Comments on the Salt Springs Natural Gas Power Generation Facility Project, Ref. No. 90114

February 9, 2026

Executive Summary

Sierra Club Canada Foundation (SCCF) is a national environmental organization dedicated to advancing climate protection, safeguarding public health, and conserving biodiversity. SCCF has a longstanding interest in the assessment of large-scale fossil fuel infrastructure, particularly where such projects risk undermining climate commitments, increasing public health burdens, or fragmenting ecosystems.

Sierra Club Canada Foundation submits this comment to the Impact Assessment Agency of Canada (IAAC) regarding the proposed Salt Springs Natural Gas Power Generation Facility (the Project) in Pictou County, Nova Scotia. **Sierra Club respectfully submits that the Project should not be screened out of a comprehensive federal impact assessment under the *Impact Assessment Act*.**

The Environmental Assessment Registration Document (EARD) does not provide sufficient evidence to justify a screening-out determination. Across several key areas—project need, alternatives, climate change, human health, wetlands, species at risk, water resources, and cumulative effects—the EARD relies on narrow analyses that downplay risk, defer critical questions, and assume negative impacts are either acceptable or unavoidable.

The proponent asserts that the Project is necessary to ensure electricity system reliability as coal-fired generation is phased out and renewable energy is added to the grid. But the EARD seems to assume a fossil gas solution is the only way forward, without showing why non-emitting solutions won't work. Where need is just asserted, not proven, screening-out the project would be premature.

Reasonable alternatives—like energy storage, imports, demand response, and regional coordination—are mentioned but dismissed, without comparative analysis. This reverses the logic of impact assessment and prevents determination of whether the Project's adverse effects are avoidable.

The Project would lock in new fossil fuel pollution for decades. The EARD does not impose enforceable limits on run hours or lifetime emissions, does not meaningfully assess lifecycle greenhouse gas emissions or methane leakage, and relies on speculative claims of

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hydrogen readiness. Screening out would foreclose examination of fossil fuel lock-in and cumulative climate impacts.

Human health impacts are treated as a box to check for regulatory compliance. This approach does not adequately address episodic emissions associated with peaking operation, cumulative exposure to fine particulate matter ($PM_{2.5}$), or interaction with climate-driven heat stress.

The Project would permanently alter wetlands in a province that has already lost too many. The EARD evaluates wetlands primarily by area rather than function and does not assess watershed-scale hydrological effects or downstream implications for cold-water refugia relied upon by Atlantic salmon.

Species at risk—including Black ash, mainland moose, wood turtle, Canada warbler, and monarch butterfly—are covered by limited surveys and mitigation plans that do not capture cumulative habitat loss or long-term viability.

Cumulative effects are a central issue. The Project is advancing alongside other proposed fossil gas infrastructure in Pictou County. Even if one accepted the proponent's asserted need (which Sierra Club does not), greenfield siting compounds cumulative environmental harm and underscores why screening-level assessment is inadequate.

Taken together, these deficiencies prevent a meaningful determination that the Project's effects are well understood or acceptable. A comprehensive federal impact assessment is warranted.

1. Need for the Project

From a federal screening perspective, the question of whether project need has been demonstrated is central to determining whether a proposed activity warrants assessment under the Impact Assessment Act particularly where asserted need may drive long-term environmental risk.

The proponent asserts that the Salt Springs Natural Gas Power Generation Facility is necessary to ensure electricity system reliability in Nova Scotia as coal-fired generation is phased out and variable renewable energy is added to the grid (Salt Springs Environmental Assessment Registration Document (EARD), s. 2.2, p. 4). This asserted need is framed as urgent and self-evident and is grounded primarily in provincial policy objectives to procure dispatchable capacity

However, the EARD does not demonstrate that this project—or fossil gas generation at this scale—is necessary to meet those objectives. Instead, the proponent defines "need" in a manner that presumes the solution in advance, effectively treating new gas generation as the default response to reliability challenges rather than one option among many. The EARD acknowledges that Nova Scotia's electricity system is undergoing a transition driven by coal phase-out, electrification, and increased renewable generation (EARD, s. 2.2, p. 4). Yet it does not provide a transparent, comparative analysis showing why those system changes require the construction of a new 300 MW fossil fuel facility with an expected operating life extending well beyond Canada's net-zero electricity commitments (EARD, Project Description, pp. 21–22).

