PEACE RIVER NUCLEAR POWER PROJECT

IAA Reference # 89430

Comments by Northwatch on

Energy Alberta's Initial Project Description

May 13, 2025

NORTHWATCH

Introduction

On April 14, 2025 the Impact Assessment Agency (the Agency) posted the first notice on the project registry for the Peace River Nuclear Project, announcing that Energy Alberta is proposing to construct a new nuclear power plant located north of the Town of Peace River, Alberta, and that a comment period was opening on an Initial Project Description.

The IAA announced that the Peace River Nuclear Power Project is subject to an integrated assessment to meet the requirements of both the *Impact Assessment Act* and the *Nuclear Safety and Control Act*. The Impact Assessment Agency of Canada (IAAC) and the Canadian Nuclear Safety Commission (CNSC) are working together on the integrated assessment to achieve the goal of "one project, one assessment."

According to the announcement, IAAC and the CNSC were inviting Indigenous Nations and communities, and the public to review the summary of the Initial Project Description and provide comments on the proposed project and stated that "this feedback will help IAAC and the CNSC prepare a summary of issues for the proponent". Comments were required by May 14, 2025.

At the same time, the Agency created a project homepage (reference number 89430) for communications related to the Project and its review.

According to the IAA project home page, Energy Alberta is proposing the construction of two twin CANDU MONARK nuclear reactors to be located approximately 30 kilometres north of the Town of Peace River, Alberta. As proposed, the Peace River Nuclear Power Project would cover 1,424 hectares in area and operate for approximately 70 years. The plant will generate up to 4,800 megawatts per year. The project assessment is being conducted in collaboration with the Canadian Nuclear Safety Commission.

Northwatch's Interests

Northwatch's interest in the project is four-fold:

1) Energy Alberta's receipt of federal funding for their nuclear project which is of direct interest to all Canadians including our members and supporters,
2) northern Ontario is experiencing the impacts of climate change with more extreme weather events and extended and more intense forest fire seasons and this project will divert public resources from taking real climate action and will power fossil fuel resource extraction projects which are major contributors to the climate crisis,
3) the project may be precedent setting or may become normative in terms of the decision-making of the Canadian Nuclear Safety Commission and / or the Impact Assessment Agency, and
4) Northwatch is a regional coalition in northeastern Ontario with a long-standing interest in the impacts of the nuclear fuel chain and the management of radioactive wastes, given the presence in our region of the world's largest uranium refinery and millions of tonnes of

radioactive uranium mine tailings and our experience as the repeated target of nuclear waste "disposal" projects.

Northwatch is part of We the Nuclear Free North, a northern Ontario alliance formed to share information and support critical analysis and opposition to the Nuclear Waste Management Organization's investigation of multiple sites across northern Ontario as potential burial sites for the burial and abandonment of high-level nuclear waste. In November 2024 the NWMO selected the Revell site between Ignace and Dryden as their preferred site for their project to transport, process, bury and abandon all of Canada's high level nuclear waste in a single location. Energy Alberta has named the NWMO and their selected site in northern Ontario as the end point for the 1.9 million nuclear fuel bundles which will be irradiated during the operation of the proposed four MONARK reactors. This is a 35% increase to the NWMO's current nuclear fuel waste projections and would have corollary effects on the NWMO project's operating period and footprint and downstream and long-term impacts, including radioactive releases.

Summary Comments

We understand the current comment period to be for the purpose of responding to the Initial Project Description and providing comments on the proposed project for the purpose of contributing to the IAAC's preparation of a summary of issues, and that the development of the terms of reference and impact statement guidelines will be drafted in consideration of the identified issues and other relevant matters. However, we note that many of the comments already submitted took the opportunity to express their views on the project in terms of support or opposition. Accordingly, we will also take the opportunity to summarize our position with respect to the project.

Northwatch is opposed to the expansion of nuclear power. In particular, we are opposed to the expansion of nuclear power to new sites and to provinces that do not currently operate nuclear power reactors. We are opposed to this expansion on the basis of nuclear power production being a high-cost and high-risk option for the generation of electricity and one which produces a range of radioactive wastes, some of which must be contained and kept separate from the environment into perpetuity. The technology produces adverse effects along the nuclear fuel chain – uranium mining, milling, refining, conversion and fuel production – while consuming large amounts of energy and generating greenhouse gasses at each step. All these impacts are prior to operation of the reactors; during operation, nuclear reactors release radioactive and other emissions, carry risks of high-consequence accidents and malfunctions, and create a lasting legacy of radioactive wastes.

The electricity needs of the Province of Alberta could be met with lower risk and more cost-effective options which would have a shorter timeline from proposal to actual operation.

