

Request for Proposals

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H₂ Supply Chain Gap Assessment and Development Plan for Atlantic Canada

RFP Release Date: **December 19th, 2024**

Proposal Due Date: **January 31st, 2025 @1PM NST**

Contact:

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1. Introduction

The Atlantic Hydrogen Alliance (AHA), Energy NL, and Net Zero Atlantic (NZA) are partnering to conduct a hydrogen supply chain study, subject to the approval of government funding supports. This study aims to assess the regional supply chain for a clean hydrogen economy in Atlantic Canada, supporting the region's transition to a low-carbon future.

- [The Atlantic Hydrogen Alliance](#) (AHA) supports the development of an economically viable clean hydrogen value chain that will enable the transition to a prosperous low-carbon economy in Atlantic Canada. Their members include large scale green hydrogen producers, energy utilities, large energy consumers, supply chain companies, educational and research institutions, academic and research professionals, government, and similar advocacy organizations supporting the clean energy transition.
- [Energy NL](#) was founded in 1977 to represent the supply and service sector of the energy industry. Today, Energy NL represents over 500 member organizations worldwide which are involved in, or benefit from, the energy industry of Newfoundland and Labrador. Their focus is on facilitating member participation in the evolving energy industry by advocating for local sustainable development, seeking opportunities locally and globally, and creating connections that advance the industry.
- [Net Zero Atlantic](#) (NZA) is a leading energy research organization advancing Atlantic Canada's transition to a low-carbon future. Net Zero Atlantic is encouraging growth of a sustainable energy sector by leading applied research in critical topics, including hydrogen, offshore wind, geothermal energy, tidal energy, and energy system modeling. Their focus is on advancing research that will help decarbonize the region's economy, mitigate climate change impacts, and move Atlantic Canada toward net-zero emissions by 2050.

These project partners are seeking a qualified consultant to research and prepare a H₂ Supply Chain Gap Assessment and Development Plan for Atlantic Canada.

2. Project Overview & Objectives

Enabling a hydrogen economy in Atlantic Canada necessitates a strong industrial supply chain. An important first step in this development is to understand the readiness of the supply chain and identify the gaps that exist. The objective of this project is to identify and enhance Atlantic Canada's hydrogen supply chain to maximize economic benefits to Atlantic Canada from domestic hydrogen development, as well as international development (export and trade opportunities). Specifically, the objectives of this project are to:

- Define the scope of the hydrogen supply chain for development, construction and operations (including production, storage, distribution, and utilization). This does not include the supply chain associated with electricity production.
- Establish a benchmark of Atlantic Canada's expertise, capability, and capacity to support a hydrogen industry, considering all activities associated with the hydrogen value chain.
- Provide an understanding of the hydrogen build-out and analysis of the associated supply chain needs to support an Atlantic Canadian hydrogen industry.
- Engage meaningfully with key stakeholders (such as project developers, governments, supply chain service providers, indigenous and rural community leaders, and academia) in the supply chain.
- Deliver an assessment of the hydrogen supply chain opportunity for Atlantic Canada. Including opportunities for Indigenous and rural communities.
- Prepare a development plan to enhance the region's hydrogen supply chain position.



3. Project Governance

The project will be governed by a Project Management Committee (PMC) comprising representatives from the AHA, Energy NL, and NZA, along with representation from each of the Atlantic provinces and the Atlantic Canada Opportunities Agency (ACOA). AHA will serve as the project manager, overseeing day-to-day management and ensuring alignment with project goals. NZA and Energy NL, as project partners, will provide project delivery support. The PMC will meet regularly with the Consultant to review progress, address challenges, and provide overall governance and direction for the project.

4. Scope of Work

Extensive H₂ related studies have already been conducted in Nova Scotia and Newfoundland and Labrador; the consultant is expected to begin the project by reviewing this existing work and incorporating relevant findings where applicable. A non-exhaustive list of publicly available reports is provided in Section 5.

Also, while the following tasks refer to Atlantic Canada, the study should, where possible provide resolution on a province-by-province basis across Atlantic Canada. In cases where provincial data or analysis is not available or applicable, the consultant should conduct the assessment at the Atlantic Canada regional level. However, it is important that the analysis considers interprovincial synergies and connections, identifying opportunities for collaboration and integration across the Atlantic Canada region.

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

Task 1: Review of the Hydrogen Value Chain

- Conduct a jurisdictional scan using case studies from regions and/or industries with established hydrogen applications or completed hydrogen supply chain studies. Provide learnings on what a hydrogen supply chain comprises.
- Breakdown and explain each stage of the hydrogen value chain, including H₂ research & development, production, storage/transport, and end-use applications, considering both export and domestic hydrogen value chains.
- Explain the workforce and major equipment components necessary for each stage of the hydrogen value chain.
- Provide detailed information on the standards and certifications that will be required for supply and service providers throughout each stage of the hydrogen value chain.

