



Natural Resources
Canada

Ressources naturelles
Canada

January 26th, 2024

Tracy Lachine
Project Manager, Prairie and Northern Region
Impact Assessment Agency of Canada

Subject: Natural Resources Canada's Review of the Initial Project Description of the Marguerite Lake Compressed Air Energy Storage Project.

Dear Colleague,

On December 18th, 2023, the Impact Assessment Agency of Canada (the Agency) requested that Natural Resources Canada (NRCAN) provide input regarding the Initial Project Description (IPD) for the Marguerite Lake Compressed Air Energy Storage Project.

NRCAN has reviewed the document in relation to its mandate and expertise in the areas of electricity systems and groundwater.

Details of NRCAN's response can be found in the completed Federal Authority Advice Record (FAAR) below.

If you have any questions, comments, or concerns, please contact me at sophia.stlawrence@nrcan-rncan.gc.ca

Sincerely,

Sophia St. Lawrence
Impact Assessment Officer
Office of the Chief Scientist
Natural Resources Canada

cc: Peter Unger – Director, Office of the Chief Scientist
Shelley Ball – Team Lead, Office of the Chief Scientist

Federal Authority Advice Record (FAAR)**The FAAR must be submitted to the Registry by January 28, 2024.**

Marguerite Lake Compressed Air Energy Storage Project – Federation Group Inc.

Department/Agency	Natural Resources Canada (NRCan)
Lead contact	Sophia St. Lawrence
Full address	588 Booth Street, Ottawa, ON, K1A 0E4
Email	sophia.stlawrence@nrcan-rncan.gc.ca
Telephone	343-541-7912
Alternate Contact	Shelley Ball (shelley.ball@nrcan-rncan.gc.ca)

-
1. a) Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed?

If yes, specify the Act of Parliament and that power, duty or function.

No.

b) Please describe any Indigenous or public consultation that will be undertaken in relation to the exercise of that power, duty or function, including when it would take place.

N/A

-
2. Is your department or agency in possession of specialist or expert information or knowledge in one of your fields of expertise that may be relevant to the conduct of an impact assessment of the Project?

Specify the specialist or expert information or knowledge.

NRCan possesses the following expertise that may be relevant to the conduct of an impact assessment for this project:

- Electricity systems
- Groundwater (On January 16th, 2024, ECCC contacted NRCan regarding the quantity of freshwater to be used from aquifers. NRCan experts reviewed the information provided at this time and may provide further expertise once more information is available at the Detailed Project Description Phase)

-
3. Has your department or agency exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action that would allow the Project to proceed in whole or in part?

Please specify if applicable.

NRCan does not have an interest in the Project, nor has it taken any course of action (e.g., regulatory decision, funding, etc.) to enable to the Project to proceed in whole or in part.

-
4. Has your department or agency had previous contact or involvement with the proponent or other party in relation to the Project (for example: an enquiry about methodology, guidance, or data; introduction to the Project)?

Please provide an overview of the information or advice exchanged.

No.

5. Does your department or agency have additional information or knowledge about the project not specified above, including information about its geographic, environmental, economic or social context (for example, location of protected or sensitive areas, history between local communities and proponent or similar projects, local or regional social or economic concerns)?

Please specify if applicable.

No.

6. From the standpoint of your department's mandate and expertise, what are the main issues concerning the project?

For each key issue, please:

- describe the effect or the nature of the issue, including any relevant context;
- provide the rationale and/or evidence for why it is a key issue;
- briefly provide solutions to the issue, including information or studies that, if applicable, should be requested to the proponent in the Tailored Impact Statement Guidelines, potential mitigation measures, or regulatory requirements relevant to the issues;
- provide a concise, plain-language summary of the issue for inclusion in the Summary of Issues.

The information provided will be taken into consideration by the Agency to formulate an opinion on whether an impact assessment is required and, if applicable, will be taken into account in developing project-specific Tailored Impact Statement Guidelines in the next steps of the impact assessment process.

Please use Table 1 to answer this question.

7. If applicable, specify any additional information the proponent could provide in the Detailed Project Description or in its response to the Summary of Issues that:

- would make it possible to verify whether certain minor issues could be addressed and managed by clear measures, existing guidelines, other regulatory processes or other existing tools;
- help the Agency to provide an opinion if an impact assessment is required, or
- would support the tailoring of the Impact Statement Guidelines if the Agency is of the opinion that an impact assessment is required.

These clarifications and additional information will be included as specific questions/issues in the Summary of Issues provided to the proponent.

Please use Table 2 to answer this question.

Sophia St. Lawrence
Name of department or agency involved

Impact Assessment Officer

Speaker title

January 26th, 2024

Date

Table 1: Key issues to inform the impact assessment process

The Agency asks that federal authorities guide expert advice on the Agency's approach to project specific tailoring, if the Agency is in the opinion that an impact assessment is required. This approach aims to focus the assessment on the Project's key issues, with an emphasis on the prevention of adverse environmental effects in areas of federal jurisdiction. In determining key issues, federal authorities should be mindful of the Project's context (size, scope, location), Indigenous knowledge and perspectives, and public concerns.