We have reviewed the Initial Project Description[1] and found that it failed to provide adequate information necessary to the impact assessment process, even taking into account that it is an initial project description and therefore a summary document. In summary, we found the document to be lacking the following area:

- Discussion of the need or purpose of the project was unduly limited and poorly supported
- alternatives to the project were similarly not well presented
- the selected technology (reactor type) was minimally presented, with no actual description of the technology or any related safety analysis
- there were only very summary references to the various project stages (site preparation, construction, operation, decommissioning and abandonment)
- we found no descriptions of accident scenarios, including worst case scenarios, or of malfunctions or malevolent (terrorist) acts
- there were either inadequate or no descriptions of health, environmental and social impacts and potential impacts at each project stage
- there were minimal references and no substantive descriptions or discussion of the radioactive wastes that will be generated (low, intermediate, high) and how they will be managed in the short, medium, and long-term, with the exception of a questionable statement about a proposed management option for high-level radioactive waste and conflicting statements about whether the wastes would be managed on-site (permanently) or transported off-site
- there were no radioactive waste volume estimates included in the initial project description (a posterboard produced by Energy Alberta for their open house indicated that 1.95 million fuel bundles would be irradiated)
- there is no discussion of the fuel type, source, and risk factors for the MONARK technology
- there is inadequate description of the proponent and no discussion of the long term ownership and accountability for a potentially privately operated nuclear reactor station, and no discussion of the assignment of liabilities and cost exposure or of the capacity of a private sector operator (such as Energy Alberta presents itself) to respond to cost exposures including large and unanticipated financial demands and / or cost overruns
- there is no discussion of liability, or of who would assume liability including in the case of bankruptcy or forfeiture on the part of a private operator
- the potential for / responses to accidents, malfunctions and malevolent acts (e.g. terrorist attacks) is wholly absent
- proliferation and security risks related to fuel sourcing and production, operations, and waste generation and management are absent

[1] Peace River Nuclear Power Project Initial Project Description, https://iaac-aeic.gc.ca/050/evaluations/document/161347

- the costs and financing for each operating stage, including decommissioning and long-term waste management are absent
- a posterboard produced by Energy Alberta for their open house indicated that Energy Alberta has "assembled a team with extensive nuclear experience and initiated the planning required to advance a nuclear generation project in Canada" which appeared – based on the display of logos – to include Atkins Realis, WPS, Tory LLP and the Royal Bank of Canada; no information about the financial means of the would-be proponent was included in the Initial Project Description or of the roles, responsibilities or liabilities of the "team" which Energy Alberta describes as having been assembled for this project

While the above summary points are a comment on the initial project description and our observations of what necessary information was excluded or absent from the description, we would further comment that the issues list produced by the Agency as a result of this comment period should include but not be limited to each of the topics identified above, and the eventual draft Tailored Impact Statement Guidelines should also require detailed address of these areas, as well as others identified by Indigenous and other public participants in this review process.

Comments on the Initial Project Description

The following comments are with respect to the Initial Project Description; note that the page numbers are in reference to where the item was found in the Initial Project Description, rather than in the Initial Project Description Summary.

Page	Text or topic in the Initial Project Description (excerpt or description)	Northwatch Comment
1	Energy Alberta is a proud Alberta-based company that was founded in 2005 to bring nuclear power to western and northern Canada. As described below in more detail, this Project is important in furthering this vision. The Project will build on the success of existing and long-standing Canadian nuclear power technology and existing research completed for the Project between 2005 and 2010. This Project will be an important component to diversify and strengthen electrical power grid in Alberta and power grid in Alberta and to meet the climate change mitigation targets of the province and country.	This and other sections the Initial Project Description (IPD) reference the earlier and failed attempt to establish a nuclear generating station in the Peace River region, but it remains unclear the exact role of Energy Alberta (EA) in the previous attempt and the exact relationship between entities involved and efforts made in the approximately 2005 to 2010 period. The guidelines should require that this be described in detail, if such references are to be made.
2.1 Project Overview	Energy Alberta is proposing to develop a nuclear power generating facility in the Peace River region of Alberta and Energy Alberta is seeking to build and operate up to 4,800 megawatts of electricity (MWe) for the Alberta electrical grid. This Project involves the permitting, construction,	In this and later sections EA makes general reference to the several project stages but provides insufficient detail throughout, particularly with respect to the site preparation, construction, operation, decommissioning and

