

Peace River First Nations
Initial Comments in Respect to Energy Alberta’s Siting Criteria and Methodology
For the Peace River Nuclear Power Project



Date: April 8, 2026 **(REVISED and REISSUED)**

Prepared for: Energy Alberta in Relation to the proposed Peace River Nuclear Power Project (“Project”)

Prepared by: Peace River First Nations (“PRFNs” or “Nations”) which, for purposes of this initial submission, is inclusive of:

- Tallcree Tribal Government
- Little Red River Cree Nation
- Beaver First Nation
- Dene Tha’ First Nation
- Duncan’s First Nation

Copied to: Casey Horseman: Horse Lake First Nation

Subject: Initial Comments on the Approach and Methodology for Siting the Peace River Nuclear Power Project

1.0 Purpose and Context

- These initial comments are provided by the PRFNs in respect of Energy Alberta's current approach to siting the proposed Project.
- The PRFNs understand Energy Alberta has identified two prospective locations for the Project approximately 30 km north of the Town of Peace River, on the west and east banks of the Peace River, and is seeking feedback on the relative merits of these pre-selected options. The two sites identified by Energy Alberta are described as Option 1 and Option 2. (See attached Google Earth Projection Map-Appendix I)
- The PRFNs have been informed that once Energy Alberta has evaluated the relative merits of Option 1 and Option 2, it will make a final decision in respect to a preferred site and then commence the preparation of the environmental impact statement based on the preferred site. Energy Alberta has informed the PRFNs that it wishes to be in the position to make this decision by mid-April 2026.
- The PRFNs further understand that early siting analysis conducted for major projects and undertakings such as this proposed Project is typically guided by an evaluation of technical, economic practicality, environmental and social/cultural criteria. As with the most major developments, such exercises generally prioritize or place considerable weighting on technical, buildability and economic factors as without these factors being present, the business case for a project erodes. Clearly public safety is also another matter that carries substantial weighting in such processes.
- The PRFNs' concern is that the current approach risks producing an 'A-or-B' consultation dynamic, where the PRFNs are being asked to comment on two pre-selected sites after the overall project development area has been selected without the information required to evaluate whether the overall project development area, the criteria set, the weights, and the data sources are appropriate and defensible.
- Given the importance of the Project area, host landscape, the Peace River valley and the Peace River itself in supporting the exercise of rights, practice of culture and maintenance of a traditional way of life, the PRFNs are of the view that the approach and method adopted by Energy Alberta should also take into account, weigh and apply Indigenous rights criteria which make the exercise of rights realizable and that address the Nations' long standing and intense cultural connection with the Project area, the Peace River and the Peace River valley.
- The PRFNs respectfully assert that impacts to the rights, culture, way of life and interests of the Nations can and need to be addressed at this early strategic and important phase of the Project analysis and decision making. Given this, there should be a meaningful and

reasonable level of collaboration with the PRFNs to develop, evaluate, apply and weigh their criteria alongside the main technical, environmental and social/cultural criteria considered by Energy Alberta to date.

- The Nations further cite legal precedent that the objective of consultation within an impact assessment scenario is not merely to consult First Nations on effects and impact to bio-physical and social elements but to ensure that a comprehensive assessment of impacts to rights and culture occurs.
- The PRFNs do not currently have the time or resources to replicate the proponent-led suitability analysis or to independently design and test complete alternative siting approaches. The PRFNs are, however, entitled to a siting process that is transparent, consistent with applicable regulatory guidance, congruent with constitutional and administrative-law principles, and capable of demonstrating that Nations' values and criteria are being meaningfully considered. In this case meaningful, consideration means developed, evaluated, applied and weighed, not merely recorded.
- The PRFNs therefore raise siting-related factors that, in their view, must be considered and addressed at a strategic planning stage, rather than deferred to later impact assessment stages where location decisions are effectively fixed and avoidance options are constrained.

2.0 Applicable Guidance and Legal Principles

- The Canadian Nuclear Safety Commission's ("CNSC") REGDOC-1.1.1, Site Evaluation and Site Preparation for New Reactor Facilities (Version 1.2) is a central guidance document for evaluating a proposed site for a new reactor facility, including the information expected in support of site evaluation and site preparation licensing activities.
- REGDOC-1.1.1 contemplates that an applicant provide a high-level overview of alternate sites considered prior to selecting the proposed site, including a brief description of how evaluation narrowed the final choice(s).
- Federal impact assessment practice similarly expects early and criteria-based consideration of alternative means (which can include location options) and transparent disclosure of how alternatives were considered and narrowed.
- The PRFNs' view is that siting is an early, strategic decision which shapes the course of projects and the nature and intensity of effects and risks. This is especially critical in this context given the scope of the Project, the potential for project-related effects, acute human health risk matters and the intense cultural connection of the PRFNs to the Project, host landscape, the Peace River valley and the Peace River itself.

- Practically, siting is not a minor project detail. It sets the long-term risk footprint, disturbance patterns, access constraints, and cumulative effects pathways. If PRFN-derived criteria are not meaningfully considered—meaning developed, considered, weighed and applied—at the siting stage, later assessment may become an exercise in mitigating a decision already made.
- It is wholly inadequate that discussions with the PRFNs regarding the two proposed siting options came after the submissions of the Initial Project Description (“IPD”), triggering the commencement of the impact assessment process. Early discussions should have occurred well in advance, providing a reasonable period of time for meaningful consultation and collaboration on this critical matter. Consideration of merely two options, neither of which may be appropriate from the perspectives of the PRFNs nor sufficiently account for and safeguard the PRFNs respective rights, cultures, ways of life and interests, is not meaningful consultation.

3.0 Guiding Legal Principles Supporting Early, Meaningful Consultation on Siting

3.1 Inherent, Treaty, and Aboriginal Rights

The PRFNs continue to practice, hold, and assert rights pursuant to:

- (1) Inherent rights and responsibilities given to us as part of the PRFNs’ sacred relationship with the Creator, lands, and waters;
- (2) Indigenous rights as recognized in the *United Nations Declaration on the Rights of Indigenous Peoples* (“UNDRIP”); and
- (3) Treaty and Aboriginal rights recognized under section 35 of the *Constitution Act, 1982*, throughout PRFN Territory.

