Request for Proposals

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NunatuKavut Community Council Geothermal Resource Assessment

RFP Release Date: December 12th, 2025

Proposal Due Date: January 30th, 2:00 PM AT

Contact:

Joe Collier, Project Manager
jcollier@netzeroatlantic.ca

1.0 Introduction

Net Zero Atlantic (NZA) is a leading energy research organization advancing Atlantic Canada's transition to a low-carbon future. We are encouraging the growth of Atlantic Canada's clean energy sector by identifying knowledge gaps, connecting experts to projects, and leading applied research. Our work covers critical areas in need of development, such as clean fuels, electricity, geothermal, carbon management (carbon capture, storage and utilization), and energy system modelling, among others. Our team's focus is on credible and unbiased research that will prepare policymakers, industry leaders and workers, and sector investors to work together on pathways to decarbonize our region's economy, mitigate climate change impacts, and move Atlantic Canada toward net-zero emissions.

NZA has led various geothermal projects, including the Community Geothermal Resource: Capacity Assessment and Training Program (GeoCAT)[1], and the Nova Scotia Phase I Geothermal Resource Assessment and Phase II: Direct Use of Geothermal Heat in Nova Scotia[2],[3]. The GeoCAT program focused on building local capacity for mid-depth geothermal energy development by training community representatives in twelve rural and five Mi'kmaq communities in Nova Scotia to assess geothermal potential, engage residents, and explore viable project opportunities. Phase I provided a province-wide assessment of geothermal potential, while Phase II examined the feasibility of direct-use geothermal heating in specific regions within NS with higher resource potential.

NZA, in collaboration with the NunatuKavut Community Council, and with support from the Newfoundland and Labrador Green Transitions Fund and Crown Indigenous Relations and Northern Affairs Canada, is leading an assessment of NunatuKavut diesel-dependent communities' geothermal potential, with a focus on applying geothermal heat for greenhouses.

Proposals are solicited for a project that will:

(i) provide a review of the geothermal resources in NunatuKavut diesel-dependent communities;

(ii) provide an evaluation of the potential for geothermal heat production from a range of geothermal technologies across the study region using existing information;

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[1] https://netzeroatlantic.ca/research/community-geothermal-resource-capacity-assessment-and-training-program-geocat

[2] https://netzeroatlantic.ca/research/phase-i-assessment-geothermal-resources-onshore-nova-scotia

[3] https://netzeroatlantic.ca/research/phase-ii-direct-use-geothermal-heat-nova-scotia

(iii) recommend next steps to further de-risk zones within the study region with favourable geothermal potential, or alternatively, explain why further de-risking of geothermal development may be a low value proposition if the review warrants this conclusion; and

(iv) Analyze and discuss the economic case for potential geothermal resource exploration and development in the study area, with a focus on geothermal greenhouses.

2.0 Context

Net Zero Atlantic is releasing this RFP as part of a larger Geothermal Greenhouse project led by NunatuKavut Community Council. NunatuKavut Community Council (NCC) represents roughly 6,000 Inuit across South and Central Labrador. NCC acts as the governing body of their people, advances the interests of their communities, protects their people's rights, and upholds their values, that have been passed down from generations. NCC's leadership is grounded in Inuit traditions and is focused on charting a path towards self-determination, reconciliation, and a thriving, sustainable homeland.

Across the coast of southern Labrador, NCC's diesel-dependent communities, (study area in **Figure 1**.) home to between 2000-3000 NCC members, rely almost exclusively upon long-distance grocery supply chains that are expensive and have a high carbon footprint. Furthermore, the logistical challenges of delivering food to NCC's communities leave these communities vulnerable to food insecurity. Geothermal greenhouses have been used in other jurisdictions (in Canada and across the globe) to mitigate food security challenges in remote communities. NCC wishes to determine if geothermal resources within the study region are a viable option for heating commercial greenhouses.