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	operation, and eventual decommissioning of four (4) CANDU MONARK 1000MWe-class power reactors, arranged as a pair of twin-unit MONARK plants.	abandonment stages (per CNSC licensing stages). The Initial Project Description includes only very brief and very general descriptions for the MONARK design and design specifications and auxiliary infrastructure.
2.1 Project Overview	There are currently two locations under consideration for Project siting, as follows. …	The two locations are identified in this and later sections, but there is inadequate information provided, including and particular about land uses and social, cultural and ecological values associated with each of the sites.
2.1 Project Overview	The final decision regarding the site location will be made after evaluating the technical and safety requirements, along with the key environmental, Indigenous and social criteria used to determine overall site suitability. This evaluation will build on similar assessments conducted in the region in 2008 and 2010. Energy Alberta plans to engage with Indigenous Nations and Communities, and local governments to gather input on the criteria for evaluating site suitability. A final decision on the site is expected to be made by late 2025.	AE intends to be limiting its engagement prior to site section to Indigenous Nations and Communities and local governments. The reason for this limitation is not stated, and this narrow scoping is problematic, and will potentially result in a failure to appropriately recognize some land uses and social, cultural and ecological values associated with each of the sites.
3.3.2.5 Non-Governmental Organizations (NGOs) and Environmental Groups	It is important to Energy Alberta that NGO's and Environmental Groups participate in the Impact Assessment process, as their perspectives will help inform Energy Alberta's development decisions. Identification of NGO's and Environmental Groups has been initiated and formal introductions and engagement activities are planned for Q2 2025 and beyond.	It is unclear why AE would have delayed direct engagement with NGO's and environmental groups until the second quarter of 2025, ie. April to June 2025, which is after the Initial Project Description has been finalized and released for public comment and during and after the public comment on the IPD and potentially on the draft guidelines. This indicates that engagement with the environmentally and socially concerned public is a low priority for AE. The Agency should adjust the review timeline for the planning phase of this review accordingly, recognizing that some groups may have been purposefully marginalized by the proponent.
Page 3.11	Early engagement efforts with the landowners and area residents has been ongoing since the spring of 2024 and Energy Alberta has secured the necessary parcels of land to explore the feasibility of the two possible locations. These discussions were conducted directly between Energy Alberta and landowners.	AE should provide much more detailed information about the means used to "secure" land, including the legal nature of the arrangement (purchase, option to purchase, etc.) and the mechanism through which the land will be released to other users / land uses when the project is discontinued (i.e. before site preparation and/or construction)
3.5 Assessments	The Strategic Assessment of Climate Change (SACC; ECCC 2020a) is a strategic assessment	The IPD provides only a general reference to the SACC and does not actually discuss their

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Relevant to the Project Page 3.14	under Section 95 of the IAA and is relevant to the Project. This relates to the extent to which the Project hinders or contributes to the Government of Canada's (GOC) ability to meet its commitments in respect of climate change, such as the Paris Agreement, Canada's 2030 target, and the goal of Canada achieving net-zero emissions by 2050. The quantification of greenhouse gas (GHG) emissions per the SACC and its supporting guidance documents are presented in Section 7.8. In particular, descriptions will be provided on how the Project will help Canada achieve the 2050 net-zero carbon emissions target by contributing to decarbonization pathways.	project in the context of the SACC, or set out its relevancy to the project and how the SACC's relevance to the project has informed the project, the initial project description, and the proponents approach to the project. The discussions in Section 7.8 are overly general and poorly supported. As discussed in comments on section 4.13, net-zero is more than aspirational, and the guidelines must set out clearly that the proponent is required to produce a set of impact assessment documents which are evidence-based and data-supported; general references and rhetoric are not appropriate.
Section 4.1 4.1.1 Purpose of the Project	This Canadian technology expands existing oil sands and energy services capability to build a new Alberta-based supply chain and grow an extensive number of other specialized highly skilled workers within the province. It further provides energy supply security as it uses natural uranium, with no requirement for enrichment and with 100% domestic fuel manufacturing.	This section strongly suggests that the purpose of the project is to provide an energy supply for oil sands extraction. The continued expansion of oils sands operation and extraction directly undermine net-zero goals; the extraction, the processing, the transport and the use of the oil sands products are large carbon sources. The guidelines must give very specific direction to the proponent to apply a full-cost accounting approach with respect to carbon emissions and the proponent's claim that the project would help Canada achieve net-zero targets. The impact assessment documents must be evidence-based and data-supported.
4.1.3 Need for Nuclear to Reach Net-Zero Emissions	This section includes five paragraphs describing various climate related commitments or agreements and describing nuclear power and its perceived (by the proponent) potential to contribute to net-zero.	Net-zero is more than aspirational, it is a set of data-based measurable endpoints in energy planning. This section does not discuss net-zero and does not establish that the project will make any measurable contribution to meeting net-zero. The guidelines must set out clearly that the proponent must produce a set of impact assessment documents which are evidence-based and data-supported; general references and rhetoric are not appropriate.
4.1.4 Value Added and Economic Growth	This section presents a range of claims and ideas which are generally unsupported except for a general reference.	Discussions such as this may be appropriate to a very summary description of the project which is simply a flagging of ideas about the project but it was insufficient for an initial project description. The guidelines should provide detailed direction on the information to be provided and the manner of its presentation (for example, references should