Task 2: Expected growth of and requirements for a hydrogen supply chain in Atlantic Canada.

- For each province identify and profile regional hydrogen priority areas (potential hub(s) and corridors) and project activity by assessing current industry, government planning, project developments, research & development, communities, and infrastructure along the hydrogen value chain.
- Outline the expected growth of the hydrogen economy in Atlantic Canada and provide an understanding of the hydrogen infrastructure and associated supply chain requirements. These snapshots should be completed for the short-term (2035) and long-term (2050) scenarios.
- Conduct a current state analysis including recent labor and economic studies for the impact of hydrogen development in Canada and more specifically Atlantic Canada. Discuss the opportunity to supply chain and service providers associated with the expected growth of the hydrogen economy.

Task 3: Conduct meaningful industry engagement

- The Consultant should provide a stakeholder engagement and communications framework for approval by the Project Management Committee.
- Introduce the project to key stakeholders in each Atlantic province (such as project developers, governments, supply chain service providers, Indigenous and rural community leaders, and academia), share the project's objectives and scope, and initiate meaningful engagement.
- Identify key stakeholders in the hydrogen ecosystem for each Atlantic province; categorize their role within the hydrogen value chain.
- Complete a minimum of four industry workshops, one in each of the Atlantic provinces. Participants will be identified through the preceding task and through discussion with the PMC. The PMC will support with workshop outreach. Workshops should be focused on providing the information collected in the preceding tasks to participants and

verifying findings. The Consultant will be responsible for organizing the workshops and leading the discussions.

- Engage with key stakeholders outside of the workshops to capture more nuanced and targeted input and to fill any specific knowledge gaps.
- Engage with relevant industry associations and stakeholders who have completed or are currently conducting similar work to ensure alignment and consistency with ongoing efforts in the region.
- Gather industry perspectives. Understand the barriers and opportunities they foresee in establishing a hydrogen economy in the region. Discuss their role, capabilities, and adaptability within the hydrogen supply chain.
- Determine readiness levels of key suppliers to engage in supply chain scenarios (e.g., type of business, location(s) and number of facilities, size of workforce, relevant or transferable experience from similar industries, certifications, and ability to obtain them).

Task 4: Assessment of the Hydrogen Supply Chain within Atlantic Canada.

- Analyze the current workforce in Atlantic Canada in relation to the requirements of a hydrogen value chain. Consider existing workforce capabilities and efforts and assess their readiness to meet future demand.
- Conduct a gap analysis of the existing supply chain using information collected in the preceding tasks. Determine what gaps exist within the hydrogen supply chain.
- Complete a SWOT assessment of the existing supply chain.
- Evaluate opportunities for Diversity, Equity, and Inclusion in the hydrogen supply chain. Specifically, identify opportunities for Indigenous and rural communities as supply chain participants.
- Evaluate additional opportunities: such as innovation, research & development, workforce development, and building a competitive advantage in the region.

Task 5: Pathways to Develop Atlantic Canada's Hydrogen Supply Chain

Provide a pathway to bridge identified gaps in the short-(2035) and long-term (2050) scenarios. Key elements include:

- Barriers and supports that could impact supply chain development including, but not limited to:
 - Factors that could prevent or delay supply chain expansion (e.g., policy uncertainty, workforce needs, investment, certifications).
 - Existing programs and supports to facilitate supply chain engagement, as well as gaps in supports.
 - International and geopolitical factors.
- Potential solutions to address barriers.
- Discuss local content strategies to ensure supply chain participation.
- Pathways and action plan for short- and long-term supply chain development, outlining areas where local capacity and capability can be expanded upon, along with specific practical measures which local industry can lead.
- Identification of the types of potential partnerships and joint ventures for local companies that may be practical to advance local capabilities and capacities.

5. Relevant Public Documents

Below is a list of publicly available documents that are relevant to this study. Additional, non-public documentation will be provided to the consultant at the outset of the work to support a comprehensive assessment.

- New Brunswick's clean energy strategy [Powering our Economy and the World with Clean Energy – Our Path Forward to 2035](#)
- New Brunswick's [Hydrogen Roadmap](#)
- Newfoundland and Labrador's Renewable Energy Plan [Maximize Our Renewable Future](#)
- Newfoundland and Labrador's [Hydrogen Action Plan](#)
- Nova Scotia's [2030 Clean Power Plan](#)
- Nova Scotia's [Green Hydrogen Action Plan](#)
- Prince Edward Island's [2040 Net Zero Framework](#)
- Net Zero Atlantic's [Net-Zero Future: A Feasibility Study of Hydrogen Production, Storage, Distribution and Use in The Maritimes](#)
- Net Zero Atlantic's [Net-Zero Future: A Feasibility Study of Hydrogen Production, Storage, Distribution and Use in The Maritimes - NL Extension](#)
- Net Zero Atlantic's [Socioeconomic Impacts of Hydrogen Production in Nova Scotia](#)