The PRFNs submit that project siting is not a minor technical detail. It is an early strategic decision that can set the spatial footprint of risk, shape future disturbance pathways, constrain alternatives, and determine whether later assessment is focused on genuine avoidance or merely on mitigation of a site already chosen. Consequently, the inherent rights, Indigenous rights recognized under UNDRIP, and constitutionally-protected Treaty and Aboriginal rights are engaged by the siting decision.

3.2 Inherent Rights

The PRFNs hold a sacred responsibility to care for the land, which predates both Canada and Canadian laws. As part of this sacred responsibility, the PPRFNs have the right to be approached as full partners and decision makers. In order for us to fulfill our responsibilities to the land, the PRFNs must be given early notice, and sufficient time and resources to fully shape and inform early decision-making within the Project, including related to siting.

3.3 UNDRIP

Under article 18 of UNDRIP, the PRFNs “have the right to participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decision-making institutions.” Further, under article 29(2), states are to “take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent.”

Given that siting of the Project directly affects our rights and sets the parameters for where hazardous materials will be stored in the future, UNDRIP necessitates that the free, prior, and informed consent (“FPIC”) of the PRFNs be obtained for the Project, and that this FPIC not be constrained by limiting the scope of site selection prior to the effective participation of the PRFNs in decision-making.

3.4 The Duty to Consult

Early consultation is required when strategic decisions are still open

In *Haida Nation v. British Columbia (Minister of Forests)*, the Supreme Court of Canada held that the duty to consult arises when the Crown has knowledge of a potential Aboriginal right or title and contemplates conduct that may adversely affect it. In this case, there are established and well-understood rights that will be affected if the Project is constructed. The Court emphasized that “Consultation must be meaningful”¹, and that the duty is proportionate to the seriousness of the potential adverse effect and must be approached flexibly and in good faith.² Subsequent caselaw has clarified that meaningful consultation must not be a ‘box checking exercise’ in which the Indigenous peoples are simply giving the opportunity to “blow off steam”;³ instead, meaningful consultation requires good faith dialogue, a state of open-mindedness about accommodation,⁴ and meaningfully “grappl[ing] with the real concerns” of the Indigenous peoples.⁵

That principle is especially important at the siting stage. From the PRFNs’ perspective, meaningful consultation requires that Energy Alberta should not treat Indigenous input as something to be layered onto two pre-selected options at the end of the siting exercise. Rather, Indigenous-derived criteria should help frame the siting exercise itself, including what areas should be avoided altogether, what values are non-tradeable, and what conditions should function as exclusionary constraints rather than merely as weighted indicators.

Once a preferred location is selected, invested in, optioned, and operationalized through baseline work and engineering, the practical room for avoidance narrows. At that point,

¹ 2004 SCC 73 at para 10.

² 2004 SCC 73 at paras 35-45.

³ *Mikisew Cree First Nation v. Canada* (Minister of Canadian Heritage), 2005 SCC 69 at para 54.

⁴ *Gitxaala Nation v. Canada*, 2016 FCA 187 at para 233.

⁵ *Tsleil-Waututh Nation v. Canada (Attorney General)*, 2018 FCA 153 at paras 6

Indigenous Nations are often left to respond to a largely settled project concept. That is not what meaningful consultation requires.

Inquiry must focus on impacts to rights

In *Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, the Supreme Court of Canada made clear that, in a project review process, the consultation inquiry is not exhausted by a conventional biophysical effects assessment. The Court stated that "the consultative inquiry is not properly into environmental effects per se. Rather, it inquires into the impact on the *right*."⁶ The Court also held that deep consultation may require formal participation in decision making, a real opportunity to make submissions, and written reasons showing that Indigenous concerns were considered and what effect they had on the decision.⁷ It bears noting that this decision pre-dates Canada's adoption of the *United Nations Declaration on the Rights of Indigenous Peoples Act*.⁸

This principle is highly material to the present circumstances. A siting exercise that focuses primarily on technical feasibility, infrastructure proximity, economics, workforce access, and generalized environmental sensitivity, without expressly examining how each siting choice will affect the continued exercise of rights and the maintenance of Indigenous way of life, risks reproducing the same legal error identified in *Clyde River*. The inquiry must remain oriented to rights, not simply to environmental acceptability in the abstract.

Yahey underscores why cumulative effects and avoidance must be addressed before the right is pushed to the brink

The cumulative effects context also supports early planning-stage attention to rights. In *Yahey v. British Columbia*, the Supreme Court of British Columbia rejected the proposition that a Treaty infringement claim should only succeed once the meaningful exercise of rights has effectively disappeared.⁹ Rather, infringement requires "a more nuanced and contextual understanding" of determining whether any meaningful right remains.¹⁰ The contextual understanding should consider the governmental scheme as a whole, the history of development on the lands, and the historical use and allocation of the resources and the impacts this has caused; in brief, cumulative effects.¹¹

For present purposes, *Yahey* is important not because the Project has already been proven to cause such an outcome, but because it demonstrates why cumulative effects and rights-based planning cannot responsibly be deferred. If a proponent waits until the impact assessment stage to consider Indigenous rights only through the lens of mitigation, it may already have foreclosed the most effective tools for protecting those rights, namely area avoidance, different corridor

⁶ 2017 SCC 40 at para 45 ("*Clyde River*"). See also, *Rio Tinto Alcan Inc. v. Carrier Sekani Tribal Council*, 2010 SCC 43 at para 53.

⁷ *Clyde River* at para 47.

⁸ SC 2021, c 14.

⁹ 2021 BCSC 1287 at para 514.

¹⁰ 2021 BCSC 1287 at para 515.

¹¹ 2021 BCSC 1287 at para 521.

choices, altered project scale, different ancillary infrastructure layouts, or a different approach to site selection altogether. Early siting is where those options still exist.

3.5 Practical implication for Energy Alberta

Taken together, the inherent, Aboriginal and Treaty rights of the PRFNs, rights recognized under UNDRIP, and the duty consult caselaw support a straightforward proposition. Where early strategic project decisions have the potential to shape impacts on rights, Indigenous Nations should be consulted early, meaningfully, and with enough information and time to influence the decision before it is effectively made. In this case, that supports a revised siting approach in which the PRFN-derived criteria are not treated as supplementary comments on Option 1 and Option 2, but as material criteria that help determine the siting framework itself.