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		be specific rather than general; footnotes should be used rather than general references). A discussion of "value added" or economic benefits from the project should be included, but an analysis of the economic benefits and value added from alternatives to the project or alternative means of meeting the need or purpose of the project should also be provided; for example, the proponent should provide a comparison of energy units produced and jobs created on a per investment dollar basis for nuclear power versus solar or wind energy projects were they to be delivered in the same region. Similarly, there should be a comparison of the benefits and disbenefits of the selected site in comparison to a site closer to the demand centre. In addition, the guidelines should require that the proponent clearly set out the demand projections and describe the demand centres (source or location of the electricity or energy demand) relate it to the site, and describe how the site was selected in comparison to sites closer to those demand centres.
Section 4.3.3. Page 4-11	The purpose of the Project is to provide the province of Alberta an additional electrical supply that will support Alberta's growing energy needs and contribute to the provincial economic growth, while supporting federal and provincial governments in meeting their GHG reduction goals. … This Canadian technology expands existing oil sands and energy services capability to build a new Alberta-based supply chain and grow an extensive number of other specialized highly skilled workers within the province. It further provides energy supply security as it uses natural uranium, with no requirement for enrichment and with 100% domestic fuel manufacturing.	This section strongly suggests that the purpose of the project is to provide an energy supply for oil sands extraction. The continued expansion of oils sands operation and extraction directly undermine net-zero goals; the extraction, the processing, the transport and the use of the oil sands products are large carbon sources. The guidelines must give very specific direction to the proponent to apply a full-cost accounting approach being applied to the proponent's proposal with respect to carbon emissions and the claim that the project would help Canada achieve net-zero targets. The impact assessment documents must be evidence-based and data-supported.
4.3.3.3	Nuclear infrastructure includes construction of or other work related to: … ■ Permanent facilities for the management and storage of low- level and intermediate level radioactive waste; and ■ Permanent facilities for the management and storage of used fuel.	This section states that the project includes permanent on-site storage of radioactive wastes, including low-level, intermediate level, and used fuel waste. However, later sections and several of the fact sheets and one of the poster boards state that the proponent's intention is to ship the waste off-site. For example: • According to Section 4.3.5.1 used fuel will be shipped off-site for disposal;

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		radioactive waste will be stored in "appropriate off-site facilities", and radioactive waste will be transported to a long-term storage/disposal site • Table 7.1-1 describing Potential Interactions between the Project and the Biophysical and Socio-Economic Environment lists the transport of radioactive waste to long-term storage/disposal site • Three of Energy Alberta's "Fact Sheets" describe the Nuclear Waste Management Organization's plan for deep geological repository and NWMO's selection of "Wabigoon Lake Ojibway Nation and the Township of Ignace in Ontario as the host communities for the future repository site" • A poster board produced by Energy Alberta for their open houses claims that "the Canadian Nuclear Safety Commission (CNSC) and the Nuclear Waste Management Organization (NWMO) oversee and regulate every stage of nuclear waste management"; it refers to them both as "governing bodies" and refers to "Canada's Long-Term Plan" to be delivered by the NWMO and again states that "The NWMO has selected Wabigoon Lake Ojibway Nation and the Township of Ignace in Ontario to host future deep geological repository sites." The management of the radioactive wastes that the proposed reactors would generate is a fundamental concern with this project, and a significant issue throughout each stage through to and following abandonment. The contradictory statements must be resolved, and a detailed plan for the management of all categories of radioactive waste at all project stages must be included in the impact assessment, and therefore the requirements must be set out in detail in the guidelines.
Section 4.3.5 Page 4-12	4.3.5 Decommissioning A Preliminary Decommissioning Plan (PDP) will be developed in early site licensing, prior to LTC	The initial project description not only fails to include a description of the decommissioning plan and strategy, it also states that the