For the purposes of federal screening under the *Impact Assessment Act*, this distinction matters. IAAC's role is not to accept assertions of need at face value, but to assess whether the proponent has demonstrated that the designated project is justified considering its environmental, health, and climate impacts. Where need is asserted rather than demonstrated, and where it is inseparable from a pre-selected fossil solution, screening out would be premature.

2. Consideration of Reasonable Alternatives

Consideration of reasonable alternatives is a core federal screening consideration, as it informs whether potential adverse effects are avoidable or have been prematurely locked in by early project design choices.

The EARD states that the proponent considered alternatives to the Project, including grid-scale battery storage, additional renewable generation, and increased electricity imports (EARD, s. 2.4, p. 8). However, these alternatives are dismissed at a general level without comparative analysis, modelling results, or cost transparency.

Battery energy storage is acknowledged as providing fast response with no direct atmospheric emissions, yet it is rejected on the basis that it would not, in the proponent's view, provide sufficient capacity or duration (EARD, s. 2.4, pp. 8–9). This assertion is offered without supporting evidence in the registration document, and without evaluating combinations of storage, demand response, transmission upgrades, or regional coordination that could collectively meet reliability needs. Similarly, increased interprovincial electricity imports and transmission-based solutions are identified but

dismissed without analysis of constraints, timelines, or comparative impacts (EARD, s. 2.4, p. 8). Rather than being evaluated as alternatives to the Project, these options are framed as measures that may be pursued in parallel, implicitly assuming that the gas facility must proceed regardless (EARD, s. 2.4, p. 9). This approach reverses the logic of impact assessment. **Alternatives are not mitigation add-ons; they are central to determining whether the Project itself is justified. In the absence of a credible alternatives record, IAAC cannot reasonably conclude that the Project's adverse effects are acceptable or unavoidable.**

3. Greenhouse Gas Emissions and Climate Change

Greenhouse gas emissions and climate change is a clear federal interest, tied to Canada's national climate commitments and the cumulative effects of long-lived fossil fuel infrastructure.

The Salt Springs Project is a fossil fuel–fired electricity generating facility with an expected operational life of several decades (EARD, Project Description, pp. 21–22). As such, it would lock in new greenhouse gas emissions well beyond the period in which Canada and Nova Scotia have committed to achieving a net-zero electricity system. The EARD acknowledges that the Project will emit greenhouse gases during construction and operation but frames these emissions as acceptable because the facility is intended to support renewable integration and coal phase-out (EARD, s. 2.2, pp. 4–5). This framing assumes, rather than proves, that new fossil gas generation is the most climate-responsible way to achieve reliability objectives, which is not true. Operational emissions are assessed narrowly, without enforceable limits on run hours or annual emissions over the life of the facility (EARD, Operations Description, pp. 21–22). Without enforceable restrictions on annual emissions throughout the facility's operational lifespan, a plant initially approved as a peaking resource could gradually transition into a regularly operated asset if electricity demand increases.

The EARD also does not meaningfully assess lifecycle greenhouse gas emissions, including upstream emissions associated with natural gas extraction, processing, and transportation. Methane leakage, a major contributor to near-term climate forcing, is not substantively addressed (EARD, Climate Change discussion, general treatment).

Taken together, these deficiencies prevent a meaningful assessment of whether the Project is compatible with Canada's climate commitments. Screening the Project out of a comprehensive federal review would skip a crucial review of fossil fuel lock-in and cumulative climate impacts, central to the public interest.

4. Human Health and Air Pollution

Human health effects, including air quality impacts and exposure to fine particulate matter, are central to the public interest determination under the Impact Assessment Act and relevant to federal screening decisions.