The PRFNs do not advance this point to make an abstract legal argument. Rather, these legal principles help explain why it is both prudent and beneficial for Energy Alberta to adjust its present approach now, while there remains genuine flexibility for avoidance, refinement, accommodation, and more defensible decision making.

4.0 Energy Alberta’s Described Siting Approach

- Energy Alberta’s siting engagement materials describe a staged process involving: (a) data development and processing; (b) siting criteria development; (c) suitability analysis; (d) site identification; and (e) screening analysis, followed by decision-making informed by multiple inputs.
- In March 2026, Energy Alberta provided to the PRFNs an ‘Indicator Workbook’ that captures and describes criteria data layers used in site evaluation, and a weighting approach that assigns relative importance to indicators within themes. Energy Alberta has also invited the PRFNs to participate in a siting information workshop, where it described the approach taken, methods applied and its current views regarding siting.
- Energy Alberta reports that the criteria it selected is based on criteria set out by International and Canadian standards and requirements. The criteria selected and applied to the siting process includes:

Site Evaluation Criteria – Technical	Site Evaluation Criteria – Technical
<ul style="list-style-type: none"> •Aerodrome - Large •Aerodrome - Small •Aquifers •Communication Towers •Communication Tower Proximity •Depth to Bedrock •Elevation Gain •Gravel and Aggregates •Gravel / Sand Pits •Hazardous Facilities •Hazardous Facilities Proximity •Hazardous Facilities - Abandoned 	<ul style="list-style-type: none"> •Oil and Gas Pipelines Proximity •Oil and Gas Pipelines - Operating •Oil and Gas Pipelines - Not Operating •Oil and Gas Wells Proximity •Oil and Gas Wells - Active •Oil and Gas Wells - Not Active •Other Wells •Pipelines - Gas Distribution •Pipelines - Water •Railways and Transmission Lines •Railway Proximity •Seismic Hazard

<ul style="list-style-type: none"> •Hazardous Facilities - Abandoned - Proximity •Highways •Highway Proximity •Local Roads 	<ul style="list-style-type: none"> •Seismic Risk From Injection •Significant Landforms •Steep Slopes •Surficial Geology •Transmission Grid Proximity •Valleys •Valley Slopes Proximity •Water Source Proximity •Wildfire Risk
Site Evaluation Criteria – Environmental	Site Evaluation Criteria – Environmental
<ul style="list-style-type: none"> •Aquatic Species at Risk Range •Federal Critical Habitat •Federal Critical Habitat Proximity •Important Bird Areas •Key Wildlife and Biodiversity Zones •Managed Lands •Native Vegetation Areas •Observed Sensitive Species (Element) Occurrences 	<ul style="list-style-type: none"> •Protected Lands •Protected Lands Proximity •Secondary Grizzly Bear Zones •Sensitive Species Habitat •Sharp-tailed Grouse Survey Areas •Waterbodies •Watercourses •Wetlands
Site Evaluation Criteria – Social/Cultural	Site Evaluation Criteria – Social/Cultural
<ul style="list-style-type: none"> •Cemeteries •Energy Alberta Optioned Lands •First Nations Reserves •Future Urban Development •Historic Resources - Provincial •Historic Resources - Other •Population Density 	<ul style="list-style-type: none"> •Population Density > 200 •Proximity to Workforce •Recreational Areas •Rural Residences (farms and acreages) •Municipal Urban Centre •Water Wells

- The materials provided to date by Energy Alberta describe the use of buffers and setbacks, and suitability mapping (a ‘heat map’) that combines indicators to visualize relative suitability. Two regional scenarios are referenced: a Technical scenario and a Proportional/Balanced scenario.
- Energy Alberta’s materials indicate two prospective locations have been identified, and invite community input on criteria, weights, proximity criteria, and additional data sources, including through discussion questions aimed at identifying physical features or land uses on either site option.

5.0 The PRFNs Understanding of Energy Alberta’s Siting Approach and Methodology

- Based on Energy Alberta’s IPD and siting engagement materials, the PRFNs understand the approach to be a GIS-enabled, multi-criteria suitability analysis where multiple spatial ‘indicator’ layers are standardized, buffered/set back, weighted, and combined to generate suitability surfaces that are then used to identify candidate parcels for further detailed investigation.

- The PRFNs understand that the methodology relies on: (a) selection of indicators and indicator definitions; (b) data sources and how raw data are processed into siting-relevant layers; (c) buffer/setback logic that translates criteria into spatial constraints or gradients of suitability; (d) weighting/aggregation choices that determine how competing values are traded off; and (e) scenario choices (e.g., Technical versus Proportional/Balanced) that alter how environmental/social/technical dimensions are combined.
- The PRFNs further understand that the current process has already narrowed the geographic scope to the Peace River area based on prior studies (2005–2010) and factors including availability of a large watercourse for cooling water, access to infrastructure, workforce opportunity, and growing regional power demand. The PRFNs are also aware that the Peace River and Peace River area was selected based in part on a recommendation to Energy Alberta by former Alberta Premier Ralph Klein.
- The PRFNs understand that the IPD identifies key geological and hydrogeological features in the regional study area, including the presence of major buried-valley aquifers (Grimshaw Gravel and Basal Gravel aquifers) and surficial alluvial aquifers along the Peace River, which are relevant to siting and risk management over the operating life of the Project.

6.0 The PRFNs’ Initial Concerns with the Approach and Methodology

- **Non-meaningful ‘A vs. B’ framing:** The PRFNs cannot meaningfully assess whether Option 1 is preferable to Option 2 without understanding the geographic scope initially considered, what alternate sites were screened out, and the rationale for narrowing to the current corridor and two candidate areas.
- **Risk of industrial-convenience bias:** Criteria that emphasize proximity to infrastructure, water, workforce, and regional demand can and often do systematically bias selection toward already industrialized corridors, even where those corridors are also where rights constraints, cumulative effects, and risk drivers (e.g., induced seismicity, water quality stressors) are concentrated.
- **Compensatory trade-offs:** Multi-criteria weighting approaches can allow strengths in one criterion to ‘compensate’ for weaknesses in another. The PRFNs’ criteria for site selection would be focused instead on, for example, the protection of critical aquifers, avoidance of induced seismicity clusters, and protection of high-value eco-cultural corridors and landscapes. In the PRFNs’ view, these criteria should function as exclusion constraints or non-tradeable determinants—not indicators that can be traded away by weighting.
- **Data and uncertainty:** Suitability mapping is only as strong as the underlying datasets, processing assumptions, and how uncertainty is treated. The PRFNs require clarity on data limitations, how missing data are handled, and whether future escalation risks (e.g.,

increasing oil and gas fracking operations, increasing oil and gas subsurface injection, climate-driven hydrology change, future land use conversion) are built into the analysis.