The study region holds several unique conditions that will require creativity and resourcefulness from the selected proponent. Geological data is limited for the area, and surficial geological maps suggest the area possesses a relatively low geothermal gradient. The successful proponent will have to have a strong understanding of how geothermal and geo-exchange systems, including shallow closed-loop systems and ocean systems, could be applied effectively within the study region, given these challenges.

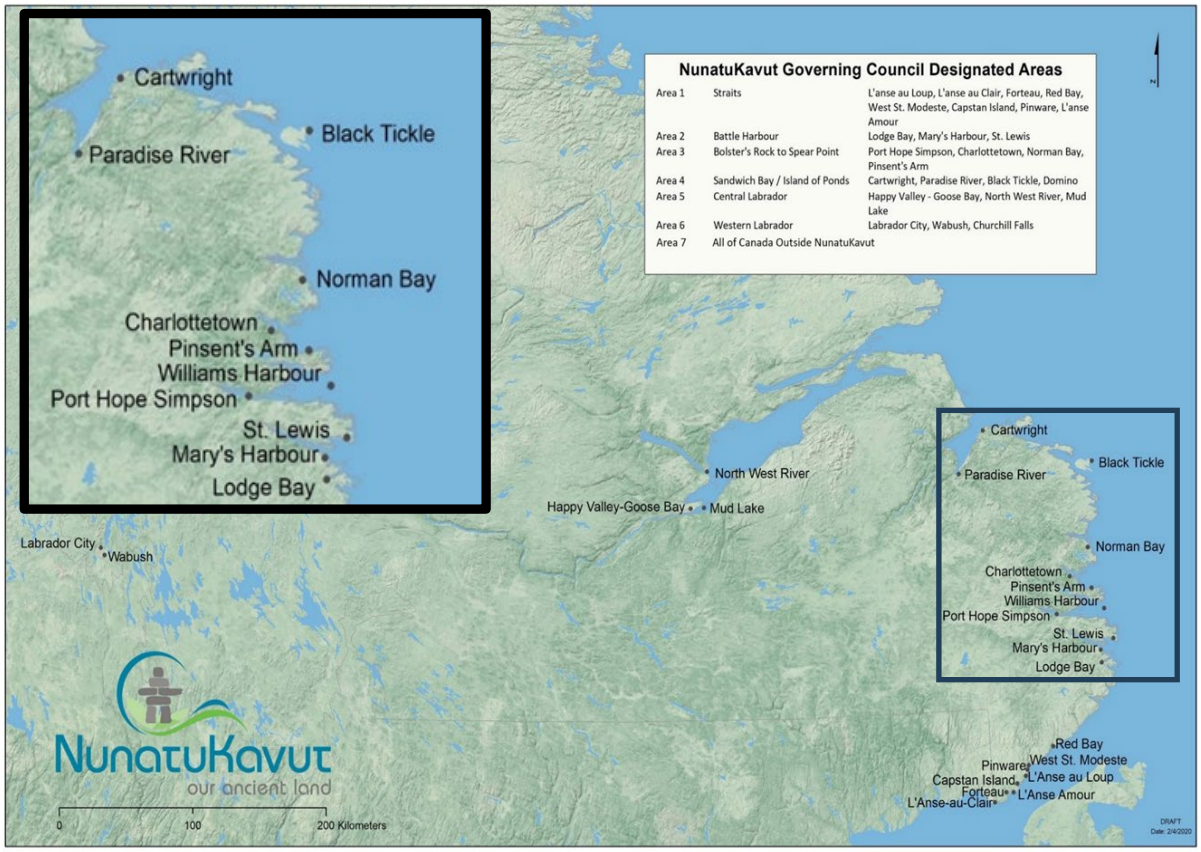

Figure 1. Nunatukavut Community Council governing areas. Study Area displayed in inset. Note. Williams Harbour will not be considered within the Study Area.

Geothermal energy is a renewable and stable source of thermal energy that can be used for heating and cooling buildings, industrial processes and electricity generation. Geothermal technologies have been paired with greenhouses in other regions around the globe to provide a source of stable, long-term, low-carbon heating. Depending on the size of the greenhouse operation, these geothermal projects can utilize mid-depth heating, at 2-3 km below the earth's surface, or shallower, geo-exchange, within 10-50m from the earth's surface, or from nearby ocean water.