Potential effects that are considered minor, or that can be mitigated through clear measures, existing guidance or other regulatory processes, may be subject to simplified information requests or be disregarded. Advice from federal authorities on key issues and solutions - and on the scope and detail of the studies and information requested - will enable the Agency to focus the analysis on those issues that are important for the impact assessment process.

Comment ID	Relevant section of the initial project description	Valued Component or Factor to Consider	Description of key issue (context and rationale)	Advice	Plain-language summary for inclusion in Summary of Issues
<p>Please present comments by organization and comment number</p> <p>e.g.: IAAC-01</p>	<p>If the comment relates to a specific section of the initial project description, please provide the reference.</p>	<p>Identify valued component(s) or factor to consider—within the mandate of your department or agency—to which the potential effect or issue applies.</p>	<p>Please provide a brief description of the issue and rationale for being a key issue.</p> <p>Include, where relevant:</p> <ul style="list-style-type: none"> the sequence of potential effects; the relevant context that specifies why this is a key issue; key uncertainties that should be addressed in the impact assessment; Indigenous or public concerns or perspective; scientific data or traditional knowledge, including from previous projects, that justifies the inclusion of the key issue in the project assessment. 	<p>If applicable, please provide brief solutions/advice to address the issue or potential effect, including:</p> <ul style="list-style-type: none"> studies or information relevant to describing and characterizing the potential effect, including any guidance for data collection or analysis or existing data sources to inform the assessment; any powers your department or agency has that may mitigate, manage or set conditions related to the issue; advice or policies to frame and mitigate the potential effect; standardized mitigation or monitoring measures that could manage potential effects, including follow-up on monitoring activities; commitments the proponent could make to respond to the issue. 	<p>For issues to be included in the Summary of Issues, provide a concise, plain language synopsis of the key issue and any questions or directions for the proponent, if applicable.</p>

Please insert additional lines if necessary.

Table 2. Details or additional information the proponent could include in the Detailed Project Description or in the response to Summary of Issues

Comment ID	Relevant section of the Initial Project Description	Description of the Issue, Concern or Uncertainty	Clarifications or additional information	Plain-language summary for inclusion in Summary of Issues
<p><i>Please identify comments by organization and comment number.</i></p> <p><i>e.g. AEIC-01</i></p>	<p><i>If the comment is related to a specific section of the Initial Project Description, please provide a reference.</i></p> <p><i>You may also choose to copy the relevant text here.</i></p>	<p><i>Provide a description of the issue, concern or uncertainty that the proponent could include in its Detailed Project Description, which could be framed and managed by clear measures, existing guidelines, regulatory processes or other existing tools, and thus be the subject of a simplified information request in the guidelines, or simply be disregarded.</i></p>	<p><i>Specify what additional information the proponent could provide in the Detailed Project Description to address the issue, concern or uncertainty, for example:</i></p> <ul style="list-style-type: none"> <i>• Clarifications to elements of Project Description (e.g. components, activities, locations or alternatives);</i> <i>• Proposals on Project design changes that could avoid effects;</i> <i>• Evidence that could demonstrate that the effects will be negligible;</i> <i>• Evidence that standard mitigation measures will reduce or eliminate potential effects;</i> <i>• Commitments the proponent could make to respond to the question/issue, including the implementation of federal operational policies or guidance documents.</i> 	<p><i>For issues to be included in the Summary of Issues, provide a concise, plain-language synopsis of the issue and any questions or instructions for the proponent, if applicable.</i></p>
NRCan-01	7.2, 12.1, 23, 24	NRCan recommends that the Project Need be described in more specific detail. This would allow for a better justification of the low capacity factor (1%, or 88 hours/year) used in calculating the operating GHG emissions in sections 23 and 24. This would also further support the choice of conventional Compressed Air Energy Storage (CAES) instead of the more energy-efficient A-CAES, as alluded to in section 12.1.	NRCan recommends that the Proponent provide additional details on the intended use of the proposed CAES plant, and use this to provide an estimate and justification for the yearly operating hours and the required storage duration.	
NRCan-02	7.3	The Project Benefits hinge importantly on the potential to operate at low emissions with hydrogen co-firing, and, eventually, 100% hydrogen operation following a retrofit. However, it is unclear how realistic this scenario is. It would be beneficial to provide more details on the technical feasibility and financial risks and impacts of hydrogen operation and retrofit.	NRCan recommends that the Proponent provide additional technical and financial details on the feasibility of hydrogen co-firing and full hydrogen retrofit.	
NRCan-03	12.1	The project will use some amount of natural gas in its operation for the expander train turbines. Should a fossil-fuel free alternative be used instead to heat the air, the project would potentially be eligible to the 30% Clean Technology Investment Tax Credit or the 15% Clean Electricity Investment Tax Credit. Given the significant impact this	NRCan recommends that the Proponent justify why a fossil-free alternative would not be feasible, given the potential eligibility for significant financial support via the Clean Technology or Clean Electricity Investment Tax Credits.	

		federal support could have on the project costs, NRCan recommends that the Proponent justify in section 12.1 why a fossil-free alternative is not feasible or would not be appropriate.		
--	--	---	--	--

Please insert additional lines if necessary.