The Salt Springs Project would introduce a new industrial source of air pollution into a rural area of Pictou County, yet the Environmental Assessment Registration Document (EARD) treats human health impacts as a secondary consideration, resolved through regulatory compliance. This approach is inadequate for the purposes of federal screening, where the question is not only whether emissions meet standards, but whether the

Project's effects on people are fully understood and acceptable. The EARD acknowledges that the facility will emit nitrogen oxides (NO_x), particulate matter, carbon monoxide, and other air contaminants during operation, with additional emissions during start-up and shut-down events (EARD, Air Quality Assessment, pp. 45–52). These emissions are modelled against provincial and federal ambient air quality criteria, and the proponent concludes that predicted concentrations fall below applicable thresholds.

However, compliance with ambient standards does not equate to the absence of health effects—particularly for nearby residents and vulnerable populations. The EARD does not meaningfully assess how repeated short-duration emission spikes from a peaking facility may affect local air quality, nor does it examine potential cumulative exposure over time as the plant operates across decades (EARD, pp. 49–51)."

Fine particulate matter ($PM_{2.5}$) is especially concerning — it's one of the most harmful air pollutants to human health due to its ability to penetrate deep into the lungs and enter the bloodstream, contributing to cardiovascular disease, respiratory illness, asthma exacerbation, and premature mortality. **There is no established safe threshold for $PM_{2.5}$ exposure.** The EARD acknowledges that the Project will emit particulate matter associated with natural gas combustion, including $PM_{2.5}$, and includes modelling intended to show compliance with ambient air quality standards (EARD, Air Quality Assessment, pp. 45–52). However, this analysis is framed around short-term compliance with regulatory limits rather than an assessment of health risk over the Project's full operating life.

As a peaking facility, the Project is designed to cycle on and off in response to grid conditions. This operating profile increases the likelihood of repeated short-duration $PM_{2.5}$ emission spikes, particularly during start-up and ramping events, which are not well captured by annual or averaged concentration metrics (EARD, pp. 49–51). The EARD does not meaningfully assess how these episodic emissions may affect nearby residents over time, especially when experienced repeatedly across years or decades.

Moreover, the EARD does not examine $PM_{2.5}$ exposure for sensitive populations, including children, seniors, and individuals with pre-existing respiratory or cardiovascular conditions, despite the well-documented disproportionate health impacts of fine particulate pollution on these groups. Nor does it assess background $PM_{2.5}$ levels in the region in combination with Project emissions, an omission that is particularly relevant in evaluating cumulative health effects in rural communities (EARD, p. 47).

The proponent also characterizes the Project location as rural and sparsely populated, implicitly minimizing health concerns on the basis of lower population density (EARD, p. 47). This framing overlooks the reality that rural residents may experience higher relative exposure due to proximity, limited buffering, and fewer mitigation measures than urban industrial settings.

Notably, the EARD does not assess potential cumulative air quality and health effects in combination with other existing or proposed industrial activities in Pictou County. By evaluating emissions in isolation, the assessment fails to account for how incremental increases in pollution—each deemed insignificant on its own—can collectively contribute to meaningful health burdens over time.

From a federal public-interest perspective, these omissions are significant. Human health is a core consideration under the *Impact Assessment Act*, and a screening decision that relies primarily on regulatory compliance risks overlooking localized and cumulative effects that are not well captured by standards-based modelling alone.

Human health is a core federal concern and relying on regulatory compliance risks missing localized and cumulative effects. Given the project's lifespan, fossil fuel reliance, and proximity to communities, a more thorough health assessment is needed. Screening out now would skip the scrutiny needed to understand long-term health impacts..

5. Wetlands and Habitat

Wetland loss and degradation engage federal interests where hydrological function, fish habitat, and cumulative ecosystem effects extend beyond a project footprint and interact with broader watershed systems.

Wetlands are a defining feature of Nova Scotia's landscape and provide critical ecological functions, including groundwater recharge, baseflow maintenance, flood attenuation, water quality regulation, carbon storage, and habitat for fish, wildlife, species at risk, and migratory birds. Nova Scotia's Wetland Conservation Policy recognizes wetlands as among the most productive and valuable ecosystems in the province and identifies their essential role in maintaining watershed health and ecological resilience.