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	application, and will be in place throughout the Project phases to effectively plan and execute the decommissioning activities. …	proponent's intention is to not develop even a preliminary decommissioning plan until the "early site licencing" which is then equated to "prior to LTC application". This is unacceptable in terms of delivery time. The decommissioning plan must be in place at the impact assessment stage and prior to the site preparation licence and must be detailed in the impact assessment documents.
Section 4.3.5 Page 4-12	4.3.5 Decommissioning A Preliminary Decommissioning Plan (PDP) will be developed in early site licensing, prior to LTC application, and will be in place throughout the Project phases to effectively plan and execute the decommissioning activities. …	The minimal description of the decommissioning approach omits any discussion of how base-line conditions will be established / documented and how end-state objectives will be set, and how any gap between pre-operation conditions (site conditions, including soil, groundwater, surface water, vegetation, etc.), post-operating conditions, and post-decommissioning conditions will be addressed.
4.3.5.1. Page 4-13 [part of Section 4.3.5 Decommissioning]	■ Used fuel handling and transfer to dry storage on-site in preparation for shipment to off-site disposal; … ■ Safe storage of all radioactive and non-radioactive waste in appropriate off-site facilities in accordance with regulatory requirements; ■ Transport of radioactive waste to long-term storage/disposal site;	In direct conflict with Section 4.3.3.3 which described permanent on-site facilities for low-level and intermediate level radioactive waste; and permanent facilities for the management and storage of used fuel, this section inventories intentions to ship waste to off-site facilities. This section is very general in its description of the wastes and their dispositioning during decommissioning and does not specifically identify the "activity" for low and intermediate-level radioactive wastes, or for liquid wastes. The management of the radioactive wastes that the proposed reactors would generate is a fundamental concern with this project, and a significant issue throughout each stage through to and following abandonment. The contradictory statements must be resolved, and a detailed plan for the management of all categories of radioactive waste at all project stages must be included in the impact assessment, and therefore the requirements must be set out in detail in the guidelines.
4.4.2 Production Process Description	The deployment of the CANDU MONARK is proposed for the Project. This next-generation CANDU reactor is the newest model currently in development, based on the design, operating experience, and the best features of the 31	The initial project description acknowledged that the design and development of the "CANDU MONARK" is in the conceptual stage of development. The guidelines must require – and the Agency must ensure that the

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	predecessor commercial CANDU reactors built around the world.	requirement is adhered to – that the impact assessment documents describe an actual reactor design in detail, including its auxiliary facilities and structures, its fuel, its waste products, and the specifics of the waste management plans and strategies based on the actual reactor design and fuel characteristics and dimensions. The assessment must be based on an actual reactor and its design, components and specifications, rather than on a concept or generic description of a reactor.
Section 4.4.2.2 plant design. Final bullet on page, 417	■ Spent fuel handling and storage systems, including used fuel transfer system, spent fuel storage pond with capacity to store 10 years of spent fuel before dry fuel storage is required, spent fuel drying and container-loading facilities, and spent fuel dry storage container facilities; …	The impact statement must include full design for all of these facilities. These are an integral part of the system and integral part of the project and must be included. The assessment must be based on an actual reactor and its design, components and specifications, rather than on a concept or generic description of a reactor.
4.4.2.3.1 Page 4-22	Note that SARHRS is only ever needed during severe accidents, which are not realistically expected during the lifetime of the plant.	The IPD completely fails to discuss accidents and malfunctions. This is a serious omission, and must be addressed by detailed directions being provided in the guidelines to ensure a thorough examination of the potential and corollary responses to accidents, malfunctions and malevolent acts which could occur.
4.6.4 Alternative Technologies	Comparing this (the E6) to the MONARK plant design, the combined land area requirements for the power block for four units is approximately 9.5 ha giving it a power density of 460 MWe/ha. … This is because SMRs are inherently designed to be a single-unit, self-contained plant, with little to no ability to share common services between multiple units on one site. This makes multiple unit land requirements even less optimal.	This comparison of the relative strengths and weaknesses of various reactor designs (including but not limited to the MONARK, the Enhanced CANDU 6, and "small modular reactors" including the BWRX-300 and the eVinci as models currently under consideration or development in Canada) should be expanded, with the evaluation including cost per energy unit, waste per energy unit, job create per dollar investment, waste characterization including dimensions, criticality considerations, proliferation risk, and accidents, malfunctions and malevolent acts.
4.6.4 Alternative Technologies	The current feasible options for an SMR are designed and largely manufactured by U.S companies based on U.S, intellectual property and using almost entirely U.S skilled workers and supply chain.	While the initial project description included a legitimate criticism of current options for small modular reactors being designed and largely manufactured by U.S. companies and based on U.S., intellectual property, it excluded a detailed description of the full chain-of-custody for the supply and services for a MONARK design. The document seems to

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		make a claim of "Deep integration with Canadian supply chains" but does not substantiate the claim or even describe the basis for this seeming claim.
4.6.6 Alternative Waste Management Page 4-37	The alternative to the chosen means of radioactive waste processing and interim storage on the site, would be to package and ship off-site all radioactive wastes or a certain portion of the radioactive waste streams (e.g., low-level radioactive wastes). Since Alberta does not currently operate any dedicated nuclear waste management (i.e., processing and storage) facilities and shipping wastes to Ontario where such facilities exist is considered to introduce undue risk and cost to the Project, this alternative was not chosen.	This is a confusing statement, particularly in light of the Section 4.3.3.3 statements that the project would include permanent facilities for the management and storage of low- level and intermediate level radioactive waste and permanent facilities for the management and storage of used fuel, and the fully contradictory statements in Section 4.3.5.1 that used fuel will be shipped off-site for disposal and radioactive waste will be stored in "appropriate off-site facilities", and radioactive waste will be transported to a long-term storage/disposal site. This section acknowledges that Alberta does not have any capacity for nuclear waste management, but neither this nor any other section describe what the waste management strategy is for low and intermediate level waste, particularly in the longer term. While we agree with both the content and the conclusion of the statement that because "shipping wastes to Ontario where such facilities exist is considered to introduce undue risk and cost to the Project, this alternative was not chosen" the statement is in direct contraction to the several other statements that firmly indicate an intention to transport the high-level nuclear waste to a proposed site in northwestern Ontario. The management of the radioactive wastes that the proposed reactors would generate is a fundamental concern with this project, and a significant issue throughout each stage through to and following abandonment. The contradictory statements must be resolved, and a detailed plan for the management of all categories of radioactive waste at all project stages must be included in the impact assessment, and therefore the requirements must be set out in detail in the guidelines.
4.7 Potential Alternatives to the Project	To meet Alberta's growing energy needs while reducing GHG emissions, solar and wind energy are two notable alternatives. These non-emitting sources of electricity are integral to Alberta's	This section includes a very superficial dismissal of wind and solar, and fails to substantiate the reasons for this dismissal. The project assessment must include a full cost