The completion of this study's objectives, detailed below, will provide NCC and NZA with enough information about the study area's geothermal resources to determine next steps for potential geothermal greenhouse development in NCC's communities.

3.0 Objective

The objective of this RFP is to obtain the services of a consultant (the Proponent) to develop a comprehensive report that will evaluate the geothermal resource potential of NunatuKavut's diesel-dependent communities and outline the technical constraints and limitations to the resource's development, with a focus on geothermal commercial greenhouse applications.

4.0 Scope of Work

The following tasks will be undertaken by the Proponent to meet the project objectives:

1. Compile, analyze, and evaluate existing data on geothermal resources within the study region.
2. Review the study area's geology and assess geothermal potential based on rock type, geothermal gradient, and potential for thermal extraction.
3. Prepare maps that define the geothermal potential of the study area.
4. Identify technical constraints and limitations to geothermal development, with a focus on geothermal greenhouses, within the study area.

Each task is further detailed below.

4.1 Research and Data Collection

Geothermal Data Compilation: Compile, review, and summarize publicly available data. Data of interest includes, but is not limited to:

- Geological mapping
- Borehole databases
- Geothermal gradients
- Historic mining data
- Geophysical data
- Data on existing subsurface reservoirs, such as abandoned mines.

4.2 Geothermal Resource Evaluation: Evaluate the geothermal potential of the study area, based on the following:

- Rock type
- Geothermal gradient
    - Shallow depths for geo-exchange systems and ocean-water geo-exchange systems
    - Mid-depth for thermal applications
    - Deep geothermal for electricity generation (if applicable)
- Potential for thermal extraction
- Existing subsurface reservoirs and abandoned mines

The evaluation should cover the entire study area, although communities within the study area that have a greater geothermal potential should be explored in greater detail.

The evaluation should identify where there are technical constraints or limitations for geothermal development. These constraints include, but are not limited to:

- Presence of suitable hydrothermal systems
- Geographic location
- geologic and reservoir conditions (eg., rock porosity and permeability, temperature, pressure depth, etc.)
- drilling and wellbore challenges
- heat extraction
- data availability and limitations

4.3 Prepare maps

- **Map geological information and geothermal resources and potential:** Compile the geologic information and geothermal assessment from Task 4.2 into a series of maps to define the geology and the geothermal potential of the study area.
- Integrated maps should group regions with similar characteristics, with data grouped by geothermal gradient, rock type, porosity/permeability, and depth to target temperatures to delineate zones of similar geothermal resource potential.
    - E.g., High-gradient, porous/permeable zones should be grouped as high-potential resource areas. Low-gradient, tight (low-permeability) rock zones should be grouped as low-potential or technically challenging areas.
- Maps should aid in prioritizing areas for potential greenhouse development or future data acquisition. The map data and files will be part of the project deliverables The following will be required:
    - Compatible file types: Shapefile / ESRI geodatabase files / GEO TIFFs or normal TIFF files
    - Projection/Datum: TBD
    - Metadata information, such as:
        - Dataset name for identification
        - Data description, including a list of key geologic and geometric features (
        - Indication of known data issues (e.g., not topologically structured, no standards, currentness, accuracy, completeness, etc.)
        - Indication of the extent of dataset
        - Indicate the georeferencing method (projection, datum, reference system)
        - Specify any packages used.

4.4 Identify Geothermal Development Opportunities and Constraints

- **Provide an evaluation of the suitability of geothermal project development**, with a focus on geothermal greenhouses within the study area, considering factors such as proximity to infrastructure, geologic factors, and density of potential end-users in the area.