The most recent province-wide wetland inventory indicates that approximately 6.5% of Nova Scotia's land base consists of freshwater wetlands, with peatlands (bogs and fens) comprising more than three-quarters of that total. The same inventory and policy documentation acknowledge that historic wetland loss in Nova Scotia has been substantial, particularly in fertile lowland areas, river floodplains, and near population centres. While precise province-wide estimates of freshwater wetland loss remain uncertain, losses are known to be high.

Importantly, the Policy emphasizes that wetlands must be evaluated not only by area, but by function, noting that wetland loss or degradation diminishes flood regulation, water purification, groundwater recharge, biodiversity support, and climate moderation services. It further recognizes that wetlands operate as interconnected systems, often linked hydrologically and ecologically to surrounding watercourses, forests, and downstream habitats, and that incremental losses can result in disproportionate functional decline at the watershed scale.

The Policy also acknowledges significant uncertainty and data gaps, including the absence of a modern, high-resolution provincial wetland inventory and limited systematic tracking of cumulative wetland loss. Despite this uncertainty, Nova Scotia has adopted a precautionary approach, with the stated objective of preventing net loss of wetland area and function, particularly in landscapes where wetlands have already experienced historic decline.

In this context, remaining wetlands in Nova Scotia carry heightened ecological importance. Project-level wetland alterations therefore cannot be assessed in isolation but must be evaluated against a backdrop of historic loss, ongoing development pressure, and increasing climate-related stressors affecting hydrology and ecosystem function.

Against this policy and ecological backdrop, the Salt Springs Project proposes direct and indirect alterations to multiple wetlands within the Project footprint. The Environmental Assessment Registration Document (EARD) identifies 18 wetlands in the Local Assessment Area, with six wetlands proposed to be directly altered, resulting in the permanent loss or modification of approximately 0.9 hectares of wetland area (EARD, Wetlands Assessment, pp. 61–66).

The proponent characterizes these wetlands as small, fragmented, or of limited ecological value, and concludes that wetland-related effects will not be significant with the application of standard mitigation and compensation measures (EARD, pp. 64–66). This framing understates the importance of the affected wetlands by focusing narrowly on size and footprint, rather than on function, connectivity, and cumulative context.

The EARD relies heavily on post-disturbance compensation to offset wetland loss, consistent with provincial permitting requirements. However, the assessment does not demonstrate that proposed compensation will replace lost wetland functions—such as flood attenuation, groundwater interaction, and downstream water quality regulation—within relevant timeframes, or at all. Nor does it account for the ecological time lag associated with wetland creation or restoration, during which lost functions are not replaced (EARD, pp. 66–67).

The assessment also treats wetlands as largely discrete features, rather than as components of a connected hydrological system. Several of the identified wetlands are hydrologically linked to nearby watercourses and forested habitats, yet the EARD does not meaningfully assess how alterations may affect downstream conditions, seasonal flow patterns, or cumulative watershed function (EARD, pp. 62–65).

Notably, the EARD does not situate Project-related wetland loss within a broader regional or watershed-scale context. There is no assessment of cumulative wetland alteration in Pictou County, nor of how incremental losses from infrastructure, energy, and industrial development may collectively erode wetland function over time. This omission is particularly consequential given the acknowledged uncertainty and historic wetland loss identified in provincial policy.

From a federal screening perspective, this approach is inadequate. Small, repeated wetland losses—each deemed acceptable in isolation—are a well-documented pathway to significant cumulative environmental degradation. When viewed through the lens of climate change, increasing flood risk, and declining ecological resilience, the loss or degradation of even relatively small wetlands can have outsized impacts.

Given the Project's permanent alteration of wetland features, the reliance on compensation rather than avoidance, and the absence of a meaningful cumulative effects framework, the wetland-related effects of the Salt Springs Project warrant more comprehensive scrutiny. Screening the Project out at this stage would foreclose the opportunity to assess whether proposed wetland losses are consistent with the precautionary intent of Nova Scotia's Wetland Conservation Policy and the federal public-interest objectives of the *Impact Assessment Act*.