- **Indigenous Knowledge incorporation:** The PRFNs are concerned that Indigenous land use and knowledge may be treated as an 'additional data' layer rather than a foundational design constraint that shapes the criteria set, thresholds, buffers, and exclusion zones from the outset. While Energy Alberta may be inviting the PRFNs to provide traditional land use information and knowledge to guide the assessment, early indications are that Energy Alberta is focused on seeking 'site specific' traditional land use information to inform siting rather than consideration of the broader eco-cultural landscapes and landforms of relevance and importance to the Nations.
- **Process sequencing:** If PRFN-derived criteria are deferred to later impact assessment stages, avoidance opportunities are materially reduced and the PRFNs are effectively asked to 'choosing between the lesser of two evils' within a corridor already selected.

7.0 PRFN-Derived Siting Criteria and Strategic Constraints (Initial Examples)

The PRFNs submit that certain criteria must operate as avoidance/exclusion constraints (or, at minimum, as high-weight non-tradeable determinants) rather than as standard indicators that can be traded off through weighting.

7.1 Safety criterion: avoidance of prominent seismicity and induced-seismicity clusters

- The PRFNs recognize modern nuclear facilities are designed to withstand seismic events. However, prudent siting still requires risk avoidance where credible seismic hazards are elevated or where induced seismicity drivers are present and may escalate over time.
- The PRFNs note peer-reviewed research regarding the November 2022 magnitude 5.6 earthquake in the Peace River area, which concluded it was induced by deep wastewater disposal from in situ bitumen recovery.
- This is just one of numerous clusters of quakes which occur immediately adjacent to the eastern and western site options. These are recorded, mapped and displayed on the Government of Alberta Earthquake Dashboard. While the Government of Alberta has yet to recognize that these quakes are human induced, it is clear that there is a correlation of quakes near the Project site and active areas of oil and gas operations. Energy Alberta is proposing a new, major nuclear generating station in a greenfield area which is prone to earthquakes and, in all probability, oil and gas induced quakes. The PRFNs consider this evidence relevant to siting risk avoidance and long-term operational certainty.

- The PRFNs submit siting should prudently avoid areas where sustained or increasing subsurface hydrocarbon activity (e.g., hydraulic fracturing, wastewater injection, reinjection/disposal) elevates the likelihood of induced seismic events. Future expansion and the build out of nearby oil and gas fields (and correlative increase in oil and gas triggered seismic events) over several decades is also a key siting matter. There are other areas on the Peace River or near the Peace River that are less proximate to such intense zones of oil and gas activity and significant seismic events. Either the siting of this proposed Project should be reconsidered or the oil and gas industries should cease.
- The PRFNs concerns on the issue are heightened given the geological instability within the Peace River valley or in areas adjacent to the Peace River valley. As one Elder stated in a recent meeting about the Project:
 - ‘what would happen if there was a major quake near the nuclear plant site and the soils and rock under the nuclear plant go through liquification and then the whole site became unstable – then you would have a complete disaster on your hands-anyone that knows the Peace River valley and actually knows it soils and weak rock knows you shouldn’t build anything important or that you want to last there’ (D. Knott: November, 2025).
- The PRFNs are concerned that criteria optimizing proximity to regional industrial demand could bias site selection toward areas where induced-seismicity drivers are present or increasing.
- The PRFNs request that, before a preferred site is selected, Energy Alberta convene technical meetings with the PRFNs, the Impact Assessment Agency of Canada (“IAAC”) and the CNSC staff, and relevant federal and provincial experts (and an independent expert retained by the PRFNs) to review datasets, assumptions, buffer/setback distances, and how uncertainty and future escalation risk are treated over the operating life of the Project.
- The PRFNs cannot overstate the importance of addressing this critical siting matter which has potential human health risks and consequences to its collective community membership, neighboring Nations and all residents that call the Peace River home. This matter cannot be deferred to the impact assessment phase but dealt with as a critical matter before key siting decisions are made.

7.2 Eco-Cultural Criterion: Prudent Avoidance of the Grimshaw Gravel Aquifer and Major Buried-Valley Aquifers

- Energy Alberta’s IPD identifies the Grimshaw Gravel and Basal Gravel aquifers (part of a buried valley hydrogeological region) as the main aquifers within the regional study area, along with alluvial gravel and sand deposits along the Peace River as surficial aquifers.
- These aquifers are vital groundwater sources and hydrogeological pathways that support baseflow contributions, wetlands and riparian function, and community and agricultural water uses, and can be difficult to remediate if contaminated.
- The PRFNs are of the view that siting should adopt a precautionary approach to protecting major aquifers and buried-valley hydrogeological features—particularly in arid environments such as this one. This includes treating proximity to such aquifers as a non-tradeable siting determinants and establishing prudent separation distances (setbacks) between the Project footprint (including ancillary facilities and any waste management or storage components) and mapped aquifer extents, recharge zones, and connected surficial aquifers along the Peace River.
- The PRFNs submit that the aquifer risk pathway is not limited to routine operations. It includes low-probability/high-consequence events, long-term contaminant transport risks, and cumulative groundwater stressors over multiple decades. This is all the more relevant as the Project is not merely a nuclear generating site, but would also function as a radioactive and hazardous waste storage site for a long period of time—and potentially forever—pending the development of a disposal solution for radioactive and hazardous waste.
- The PRFNs requests that Energy Alberta provide (and review with PRFNs) detailed hydrogeological mapping and conceptual models for both site options, including: aquifer geometry, connectivity, depth, recharge/discharge zones, well usage patterns, and conservative contaminant transport/attenuation assumptions to inform siting decisions.
- The PRFNs cannot overstate the importance of addressing this critical siting matter which has potential environmental, social, health and cultural risks and consequences to its collective community membership, neighboring Nations and all residents that call the Peace River home. This matter cannot be deferred to the impact assessment phase but dealt with as a critical matter before key siting decisions are made.