  The assessment should be presented in two parts:

  1. Geothermal Resource Potential: Evaluate the potential of the geothermal resource based on geological and subsurface conditions alone.
  2. Development Suitability: Assess geothermal development potential in combination with surface-level factors, including proximity to infrastructure and end-users, to identify areas that may be suitable for development. Identify and describe three NCC communities within the study area that meet favourable development conditions. Include a brief explanation of the geothermal opportunity within each community and a walkthrough of suggested next steps for each community. Geothermal opportunities should be focused on commercial greenhouse heating but could include other applications. Geothermal technologies could include mid-depth heating, shallow geo-exchange, or ocean geo-exchange, among others.

- **Opportunities**: Highlight any significant opportunities or strategic advantages these areas offer for geothermal development.
- **Constraints and Limitations**: Identify, analyze and discuss the technical constraints and limitations for geothermal development within the study area, including but not limited to:
  - Research and knowledge gaps.
  - Data limitations.
  - Geographical and geological limitations.
- **Geothermal Applications and Examples:** Provide examples from other jurisdictions that have been effective in developing geothermal commercial greenhouse applications and that have similar geological resource potential as the study area. These assessments will provide brief summaries of the developments and the enabling conditions that allowed for development. The enabling conditions can include geological conditions, infrastructure, energy demand, regulatory and technical considerations, as appropriate. The assessments will also include a comparison of the enabling conditions in the other jurisdictions to the conditions in NCC's communities. Examples that may be included in this assessment are encouraged to be provided in the proposal.

- **Options for Overcoming Barriers:** Provide suggestions for de-risking targeted areas in terms of new subsurface modeling, imaging, or drilling, or other follow-on work.

Scope Assumptions

- This work will focus on NCC's diesel dependent communities.
- Geothermal electricity production is out of scope and will only be discussed marginally.
- NZA will not be providing datasets to the proponent. Engagement with industry and/or government is expected in finding data sources.

5.0 Deliverables

Upon project completion, the successful proponent will provide:

(1) A Report that presents and summarizes all four parts of the Scope of Work. Both a Draft version and Final version are required with the opportunity for the Research Management Committee to recommend reasonable changes to the Draft version for inclusion by the proponent in the Final version before the project ends.

(2) A presentation (in PowerPoint) to the research management committee to accompany submission of the Draft version of the Report. The presentation will review the project, its main findings, and the structure and contents of the report.

(3) GIS layers of the compiled geothermal and geological data along with the synthesis maps showing favorability for the different types of geothermal resource in the region. All data collected or created must be provided in its raw, accessible formats.

The Proponent is required to attend monthly Research Management Committee (RMC) meetings and provide bi-weekly project updates via progress reports. As the project progresses, the Proponent will provide the following:

I. **Draft Report and Synthesis Maps** summarizing the results of the scope of work described above. The draft report will be provided to the RMC, which may propose reasonable revisions for incorporation by the Proponent into the final version.
II. **Final Report and Synthesis Maps** with the RMC's revisions and comments addressed. Both draft and final versions will be submitted in PDF format.
III. **PowerPoint Presentation** to the RMC and any NCC members who wish to attend, to accompany the submission of the draft report. The presentation will review the project and its main findings.
IV. **Datasets and GIS Layers**, of the compiled geothermal and geologic data. The dataset should be accompanied by metadata delivered in a format specified by NCC.

6.0 Timelines

To support effective communication and project coordination, the Proponent is expected to host regular project status meetings via video conference. At project onset, the desired frequency of project status meetings will be determined. The Proponent is expected to host the kickoff meeting. The following timeline outlines Net Zero Atlantic's expectations with respect to timing.

Project Timelines	
Item	**Date**
RFP Release Date	*Dec 12, 2025*
RFP Q & A Close Date	*Jan 22, 2026, 2PM, AT*
Proposal Due Date	***Jan 30, 2026, 2PM, AT***
Project Kickoff	*March 15, 2026*
Draft Report	*June 30, 2026*
Final Report, Presentation	*July 31, 2026*

7.0 Project Funding

Funding for this project will be allocated through a competitive bid process and is capped at a maximum of $50,000 CAD, including all related expenses but excluding taxes. Proposals that exceed this amount will not be considered. Note that proposals will be rated first in terms of experience/team/work plan and second in terms of value.