6. Species at Risk

Potential effects on species at risk and their habitat directly engage federal responsibilities under the Species at Risk Act and warrant careful consideration at the screening stage.

The Salt Springs Project is proposed in a landscape that includes wetlands, forested habitat, riparian areas, and disturbed open land capable of supporting a range of species listed under the federal *Species at Risk Act* (SARA) and Nova Scotia's *Endangered Species Act*. These species are not abstract or obscure; they include plants and animals widely recognized by the public and that serve as indicators of ecosystem integrity, climate stress, and cumulative land-use pressure.

Despite this context, the Environmental Assessment Registration Document (EARD) approaches species at risk largely through a project-footprint screening exercise, relying on limited field surveys and desktop reviews to conclude that residual effects will not be significant once standard mitigation measures are applied (EARD, Species at Risk Assessment, pp. 69–75). This approach is insufficient for federal screening purposes.

Species at risk considerations extend beyond direct mortality or vegetation removal within a narrowly defined footprint. They include habitat suitability, connectivity, hydrological integrity, cumulative disturbance, and long-term viability—all of which are relevant to the Salt Springs Project and not adequately addressed in the EARD.

Black ash (*Fraxinus nigra*) is a wetland-dependent tree species listed as Threatened in Nova Scotia and experiencing significant regional decline. It is strongly associated with forested wetlands, floodplains, seepage areas, and poorly drained soils—habitat types identified within and adjacent to the Project footprint (EARD, Wetlands Assessment, pp. 61–66). Even where mature individuals are not confirmed during site-specific surveys, alterations to wetland hydrology, soil compaction, drainage patterns, and groundwater connectivity can reduce habitat suitability and regeneration potential over time. The EARD does not meaningfully assess these indirect effects, nor does it evaluate how incremental wetland loss and alteration may affect the long-term persistence of wetland-dependent plant species (EARD, pp. 62–67).

The mainland moose population in Nova Scotia is listed as Endangered and is widely recognized as a symbol of forest and wetland ecosystem health. Moose rely on large, connected landscapes that include wetlands, bogs, riparian areas, and adjacent forest cover for foraging, thermoregulation, and movement. While the EARD does not assert the presence of moose within the immediate Project footprint, it does not assess how incremental wetland loss, forest clearing, access development, and habitat fragmentation contribute to broader regional pressures on moose habitat (EARD, Species at Risk Assessment, pp. 69–74). For a species already in steep decline, cumulative landscape-level effects are often more consequential than isolated site disturbances.

The wood turtle (*Glyptemys insculpta*) is listed as Threatened federally and provincially and is strongly associated with clean rivers, floodplains, wetlands, and adjacent upland habitat. The EARD relies on limited survey results and standard mitigation measures to conclude that effects on reptiles are unlikely (EARD, Species at Risk Assessment, pp. 71–74). However, this approach does not adequately address indirect effects such as changes to water flow, sedimentation, habitat connectivity, or increased disturbance that may arise from wetland alteration and associated infrastructure over time.

The Canada warbler (*Cardellina canadensis*), listed as Threatened under SARA, is a migratory songbird strongly associated with forested wetlands, riparian thickets, and moist understory conditions. These habitat features overlap with wetland and forest types identified within the Project area. The EARD relies on the absence of detections during surveys to conclude that effects on migratory birds and species at risk will not be significant (EARD, pp. 70–73). However, Canada warblers exhibit seasonal variability and patchy distribution, and their dependence on specific habitat conditions makes them particularly sensitive to fragmentation and wetland alteration.

The monarch butterfly (*Danaus plexippus*), listed as Special Concern in Canada, is one of the most publicly recognized species at risk and a widely understood indicator of cumulative habitat loss. Monarchs rely on milkweed and nectar sources often found in wetland margins, open disturbed areas, and transitional habitats—areas frequently affected by infrastructure development. Although monarchs may not be the focus of site-specific surveys, their inclusion underscores that incremental habitat alteration across landscapes is a primary driver of species decline.