7.3 Eco-Cultural Criterion: High-Value Peace River Eco-Cultural Corridor

- The PRFNs submit the Peace River Corridor—including upper benchlands, valley slopes, incised draws, valley bottom, islands, backwater channels, oxbows, and tributary confluences—constitute a High-Value Indigenous Eco-Cultural Corridor that is essential to

the exercise of Treaty and Aboriginal rights and the continuation of cultural practices and ways of life.

- The PRFNs Ancestors and members have and continue to rely intensely on the Peace River valley corridor to travel, hunt, fish, trap, gather, camp, renew relationships, and conduct seasonal land governance and trade. The fur trade built on, attached itself to and thrived upon this long-established high value corridor.
- The PRFNs highlight that extensive agricultural conversion and tenure change (fee simple and leased lands), combined with land access constraints and hunting prohibitions, have functionally reduced realizable land access across large surrounding areas. This mass area or block of land extending back from the Peace River into the hinterland is now essentially “a no-go area” for these Nations. As a result, the Peace River corridor has become an increasingly important ‘gap’ within the farming block where the exercise of rights remains realizable in a quieter, biodiverse, and culturally meaningful setting.
- The PRFNs’ traditional knowledge and land use practices describe specific eco-cultural attributes of the valley system that support wildlife refuge and harvesting success. The PRFNs provide just two examples for illustrative purposes of the eco-cultural values this unique area supports related to moose:
 - The PRFNs report that their families and community members hunt extensively through the late summer and fall. Following a break they will continue to hunt in January-March. In the winter months, hunters will traverse the valley sides of the Peace River as moose tend to congregate there. They do so as thicker stands of older forest help block the wind and provide greater winter thermal refuge. The upper and mid slopes also are warmer as cold air sinks into the valley below providing further warmth along with other attributes such as winter forage, protection and escape routes;
 - In the spring, pregnant cow moose will swim out to the islands in the Peace River to have their calves. They do so since that there is water, forage, and protection and separation from predators. They will often stay there until the calves are strong enough and have the skills which enable them to better survive.
- The PRFNs submit that siting a major nuclear facility and associated infrastructure within or immediately adjacent to this corridor risks further displacement from this unique and important high value cultural landscape. Thus, there is a need for Energy Alberta to collaborate and meaningfully consult the PRFNs on developing a suitable criterion which addresses the highly critical and important eco-cultural value. This is a significant enough matter which needs to be dealt with at a siting level and not simply as a value to be assessed within the proponent’s subsequent impact assessment analysis.

7.4 Ecological Cultural Criterion: Cumulative Effects on Peace River Health, Fisheries, and Fishing Practices

- The PRFNs submit that cumulative effects on the Peace River are not hypothetical. Members report declining fishing success over decades within the Peace River and its key tributaries and ongoing concerns about government and industrial stressors acting on water quality, fish, and fish habitat.
- The PRFNs note that some families and community members have curtailed fishing in certain reaches of the Peace River downstream of industrial activity and features due to concerns about water quality and contamination risk, which functions as a rights-impact pathway through avoidance and loss of use. It is noted that:
 - there is a large concentration of farmlands that use fertilizers, spray residue, animal waste and sediments flowing off the Peace River benchlands, into draws and creeks and into the Peace River;
 - the Town of Peace River releases effluent, storm water discharges and treated water;
 - the Mercer pulp plant impacts water quality, despite improvements to pulp and paper mill effluent regulations introduced in the 1990s;
 - Government of Alberta issues fish consumption advisories on the Peace River and its main tributaries.
- The PRFNs submit that introducing a nuclear facility into an already burdened section of the Peace River may deepen real or perceived avoidance effects, and therefore siting must be assessed not only through biophysical metrics but through a rights lens: whether siting makes the practice of fishing more difficult, risky, or culturally unacceptable for families over the long term. A sound siting exercise should address and incorporate this important criterion. This should not be deferred or dealt with as an issue to be dealt with as an issue in the impact assessment.

7.5 Perception of Risk and Avoidance Criterion

- In addition to actual direct, indirect and cumulative impacts to the PRFNs' rights, there is the matter of perception of risk and avoidance. It is anticipated that in the course of the review, Energy Alberta and the CNSC will bring forward information which demonstrates that the plant can be operated in a manner which protects human health and safety and that people in the area will not be exposed to radiological or toxic elements from the plant.
- Based on ongoing research and documentation, it is clear that the PRFNs land users are impacted through various factors such as constraints to lands and impacts to eco-cultural values which support the exercise of rights and practice of culture. In addition to this, PRFN land users, hunters, fishers also choose to be on lands and utilize lands that are preferred or

contain the conditions that they view are suitable or preferable. This is not to say that the PRFNs land users are 'fussy' or 'choosy'. Rather, they have been raised and provided knowledge by their forebears and family about the conditions which are suitable to travel into, stay in, hunt in, fish in, gather in, camp in, etc.

- If the PRFN people assess some form of risk to be present (e.g., like air-based spraying of herbicide, fugitive dust from well used oil and gas access roads, risks from road collisions on highly used oil and gas access roads, risks from H₂S and emissions from oil and gas facilities), they make an active choice to avoid those areas. An assessment of the balance of opportunity, impacts, conditions and potential risk is made.
- The PRFNs are gravely concerned that their families' knowledge of the nuclear plant operations and stored nuclear waste, will cause people to avoid the Project area for many kilometers – it is not known how much but there is a high likelihood that they will avoid using the Peace River corridor, Peace River valley and valley bottom for some distance due to the perception of risk and need for prudent avoidance. This may stand in contrast to Energy Alberta and the nuclear industry's data and calculations in respect to actual risk, however it is a reality and will be a lived reality for some of the PRFN members and families.
- Where families assess risk to be present (e.g., perceived contamination risk, stored waste risk, chronic emissions concerns), they may avoid otherwise important areas even in the absence of proven contamination, resulting in de facto displacement and loss of cultural practice opportunities.
- The PRFNs therefore take the view that given this reality, that siting criteria be developed which addresses evaluates sites from this standpoint.