6. Deliverables

The Consultant is required to attend and host PMC meetings and provide updates on the project at a frequency suggested by the Consultant and approved by the PMC. As the project progresses, the Consultant will provide:

- I. **Workshops:** The Consultant will conduct one workshop in each of the Atlantic Provinces - Nova Scotia, New Brunswick, Newfoundland, and Prince Edward Island. A workshop summary will be provided for each workshop, detailing key discussions, feedback, and recommendations from participants.
- II. **Public Facing Report:** Presenting the results of the scope of work stated above in Section 3.0. Both draft and final versions of these reports will be provided, with the Project Management Committee (PMC) having the opportunity to recommend reasonable modifications to the draft report for inclusion by the Respondent in the final version.
- III. **Power Point Presentation & Public Webinar:** Including, at a minimum, PowerPoint presentation & two public webinars hosted by the Atlantic Hydrogen Alliance in the Maritime provinces and Energy NL in Newfoundland & Labrador and delivered by the Consultant.
- IV. **Infographic or Info Sheet:** Outlining key findings in an easy-to-access medium.

7. Timelines

The following timeline outlines the PMC’s expectations:

Project Timelines	
Item	Date
RFP Release Date	December 19 th , 2024
RFP Q&A Close Date	January 21 st , 2025 @ 1PM NST
Proposal Due Date	January 31 st , 2025 @1PM NST
Target Project Award Date	February 18 th , 2025
PMC Project Status Meetings	Frequency suggested by consultant
Final Report	August 31 st , 2025

Engagement, meetings, and presentations will occur through virtual and/or in-person delivery. The Consultant is expected to provide an updated timeline showing details of these sessions to the extent possible.



8. Project Budget

The total project cost must not exceed CAN \$330,000 (including tax) and is inclusive of any related travel expenses and direct expenses. 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.

9. Respondent Qualifications

The successful applicant must have:

- **Proven Expertise:** Demonstrated experience in assessing supply chains and knowledge of hydrogen applications and supply chains.
- **Stakeholder Engagement Skills:** Ability to effectively engage with a range of stakeholders and conduct workshops to gather diverse perspectives.
- **Technical Knowledge:** Comprehensive knowledge of hydrogen infrastructure, supply chains, and applications.
- **Strong Communication Skills:** Ability to produce clear reports, infographics, and deliver presentations and webinars effectively.
- **Project Management Experience:** Proven track record in managing similar projects, ensuring timely and budget-compliant delivery.
- **Knowledge of Atlantic Canada's energy industry and manufacturing sector.**

10. Proposal Requirements

- The proposal should be concisely worded with clearly described objectives, methods, budget, schedule, and deliverables. The proposal should include a workplan outlining how all the tasks will be approached. The proposal should be a maximum of 15 pages excluding appendices, title page, and cover letter.
- The proposal should include a description of the Respondent's organization and its relevant experience with similar projects. The Respondent must also describe 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, as an appendix.
- The Respondent should provide a detailed budget including project tasks, team member daily or hourly rates, and their intended number of days/hours to work on each project component.
- A single electronic document is sufficient. Please ensure 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.
- Submissions should be emailed to Stephanie Adey at sadey@energyl.ca prior to the deadline. If there are any issues regarding submissions, please reach out to Stephanie by email or phone (709-758-6610 ext. 206).

11. Questions and Clarifications

The PMC will accept content-related questions from interested applicants on an ongoing basis until January 21st, 2025 at 1PM NST. Please email Stephanie Adey at sadey@energynl.ca with any questions prior to this date. Additionally, a Q&A page will be available on the Energy NL [website](#). The names and organizations of those submitting questions will remain anonymous; only the question and the project team'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.

12. Evaluation

This project will be administered through the AHA. The rubric below demonstrates the weighting associated with each proposal component. Proposals will be quantitatively evaluated against a set of criteria developed by the PMC. Respondents 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. Knowledge and experience in the hydrogen sector, Atlantic Canada’s energy industry, and manufacturing sector.	30%
Project Plan, Approach and Methodology: Consultant 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 Respondent and PMC are clearly described.	30%
Local Content and Knowledge: The Respondent has local representation on their team, ensuring regional expertise and participation in the project.	20%
Schedule and Work Distribution: Respondent describes an achievable schedule and demonstrates the ability to complete the work on or before the desired completion date.	10%
Value: The project offers good value for the proposed budget. The budget is clear, convincing, and well-described.	10%
Total:	100%

Please Note: The PMC reserves the right to fully award, partially award or not award the project ' H2 Supply Chain Gap Assessment and Development Plan for Atlantic Canada.'