Taken together, these species illustrate why a screening-level assessment is inadequate. The EARD's reliance on limited surveys, absence of detections, and standard mitigation measures does not address uncertainty, cumulative habitat loss, or long-term ecosystem function. Screening the Project out of a comprehensive federal review would preclude meaningful examination of how wetland alteration, habitat fragmentation, and fossil fuel–related infrastructure contribute to ongoing biodiversity loss, contrary to federal species protection objectives.

7. Water, Hydrology, and Cold-Water Fish Habitat and Impact on Atlantic Salmon

Water resources and downstream fish habitat, including cold-water refugia relied upon by Atlantic salmon, are matters of federal jurisdiction where cumulative and watershed-scale effects are implicated.

Freshwater systems in Nova Scotia are increasingly stressed by climate change, land-use pressure, and historic habitat alteration. Rising air temperatures, more frequent summer drought conditions, and altered precipitation patterns are contributing to lower summer baseflows and higher stream temperatures, placing growing pressure on cold-water–dependent aquatic species. In this context, the integrity of wetlands, groundwater systems, and connected watercourses has become increasingly critical to maintaining watershed resilience.

Wetlands play a vital role in regulating hydrology and water temperature. Through groundwater recharge, baseflow maintenance, flood attenuation, and thermal buffering, wetlands help sustain stream flows and moderate temperature extremes during periods of low precipitation and high heat. These functions are particularly important during summer months, when aquatic ecosystems are most vulnerable to thermal stress. Alterations to wetlands and surrounding soils can therefore have downstream effects that extend well beyond the immediate project footprint.

The Environmental Assessment Registration Document (EARD) identifies multiple wetlands and at least one watercourse within the Local Assessment Area and acknowledges that several wetlands will be permanently altered or removed because of

the Project (EARD, Wetlands Assessment, pp. 61–66). However, the assessment treats these features as isolated elements, focusing on direct footprint impacts and regulatory compliance, rather than evaluating how wetland alteration may affect hydrological connectivity, groundwater contribution, or downstream thermal regimes.

Atlantic salmon are sensitive to water temperature and flow conditions and are widely recognized as a sentinel species for watershed health. Across much of Nova Scotia, Atlantic salmon populations have experienced significant declines, driven by a combination of habitat loss, altered hydrology, warming waters, and cumulative development pressure. As climate change progresses, the persistence of remaining salmon populations increasingly depends on access to cold-water refugia—localized areas of cooler water sustained by groundwater inputs, wetlands, shaded tributaries, and intact riparian zones.

Cold-water refugia are not always mapped, visibly distinct, or confined to clearly identified fish habitat within a project footprint. They often occur downstream of wetlands, seepage areas, and groundwater discharge zones that moderate stream temperatures during critical periods. Incremental changes to upstream wetlands, soils, and drainage patterns can therefore reduce the availability or effectiveness of these refugia, even where direct in-stream works are limited or absent.

The EARD concludes that effects on fish and fish habitat are unlikely to be significant, on the basis that no direct fish habitat is affected within the Project footprint and that standard mitigation measures will be applied (EARD, Aquatic Environment Assessment, pp. 67–69). This conclusion does not adequately account for indirect or downstream effects, nor does it assess how wetland alteration may influence baseflow, groundwater contribution, or stream temperature at locations supporting cold-water species.

The Project involves vegetation clearing, soil disturbance, wetland alteration, and the introduction of new impervious and compacted surfaces, all of which can influence surface runoff, infiltration, and groundwater movement (EARD, Project Description, pp. 21–24). While each of these effects is treated as minor or mitigable in isolation, the EARD does not assess their combined influence on watershed-scale hydrology, particularly under future climate conditions.

Notably, the EARD does not evaluate how Project-related hydrological changes may interact with existing wetland loss and drainage in the region, the increasing frequency of summer low-flow conditions, rising water temperatures, or other existing or proposed developments within the watershed.

This omission is significant. For Atlantic salmon and other cold-water species, risk is rarely attributable to a single project alone. Instead, it arises from the accumulation of small hydrological changes over time, each of which incrementally reduces habitat suitability and resilience. Screening-level assessments that focus narrowly on footprint impacts are ill-suited to capturing this dynamic.