7.6 Regional Cumulative Impacts and Induced Development Criterion

- The PRFNs submit that a large increase in reliable power can be a driver of additional industrial expansion, including areas in the Peace River already experiencing rapid growth, such as the Montney Basin which intersects with the western areas of the PRFNs.
- The PRFNs note that Energy Alberta appears to treat growing regional power demand as a positive siting factor. From the PRFNs' perspective, this is actually a significant risk factor as the Project's output materially enables further industrial expansion within the Nations traditional territories, including land use areas within the Montney Basin.
- The proposed Project has a high potential to heighten and deepen impacts on the PRFNs through direct, indirect, cumulative, and induced cumulative effect pathways. For example:

- the Project will only function with transmission lines. Even though the transmission lines will be treated as a separate project, their effects and impacts are relevant. The longer the transmission line distance from the plant to major industrial users or user focal points (e.g. Athabasca oil sands industrial users, oil and gas refiners in Edmonton's industrial heartland, Montney shale gas and liquid companies or BC Hydro) the greater the impact on the PRFNs traditional territories and land use areas will be.
- Thus, the PRFNs are of the view that siting criteria should also include sites which limit the impact on their rights, culture and way of life through reduced footprint at the plant site and through reduced transmission distance.

7.7 Social Impacts Criterion: Housing Displacement and Cost-of-Living Effects

- The PRFNs submit that proximity to towns can be scored as “highly suitable” for workforce logistics, yet can produce serious adverse social effects borne disproportionately by Indigenous people who already face structural housing constraints.
- The Nations are concerned that siting very near towns (e.g. Grimshaw, Peace River, Manning, High Level or La Crete) could contribute to property speculation, rent escalation, and increased costs for goods and services during construction and operations, affecting First Nation members who must and are seeking off-reserve housing options.
- The experience of Bruce Power, which is sited in the Bruce Grey Huron County of Ontario, is a cautionary tale. The cost of housing, mortgages and rents in the local area spiked as the construction and operation of the vast facility brought in highly skilled labor and introduced high paid salaries. Property values have skyrocketed and have affected local residents and First Nations, who often do not have access to high paying jobs from the plant and in turn struggle to live in the area.
- The PRFNs submit that siting criteria should be developed that reduce impacts to local future housing costs and prices of goods and services of towns along the Peace River.

7.8 Additional PRFN Criteria

The PRFNs provide the above information in relation to factors and criteria which are relevant to their rights, culture, way of life and interests. This should be treated as an initial list and additional information may be forthcoming in respect to these matters, as the Nations' technicians become more orientated to Energy Alberta's approach and methodology related to siting.

8.0 PRFN Constructive Requests to Energy Alberta

The Peace River First Nation put forward the following initial requests to Energy Alberta:

- Work collaboratively with the Nations to develop PRFN criteria and thresholds that address rights, culture, and way of life impacts as siting determinants.
- Provide the high-level alternate-sites overview contemplated by REGDOC-1.1.1, including the geographic scope initially considered, the screening steps used, and a transparent narrowing rationale.
- Explicitly incorporate criteria, co-developed with the PRFNs into the criteria set and demonstrate, transparently, how each is weighted and/or treated as an exclusion or non-tradeable constraint.