Please include a cost-task breakdown (time per person per task), including hourly or daily rates. The detailed budget should provide a breakdown of costs by task and a separate line item for any applicable taxes.

8.0 Proponent Qualifications

The successful applicant must:

- Proven experience in geothermal resource assessment and geothermal project assessment or development.
- Demonstrate strong GIS and geologic mapping skills specific to geothermal, and an ability to produce high-quality maps.

- Familiarity with geologic and geothermal databases is necessary for performing a geothermal assessment.

- Possess a strong understanding of the geologic landscape, energy needs, and environmental challenges specific to NCC's communities.

- Demonstrate a strong understanding of the unique opportunities and challenges of using various geothermal technologies in remote northern communities.

Proposals should explain the experience and qualifications of the project team and provide references where available (both literature and previous clients).

9.0 Proposal Requirements

The proposal should:

- Be concisely worded with clearly described objectives, methods, budget, schedule, and deliverables. Maximum 15 pages, excluding appendices, title pages, and cover letter. The proposal should include a work plan outlining how and when all the tasks will be completed.
- Describe the Proponent's organization and its relevant experience with similar projects and detail the relevant work experience of the key staff assigned to this project and their roles on the project. This material should be summarized in the body of the proposal and can be presented in more detail, if needed, in an appendix.
- Provide confirmation that the Respondent's team will be adequately resourced to execute all deliverables.
- Provide a detailed fixed fee budget including project tasks, team member's daily or hourly rates, and their intended number of days/hours to work on each project component. The detailed budget should provide a breakdown of costs by task and a separate line item for any applicable taxes.

To submit your proposal:

- Prepare a single electronic document in PDF format. Ensure that the proposal or cover letter is signed by an officer or equivalent with authority to bind the Respondent to the statements made in the proposal.

- Upload an electronic copy to the Net Zero Atlantic- FTP site available at:

  https://netzeroatlantic.sharefile.com/r-r7eaaa49bfb794f59aff04d1fddf3bfaa

10.0 Questions and Clarifications

Net Zero Atlantic will accept content-related questions from interested applicants on an ongoing basis until January 22nd. Please email the Project Manager, Joe Collier, at jcollier@netzeroatlantic.ca with any questions prior to this date.

A Q&A page will be available on the Net Zero Atlantic website:

https://netzeroatlantic.ca/opportunities/request-proposals/nunatukavut-community-council-geothermal-resource-assessment.

The names and organizations of those submitting questions will remain anonymous; only the question and Net Zero Atlantic's response will be posted. Interested parties are encouraged to check the Q&A page for updated information and/or clarifications that may help in completing their proposal. The Q&A page will only be available if content-related questions have been received.

11.0 Evaluation

This project will be administered through Net Zero Atlantic. The weighting table below demonstrates the weighting associated with each proposal component. Proposals will be quantitatively evaluated against a set of criteria developed by the PMC. Proponents should demonstrate good value for money but note the lowest cost will not necessarily be selected.

Factor	Weight
Experience and Knowledge: Qualifications, experience and capabilities of the company and delivery team; demonstration of knowledge relevant to this study.	30%
Project Plan, Approach and Methodology: Proponent demonstrates an understanding of the project service requirements and has outlined a comprehensive and effective work plan. Proposal describes the objectives, methodology, milestones and deliverables, and a sound approach in undertaking this project. Communication format and frequency between the Proponent and Net Zero Atlantic are clearly described.	40%
Schedule and Work Distribution: Proponent describes an achievable schedule and demonstrates the ability to complete the work on or before the desired completion date.	10%

Proposal Presentation and Organization: The proposal includes all RFP requirements and tasks, demonstrates attention to clarity, grammar, presentation, and comprehensibility.	10%
Value: The project will offer good value for the proposed budget. The budget is clear, convincing, and well-described.	10%
Total:	**100%**

Please Note: Net Zero Atlantic reserves the right to fully award, partially award or not award this project.