From a federal perspective, fish and fish habitat—including the hydrological and thermal conditions that sustain them—are matters of clear national interest. A screening decision that does not examine how upstream wetland alteration and hydrological change may affect downstream cold-water refugia risks underestimating the Project's potential

contribution to ongoing declines in Atlantic salmon habitat.

Given the acknowledged uncertainty, the climate sensitivity of cold-water systems, and the cumulative nature of hydrological impacts, a comprehensive federal impact assessment is warranted. Screening the Project out at this stage would preclude a meaningful evaluation of how incremental wetland and hydrological changes may interact with climate change to affect Atlantic salmon and the broader health of freshwater ecosystems.

8. Cumulative Effects

Cumulative effects analysis is fundamental to federal screening, as IAAC's mandate is to assess whether interacting and long-term impacts warrant comprehensive review rather than piecemeal approval.

Cumulative effects are a central issue raised by the Salt Springs Project. While individual components of the Project are repeatedly characterized in the Environmental Assessment Registration Document (EARD) as small, localized, or mitigable, the assessment consistently evaluates those effects in isolation rather than examining how they interact over time, across environmental components, and within a broader regional and climatic context.

This siloed approach understates risk. The Project's potential effects on greenhouse gas emissions, air quality, wetlands, species at risk, water resources, and human health are interconnected and mutually reinforcing. When viewed together, they raise legitimate questions about whether approving additional fossil fuel infrastructure in this region is consistent with long-term environmental protection, climate resilience, and public interest objectives.

The EARD repeatedly concludes that Project-related effects are not significant because they fall below regulatory thresholds or affect small areas (EARD, pp. 45–75). This framing fails to account for the reality that significant environmental degradation often occurs incrementally, through the accumulation of many individually minor decisions.

For example, the permanent alteration of approximately 0.9 hectares of wetlands is treated as acceptable in isolation, despite acknowledged historic wetland loss in Nova Scotia and the increasing importance of remaining wetlands for flood attenuation, groundwater recharge, and climate resilience (EARD, Wetlands Assessment, pp. 61–66). Similarly, modest increases in air pollutant emissions are deemed insignificant without assessing how repeated episodic emissions—particularly of $PM_{2.5}$ from peaking operation—may contribute to cumulative exposure and long-term health risk (EARD, Air Quality Assessment, pp. 45–52).

Climate change is not treated in the EARD as a cumulative risk multiplier. Rising temperatures, increasing frequency of extreme heat events, altered precipitation patterns, and summer low-flow conditions all increase the sensitivity of ecosystems and communities to additional disturbance. Wetland loss, hydrological alteration, fossil fuel combustion, and air pollution have greater consequences under future climate conditions than under historic baselines.

The Project's greenhouse gas emissions are assessed without reference to the cumulative implications of long-lived fossil fuel infrastructure in a jurisdiction that has committed to a net-zero electricity system (EARD, Project Description and Climate Discussion, pp. 21–24). Screening out the Project would effectively accept a piecemeal approach to fossil fuel expansion without evaluating how individual projects collectively undermine climate objectives.

Cumulative effects are particularly evident in the context of biodiversity loss. Species at risk such as Black ash, mainland moose, wood turtle, Canada warbler, and monarch butterfly are not threatened by a single project alone, but by progressive habitat loss, fragmentation, and degradation across landscapes. The EARD relies heavily on site-specific surveys and mitigation measures to conclude that effects are unlikely, without examining how incremental wetland alteration, forest clearing, access development, and hydrological change interact at the regional scale (EARD, Species at Risk Assessment, pp. 69–75).

The EARD's cumulative effects analysis is particularly weak with respect to water resources. Wetlands, groundwater systems, and surface watercourses function as interconnected networks. Incremental changes to upstream wetlands and soils can reduce baseflows, increase water temperatures, and diminish cold-water refugia relied upon by Atlantic salmon and other cold-water species downstream. By concluding that effects on fish and fish habitat are unlikely because no direct in-stream works occur within the Project footprint, the EARD avoids assessing watershed-scale cumulative risk, particularly under climate change (EARD, Aquatic Environment Assessment, pp. 67–69).