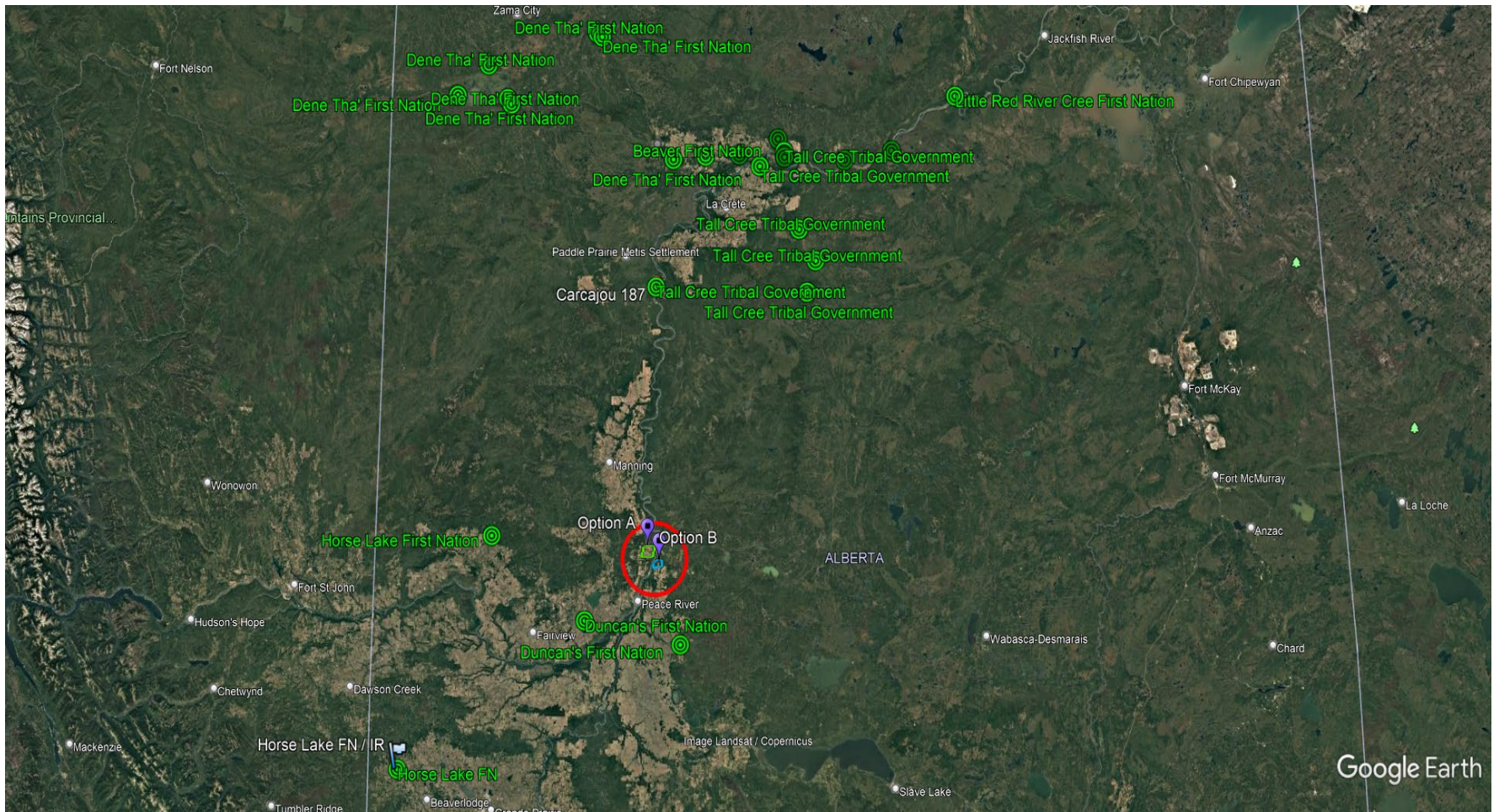
9.0 PRFNs Interim Views

- The PRFNs are engaging in good faith and recognize that siting is a foundational strategic decision that shapes the Project's risk footprint, avoidance options, and cumulative effects pathways for decades.
- The PRFNs submit that the siting approach described to date appears driven primarily by technical and economic feasibility factors, with insufficient demonstration that PRFN rights-based and eco-cultural criteria are being treated as determinative constraints.
- Consultation is not meaningful where the PRFNs are presented with a choice between Option 1 and Option 2 without disclosure of alternate sites considered, the corridor narrowing rationale, the criteria set, weights, data sources, and how uncertainty and non-compensatory constraints are managed.
- If Energy Alberta selects a site based on criteria that disregard PRFNs' critical considerations, the subsequent impact assessment will be weakened and PRFNs' confidence in the process will be materially undermined. Conversely, early strategic integration of PRFN criteria can meaningfully reduce risk and conflict while improving the defensibility and legitimacy of the siting decision.
- Given this the PRFNs are of the view that neither Option 1 nor Option 2 represent wise or appropriately informed choices at this time. The PRFN put forward a rationale that a modified approach be adopted which fully considers, incorporates and weighs PRFN-centred criteria, which will address impacts to their rights, culture and way of life at this early and critical strategic stage.

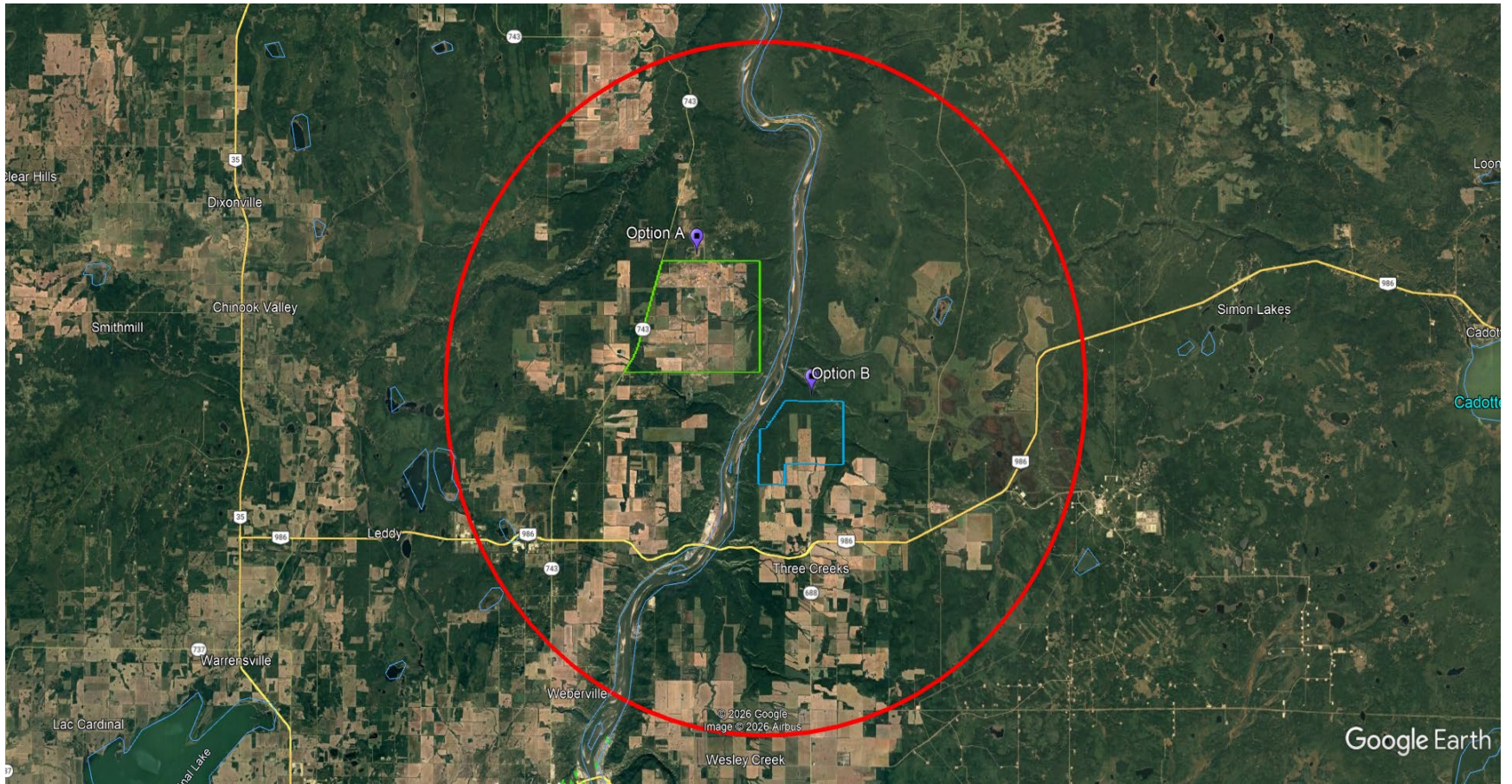
- The Nations are willing and prepared to engage with Energy Alberta in a timely and efficient manner to address this error and oversight.

