a Mi'kmaq Ecological Knowledge Study (MEKS) related to the proposed project. The MEKS will consider the land and water areas in which the proposed project is located to identify what Mi'kmaq traditional use activities have occurred or are currently occurring within the study area, and what Mi'kmaq ecological knowledge presently exists with respect to the area. IESO Nova Scotia has committed through its outreach to Mi'kmaw communities and organizations to share the MEKS once it is completed. The MEKS study will, in part, inform if there would be potential impact on Aboriginal and Treaty rights.

IESO Nova Scotia has engaged with the Assembly of Nova Scotia Mi'kmaq Chiefs through direct outreach with Kwilmu'kw Maw-klusuaqn (KMK) to provide project information to support ongoing engagement and two-way communication, including in consideration of potential impacts on Aboriginal and Treaty rights. IESO Nova Scotia has also engaged Sipekne'katik First Nation through its consultation unit, Sipekne'katik Governance Initiative (SGI) Protocol, to consider potential impacts on Aboriginal and Treaty rights. IESO Nova Scotia will apply for consultation and review under the SGI protocol.

With the support of external advisors from the Mi'kmaw community, IESO Nova Scotia will develop its Indigenous Framework, which will formalize guiding principles, our approach to Indigenous inclusion and engagement, and our role in reconciliation. IESO Nova Scotia is also developing its first Integrated Resource Plan (IRP) and has initiated outreach to Mi'kmaq communities and organizations to encourage participation in the IRP process, to ensure important perspectives are heard and integrated into long-term energy system planning for the province. Additionally, as part of the proposed project, IESO Nova Scotia will adopt the Mi'kmaq First Program, developed by the Assembly of Nova Scotia Mi'kmaq Chiefs, to enable Mi'kmaw individuals and companies to benefit from project-related employment and contracting, and to support Indigenous investment in key Nova Scotia sectors such as energy.

<u>The project's contribution to adverse cumulative impacts on Mi’kmaq Aboriginal and treaty rights, traditional land use, water availability, habitat connectivity, and ecological integrity.</u>

Provide information on how the project could contribute to adverse cumulative impacts on Aboriginal and treaty rights, and how these would be managed, including consideration of Mi'kmaq Knowledge from all potentially impacted Mi’kmaw communities.

The Mi'kmaq of Nova Scotia have established Aboriginal and Treaty rights. Mi’kmaq rights are communal rights and therefore shared amongst all members of the Mi’kmaq Nation in Nova Scotia. The proposed project site is located in the traditional, unceded lands of the Mi'kmaq People. The proposed construction and operation of the project will remain within the relatively small footprint (12 ha) identified in the IPD, which will support minimizing the possible contributions to adverse cumulative impacts, but nevertheless could contribute to potential impacts on Aboriginal and Treaty rights. IESO Nova Scotia proposes to identify, understand, and address any potential effects through proactive and regular engagement with Mi'kmaw leadership and organizations, utilization of Mi'kmaw traditional knowledge in project planning, and with formalization of IESO Nova Scotia's Indigenous Framework. Traditional knowledge will be considered in project planning through integration of MEKS learnings and future studies and exchanges through the Mi'kmaq Communication Plan.

Permitting and Authorizations

Environment and Climate Change Canada recommend being consulted to ensure that the requirements of the Migratory Birds Convention Act, 1994 and the Migratory Birds Regulations, 2022 and the Species at Risk Act are taken into account.

IESO Nova Scotia will engage ECCC to ensure that all project planning and implementation activities fully consider and comply with the requirements of the *Migratory Birds Convention Act, 1994*, the *Migratory Birds Regulations, 2022*, and the *Species at Risk Act*. The development of the site-specific Wildlife Management Plan, as required under Condition 5.2 of the provincial EA conditional approval, will be submitted through provincial Industrial Approval application process, to confirm that avoidance, mitigation, and monitoring measures appropriately address potential effects on migratory birds and species at risk, and meet all applicable federal obligations. As per Condition 5.2 of the EA conditional approval, the Wildlife Management Plan will be provided to NSECC, NSDNR, and ECCC for review.

The IPD submission included the development and implementation of plans that include mitigation measures to reduce the effects on avifauna, specifically addressing the issues of habitat loss and alteration, sensory disturbance, and injury and mortality.

Fisheries and Oceans Canada recommend being consulted to ensure the requirements of the Fisheries Act are taken into account and recommend that the proponent submit a request for review that includes groundwater modelling and hydrologic information quantifying how groundwater withdrawals may alter groundwater levels and surface water flows, particularly during low-flow conditions. The submission should outline model assumptions, predicted flow changes, and proposed monitoring or mitigation measures to demonstrate that ecological flows will be maintained and met.

IESO Nova Scotia will prepare and submit a request for review (RFR) that includes modelling analyses quantifying potential changes to surface flows associated with project related groundwater withdrawals. The RFR will describe model assumptions and limitations, calibration and validation methods, potential effects on fish and fish habitat, and proposed monitoring and mitigation measures to maintain ecological flows following DFO guidance (DFO, 2013).

References:

DFO. (2013). *Framework for assessing the ecological flow requirements to support fisheries in Canada*. Government of Canada. https://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2013/2013_017-eng.html

NSECC. (2010). *Guide to groundwater withdrawal approvals*. Nova Scotia Environment and Climate Change.