The Salt Springs Project is not being proposed in isolation. It is advancing within a broader regional context that includes other proposed and existing energy infrastructure developments drawing on the same landscapes, airsheds, watersheds, and communities. Most notably, the Salt Springs Project is one of two proposed 300-MW fossil gas–fired generation facilities advanced within Pictou County during the same planning period.

Sierra Club Canada Foundation has also submitted comments to the Impact Assessment Agency of Canada regarding the Marshdale Project, which raises many of the same underlying issues related to need, alternatives, greenhouse gas emissions, air quality, wetlands, species at risk, and cumulative effects. While each project must be assessed on its own record, their concurrent advancement underscores the risk of piecemeal decision-making in the absence of a broader system-level assessment.

Even if one accepted the proponent's asserted need for the Project (which Sierra Club does not), the decision to site new fossil fuel infrastructure on greenfield land compounds cumulative environmental harm and underscores why screening-level assessment is inadequate. Greenfield siting results in permanent loss of intact land, wetlands, and associated ecological functions, adding to historic and ongoing landscape fragmentation that is not captured through project-by-project review.

From a cumulative effects perspective, the concern is not whether this individual project causes significant impacts in isolation, but whether repeated approval of energy infrastructure incrementally erodes ecological resilience and normalizes irreversible land-use change. Without a comprehensive federal review capable of situating the Project within broader development patterns and long-term environmental trends, IAAC risks

underestimating the system-level consequences of continued greenfield siting for fossil fuel infrastructure.

Evaluating the Salt Springs Project without regard to parallel proposals risks underestimating cumulative effects that only become apparent when multiple projects are considered together, including increased fossil fuel lock-in, compounded wetland and habitat loss, incremental air pollution, and added pressure on climate-sensitive watersheds. For IAAC, the existence of parallel projects addressing the same asserted system need reinforces the importance of a federal review capable of examining combined and interacting effects, rather than screening decisions made in isolation.

Cumulative effects are therefore not an ancillary concern in this case; they are the lens through which the Project's significance must be understood. The EARD's fragmented treatment of effects across valued components does not provide a sufficient basis for concluding that the Project's impacts are insignificant when considered together.

Given the interaction of climate change, wetland loss, hydrological alteration, biodiversity decline, air pollution, and fossil fuel lock-in, a comprehensive federal impact assessment is warranted. Screening the Salt Springs Project out at this stage would risk normalizing incremental environmental degradation and would be inconsistent with the precautionary and public-interest objectives of the *Impact Assessment Act*.

9. Conclusion and Recommendation

The question before the Impact Assessment Agency of Canada is not whether individual impacts identified in the Environmental Assessment Registration Document can be mitigated in isolation, but whether the Project's full range of potential effects is sufficiently understood to justify screening it out of a federal impact assessment. On the record before IAAC, that threshold has not been met.

As demonstrated throughout this submission, the EARD relies on asserted need rather than demonstrated necessity, dismisses reasonable alternatives without comparative analysis, understates fossil fuel lock-in and lifecycle greenhouse gas emissions, and treats human health, wetlands, water, species at risk, and climate change as discrete issues rather than interacting system-level risks.

Screening the Salt Springs Project out at this stage would pre-judge questions that go to the heart of the federal public interest, including climate compatibility, cumulative environmental degradation, long-term human health risk, and Canada's responsibilities with respect to biodiversity and fish habitat.

For these reasons, Sierra Club Canada Foundation respectfully recommends that IAAC not screen the Salt Springs Project out and instead require a comprehensive federal impact assessment under the *Impact Assessment Act*.

We also contend that the need for, scale, scope, impacts and cumulative impacts of this plant and a second gas-fired plant proposed for Marshdale (Project Ref. No 90111) are inter-related and cannot be determined in isolation, and recommend that both plants be assessed jointly through a single federal impact assessment.