10.0 References

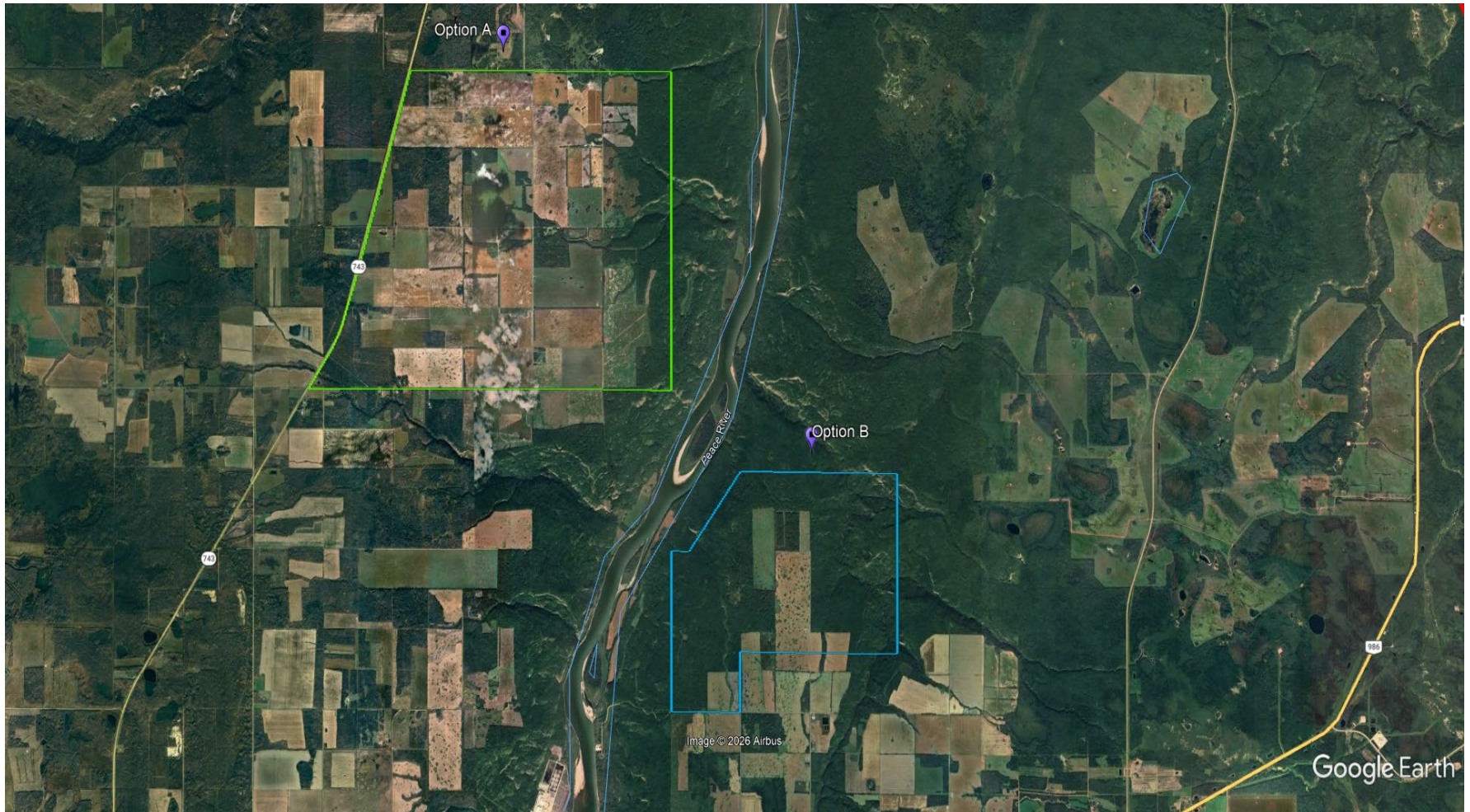
- Canadian Nuclear Safety Commission (CNSC). REGDOC-1.1.1: Site Evaluation and Site Preparation for New Reactor Facilities (Version 1.2).
- Impact Assessment Agency of Canada (IAAC). Addressing “Purpose of” and “Alternative Means” under the Canadian Environmental Assessment Act, 2012.
- Canadian Nuclear Safety Commission (CNSC). Generic Guidelines for the Preparation of an Environmental Impact Statement under CEAA 2012 (Environmental Protection).
- Rio Tinto Alcan Inc. v. Carrier Sekani Tribal Council, 2010 SCC 43.
- Haida Nation v. British Columbia (Minister of Forests), 2004 SCC 73.
- *Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, 2017 SCC 40.
- *Mikisew Cree First Nation v. Canada* (Minister of Canadian Heritage), 2005 SCC 69.
- *Gitxaala Nation v. Canada*, 2016 FCA 187 at para 233.
- *Tsleil-Waututh Nation v. Canada (Attorney General)*, 2018 FCA 153 at paras 6
- Energy Alberta. Peace River Nuclear Power Project – Initial Project Description (April 11, 2025).
- Energy Alberta. “Siting” – Engagement Session slide deck (Fall 2025).
- Schultz, R., et al. Disposal From In Situ Bitumen Recovery Induced the ML 5.6 Peace River Earthquake. *Geophysical Research Letters* (2023).
- Stanford University. Oil-sand wastewater triggered large Alberta earthquake (March 23, 2023).
- Dodgson, J., Spackman, M., Pearman, A., & Phillips, L. Multi-criteria analysis: a manual. UK Department for Communities and Local Government / LSE (2009).
- Martin, D. M., et al. Non-monetary valuation using Multi-Criteria Decision Analysis: sensitivity and limitations in environmental decision making. *Ecosystem Services* (2018).
- Municipality of Kincardine. What We Heard: Housing in Kincardine (Engagement Report) (September 2022).
- Municipality of Kincardine. Kincardine Housing Action Plan Survey Results (V2.26) (n.d.).
- Impact Assessment Agency of Canada. Bruce C Initial Project Description (Bruce Power) (2024) (Canadian Impact Assessment Registry).
- Bruce County. Demographic & Housing Study (prepared by KPMG) (2020).
- *Yahey v. British Columbia*, 2021 BCSC 1287.



Peace River First Nations and Project Area



Project Area and Site Option 1 and Option 1



Project Area and Site Option 1 and Option 2