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	plans to decarbonize the grid. However, when considering reliable, long-term baseload generation to meet the forecasted electricity demand, large nuclear power remains the best and most proven option. [the section included additional text related to the options of wind and solar]	accounting comparison, including accounting for the full nuclear fuel chain, including mining, milling, refining, conversion and fuel manufacturing – referred to in one of Energy Alberta's "fact sheets" as "The Uranium Conversion Process" – plus operations, waste management, decommissioning and abandonment. The full cost accounting methodology must integrate non-monetized values, such as clean air, water, human health, and genetic resources.
6.1 Federal Funding Page 6-1	The Project is currently receiving funding from the Government of Canada through the Natural Resources Canada (NRCan) Electricity Pre-Development Program. This program is expected to continue to provide funding during the pre-development phase of work for the Project. There is potential for future federal funding, but this has not been confirmed at this time.	The project must be fully costed as part of the assessment process documentation. Costs must include all phases of operation, including long-term waste management, and decommissioning; the costing exercise must also include accidents, malfunctions and malevolent acts and clean-up, compensation and reparation costs.

Nuclear Fuel Waste and its Long-Term Management

The Initial Project Description identifies in Section 4.3.5.1 and in Table 7.1-1 the proponent's expectation that high-level radioactive waste (nuclear fuel waste) will be transported off-site to a long-term storage/disposal site. Three of Energy Alberta's "Fact Sheets" included as appendices to the Initial Project Description describe the Nuclear Waste Management Organization's plan for deep geological repository and NWMO's selection of "Wabigoon Lake Ojibway Nation and the Township of Ignace in Ontario as the host communities for the future repository site".

Further, a poster board produced by Energy Alberta for their open houses claims that "the Canadian Nuclear Safety Commission (CNSC) and the Nuclear Waste Management Organization (NWMO) oversee and regulate every stage of nuclear waste management". It refers to both the CNSC and the NWMO as "governing bodies" and describes "Canada's Long-Term Plan" to be delivered by the NWMO and again states that "The NWMO has selected Wabigoon Lake Ojibway Nation and the Township of Ignace in Ontario to host future deep geological repository sites."

The management of the radioactive wastes that the proposed reactors would generate is a fundamental concern with this project, and a significant issue throughout each stage from design through to abandonment. Through the absence of substantive information about how these wastes will be managed, the contradictory statements in the initial project description, and the erroneous understanding of the Nuclear Waste Management Organization and the status of its proposed deep geological repository the proponent has demonstrated a lack of understanding and competence with respect to these issues.

For the record, the Nuclear Waste Management Organization is an organization of the three provincial utilities which operate or have operated nuclear power reactors (Ontario Power Generation, Hydro Quebec and New Brunswick Power) and are subsequently owners of high-level nuclear fuel waste; the NWMO is not a regulator or a governing body and while created by the three nuclear power companies at the direction of a federal law (Nuclear Fuel Waste Act, 2002), it is not a government agency.

The full description of the proponent's long-term management plan for nuclear fuel waste is that it is to be transported off-site to a long-term storage/disposal site, and it names the NWMO's proposed site in northwestern Ontario for that purpose.

While NWMO self-describes as being responsible for the transportation, processing, burial and abandonment of the fuel wastes at a centralized location, NWMO has clearly stated that it is not responsible for the extraction of the wastes from on-site storage or for the transfer of the waste into transportation containers; NWMO states in the same report as referenced above that "At each interim storage facility, the waste owner is responsible for the retrieval of used fuel from storage, preparing and loading the transportation package with used fuel, and loading and securing the transportation package onto the conveyance"[2].

The NWMO further clarifies in that same report that "the conveyance (with secured transportation package) is prepared and ready for transport. As a result, transportation infrastructure, facility infrastructure, equipment for transportation package and conveyance loading at the storage facility are excluded from this (the NWMO) report". The reason they are excluded from the NWMO's transportation report is that they are the exclusive responsibility of waste owner. In this instance, it is Energy Alberta who is the aspiring owner of radioactive waste, and so it is their responsibility to undertake these activities (and to describe them in the Initial Project Description and in later impact assessment documents).

Even if the NWMO site was a reliable option for the long-term dispositioning of the nuclear fuel waste – and we assert that it is not a reliable option – the Energy Alberta plan must include their plans and methods for short term storage (in the irradiated fuel bays), medium term storage (in dry storage containers at the site) and the extraction and transfer of the wastes from the dry storage containers into transportation containers.

Energy Alberta may be under the false impression that the NWMO's project is developed and reliable. Outside of the nuclear industry, the shared assessment is that it is neither:

- The NWMO proposal is still in the concept stage. NWMO says they will initiate the assessment process in 2025 and submit a full proposal in 2028 but the last description of the project was published in 2021 and it was very much conceptual in nature

[2] Deep Geological Repository Transportation System Conceptual Design Report Crystalline / Sedimentary Rock APM-REP-00440-0209 R00, September 2021, Ashton Taylor, AECOM Canada Limited – Prepared for NWMO, page 10

- There is no deep geological repository for high-level nuclear waste operating anywhere in the world, despite decades of effort by the nuclear industry. Some have been repositories have been proposed then cancelled and others have been proposed and are under review (the proposed repository in Sweden has been in the regulatory process since 2011) but none have received full approvals or been brought into operation.

Energy Alberta erroneously describes Wabigoon Lake Ojibway Nation as "willing host community", misrepresenting the Nation and WLON's decision-making process and decision. Further, the statement wholly overlooks the unanimous resolution passed by the Chiefs in Assembly of Grand Council Treaty #3 in October 2024. Grand Council Treaty #3 is comprised of 28 First Nations, including Wabigoon Lake Ojibway Nation. The Revell site is in the heart of Anishnabi Aki (Treaty 3 territory).

On October 3, 2024 Grand Council Treaty #3 Chiefs-in-Council Resolution CA-24-14, "Position on Nuclear Waste and Resource Development in Treaty #3" was passed, expressing "continuing support for the Elders' Declaration CA-11-14 that makes clear that a Deep Geological Repository for the storage of nuclear waste will not be developed at any point in the Treaty #3 Territory."[3]

On November 18, 2024 Wabigoon Lake Ojibway Nation announced that the community had reached a decision to allow the NWMO to move to site characterization phase in its investigation of the Revell site in northwestern Ontario. Wabigoon Lake Ojibway stated very clearly that "The yes vote does not signify approval of the project."

On November 28th the NWMO announced that it had selected the Revell site as their preferred location for the development of their deep geological repository project. On that date, Wabigoon Lake Ojibway Nation released a statement acknowledging NWMO's site selection decision and announcing that the project will be subject to a determination from WLON's Sovereign regulatory decision-making process[4].

Further, the NWMO's selection of the Revell site is now the subject of a legal challenge from Eagle Lake First Nation.[5]

Eagle Lake First Nation has filed an application in Federal Court seeking a judicial review of the Nuclear Waste Management Organization's decision to build the deep geological repository in the Township of Ignace and Wabigoon Lake Ojibway Nation area. Eagle Lake First Nation says it was "unjustifiably" rejected as a host community and denied its own right to consent to the

[3] https://wethenuclearfreenorth.ca/wp-content/uploads/2024/11/ca-24-14-position-on-nuclear-waste-and-resource-development-in-treaty-3.pdf
[4] As posted at https://www.wabigoonlakeon.ca/_files/ugd/04fe7b_2ec4c7b04a2b45c0bdf8c78ce967478a.pdf
[5] https://globalnews.ca/news/10932606/ontario-first-nation-challenge-nuclear-ignace/#:~:text=A%20First%20Nation%20in%20northern,to%20have%20its%20decisions%20quashed.

project and not for any fair, justifiable or defensible reasons, but because members of the First Nation had raised concerns about the nuclear waste site.

The court filing also names the federal minister of natural resources among the respondents and accuses the NWMO of acting in "bad faith" and seeks to have the NWMO's site selection decision quashed.

In summary, there is widespread opposition to the NWMO's project and their intended use of the headwaters of the Wabigoon and Turtle River watersheds for the burial and abandonment of all of Canada's high-level nuclear fuel waste. This opposition has been expressed by community groups, non-governmental organizations, municipalities, First Nations and treaty organizations in the region of the proposed project, downstream from the project, and along the transportation route.

In northern Ontario there is a high level of concern and opposition to the NWMO's transportation plan, which with the current inventory of waste from Ontario, Quebec and New Brunswick would involve 2-3 shipments per day for more than 50 years, with each truck hauling 35 tons of radioactive waste per trip. Over 90% of those shipments would come from southern Ontario, averaging 1,700 km per trip, with most of those kilometres travelled on the poorly maintained and mostly 2-lane roads of northeastern and northwestern Ontario.

Shipments along the 2,200 km route from Peace River to the Revel site would be longer but would similarly be largely traveled on 2-lane roads, with the exception of when the trucks passed through the large centres of Edmonton, Saskatoon and Winnipeg.

- Each shipment will result in low levels of radioactivity being emitted.
- If there is an accident that results in a breach of the containers it is expected that the releases would be much larger.
- There is no level of exposure to ionizing radiation that does not pose an associated risk to human health.
- There is very little experience with nuclear fuel waste transportation in Canada.
- International experience has a mixed record.
- There are serious gaps in the testing of the transportation containers and training for emergency responders.
- There is no experience internationally that is equivalent to the distance, volume, frequency and duration of the NWMO's proposed transportation program.

If the Peace River Nuclear Project was to move forward and Energy Alberta was to presume to send their 1.95 million bundles of high-level radioactive wastes to the Revell site in the heart of Treaty 3 territory in northwestern Ontario, Energy Alberta should expect that the opposition

would expand to the 2,200-kilometre transportation route between Peace River and the Revell site.

Concerns with IAA Process

Northwatch has multiple concerns with the current review process, some of which have been previously expressed in correspondence between Northwatch and the Agency. We acknowledge that some of these concerns or criticisms are in response to flaws in the process design and may be more difficult for the Agency to address in the short term, while some of these concerns are in response to operational choices the Agency is making in how they deliver this particular review.

Our concerns include:

- there was initial confusion over the deadline for comments on the initial project description, with Agency posts variously stating the deadline to be May 14 or May 15; as recently as May 11th Northwatch received communication from a civil society organization who was still under the impression that the deadline was May 15 and we note that the agency corrected the date in their registry but did not distribute notice of that correction; we trust that the Agency will accept comments received on May 15th as "on time" given the confusion created at the opening of the comment period by the incorrect posting
- the participant funding application deadline is not until two days after the deadline for comments on the initial project description; this project has a long timeline and there is no reasonable defence for such crowding of the deadlines or setting a deadline for comment before participant funding is available (and potentially imposing a second comment deadline before a participant funding decision is received).
- The Agency provided single-day opportunity to participate in public information sessions on April 23 (English) and 24 (French) and while the Agency did make the presentation available to those who were unable to attend, a recording was not made available; the rationale for no recordings being available was that this was to "protect the privacy" of participants; we do not find this persuasive, given that the sessions were public, and participants also have the option of not sharing identifying information; with the very short timelines for this stage of the review and with many participants and potential participants not being familiar with the IAA process, making a recording available would have been of benefit to those who were not able to participate in real time and would have been without adverse effect on any who were able to participate
- The Agency intends to provide the Summary of Issues (SOI) to Energy within two weeks from close of the public comment period on May 14, after which the proponent has 30 days to submit their response to the SOI document (i.e. by late June) but the Agency

intends to begin the comment period on the draft Tailored Impact Guidelines and plans for the impact assessment in late May with a 30 day comment period; the consequence of this is that the public and Indigenous peoples will not have the opportunity to consider the Proponent's response to the Summary of Issues when preparing comments on the draft Tailored Impact Guidelines and the various plans (Public Participation Plan, Cooperation Plan, Permitting Plan, Indigenous Engagement and Partnership Plan); this is a shortcoming that could be easily remedied by sequencing these planning activities, i.e. starting the comment period on the draft Tailored Impact Guidelines and plans for the impact assessment no sooner than the date which the proponent's response to the Summary of Issues is posted to the registry

- The current version of the Registry is difficult to use and lacks certain functions which were available in previous versions and were helpful to public participants; for example, in previous versions of the registry participants were able to copy and paste a listing of registry postings into a table and then use that to make notes per submission, to track issues and themes, and code and sort registry postings but this function is no longer available; we appreciate that this may be an issue that is outside the scope of what Agency staff are be able to address at this time, but wish to note it for the record

Conclusions

The purposes of this Impact Assessment Act include fostering sustainability, protecting the environment, having fair and predictable impact assessment processes, insuring assessments take all effects into account, ensuring meaningful participation opportunities, relying on scientific information, and the assessment of cumulative effects.

In the instance of the assessment of the Peace River Nuclear Project, these purposes can only be achieved if as starting steps the issues list includes those issues raised in this and other submissions, the planning stage of this review allows adequate time for an iterative process including ensuring that the proponent's response to the issues list is available at least thirty days before the deadline for comment on the guidelines, and by establishing that the assessment will be based on comprehensive and factual information about the Project and its potential effects.

We request that the Agency provide a detailed dispositioning of Northwatch's and other participants' comments as part of carrying out an assessment process that is transparent and one in which decisions are traceable and accountable.