

Table of Contents

Introduction		2
Why is Clean Fuels Production Important?	2	
Why Newfoundland and Labrador?	3	
About econext	5	
Aim to be a Global Leader in R&D, Training, and Innovation		8
Attracting New 'Green' Industrial Activity		8
Energy Storage		9
Underground Clean Fuels Storage	9	
Underground Compressed Air Storage	10	
Pumped Water Storage	10	
Extracting Value from Waste Streams		11
Energy Pathways Modeling		12
Decarbonizing Domestically		12
Transportation	13	
Ports	13	
Heavy Industry	14	
Electricity	14	
Carbon Removal	15	
Leverage the Emerging Industry to Facilitate RED Initiatives		16
Implement an Aggressive Investment Attraction Strategy		16
Incentivizing, Not Disincentivizing	17	
Regulations and Permitting	18	
Accessing Electricity Supply	19	
Offshore Considerations	20	
Branding NL as a Global Leader	20	
Conclusion		21



Introduction

The emerging clean fuels industry in Newfoundland and Labrador (NL) presents substantial long-term growth opportunities for the province over and above those associated with construction and operations.

To realize these opportunities, it is important to be proactive in envisioning how the presence of these new industries in our province can be leveraged to benefit the economy and our communities for many years to come.

This discussion paper explores the economic development opportunities adjacent to the clean fuels industry and provides recommended next steps that can be taken within the province to advance them.

Why is Clean Fuels Production Important?

In the global fight against climate change, 'clean fuels' are viewed as an important part of the solution.

The Government of Canada defines clean fuels as 'fuels that produce much lower greenhouse gas emissions than traditional fuels on a life-cycle basis'. Practically speaking, the term refers to hydrogen, ammonia, methanol, diesel, and other fuels that are produced through environmentally sound processes (i.e., via renewable energy).

Many fuels like hydrogen and ammonia are already used in significant quantities worldwide – but are derived from processes that create GHG emissions. The displacement of these commodities with their clean fuels equivalents – e.g., the same fuel but produced using low-emissions processes – in and of itself creates a significant demand for clean fuels.

But the projected demand extends far beyond this displacement.



Clean fuels can be used to replace fossil fuels in a variety of applications – from transportation (trucks, planes, trains, marine vessels), to industry (heavy duty machinery and equipment), to electricity generation. Clean fuels can act as powerful mediums for energy storage and be used effectively when the limits of battery technology make outright electrification unfeasible.

Clean fuels like hydrogen are central to the net zero objectives of many jurisdictions, particularly in Europe where significant quantities of hydrogen are key not only for decarbonization but to also enhance the energy security of nations in light of the invasion of Ukraine by Russia.

Why Newfoundland and Labrador?

NL has a number of key strategic advantages which make it an attractive location for clean fuels production:

- Untapped wind resources NL has some of the best onshore and offshore wind resources in North America.
- Backed by a hydroelectric grid NL has an abundance of hydroelectricity (developed and undeveloped) for base load and backup.
- An abundance of land and water NL has significant available and accessible crown land and fresh water.
- Existing port infrastructure NL has a series of established industrial-focused ice-free deep seaports with land available for infrastructure to support development.
- Strategically located Located on the eastern seaboard of North America, NL is on major shipping routes, is close to key markets on the continent, and is the closest point between North America and Europe.



- Significant energy storage possibilities From pumped water to geologic storage, strong options exist in NL to help balance demand and supply of energy.
- A ready supply chain NL has a robust energy sector supply chain with specialized expertise in areas such as: engineering; fabrication; marine transportation; logistics; safety; environmental monitoring; etc.
- A skilled workforce NL has a workforce with transferable skills and significant experience in supporting large scale construction and energy projects, primed to lead the transition to low-carbon economy.
- Supportive government Canadian and NL governments have made significant commitments to support the clean fuels projects including funding and incentives for development, infrastructure, R&D, and more.

While all of these factors individually are not necessarily unique, the fact that they exist in one geographical area – Newfoundland and Labrador – makes the province compelling for developers.

The role that NL can play was accentuated by the German Chancellor's visit to the province in the Summer of 2022. Countries like Germany are counting on jurisdictions like NL – that have all of the key ingredients to be large producers and exporters of clean fuels – to provide them with the resources that they need.

Despite its small population of just over 520,000, NL has an opportunity before it to play a significant role in enhancing global energy security and making a very meaningful contribution in the fight against climate change. By becoming a leader in the clean fuel transition, NL can position itself as an international leader in the transition to a low-carbon economy. This can help attract investment, talent, and partnerships from around the world, further boosting the province's economic and environmental benefits.

It is incumbent on NL to embrace this responsibility, while seizing the opportunities that it will provide.



econext's purpose in publishing this discussion paper is to create a greater awareness of the opportunities that are before NL, and to encourage decision-makers and stakeholders to advance their thinking about how they can be realized. This discussion paper is the beginning of the conversation and not meant to be definitive or conclusive. econext welcomes feedback that helps it to better understand the opportunities associated with clean fuels.

About econext

econext is a not-for-profit association of businesses that accelerates clean growth in NL, working on behalf of over 200 members to foster environmentally sustainable economic development since 1992.

econext has played an important role in exploring the potential that clean fuels presents NL:

- In June of 2020 econext provided economic recovery recommendations to NL after the onset of the pandemic in 2020, including highlighting the opportunity that hydrogen presented the province as being a priority.
- In February of 2021 *econext* <u>published a discussion paper</u> on the potential hydrogen economy presented NL.
- This was followed up in July of 2021 by the publication of a paper which *econext* contributed significantly to exploring the <u>feasibility of hydrogen production</u>, <u>storage</u>, <u>distribution</u>, <u>and use</u> in the province.
- In 2022, through its <u>Net Zero Project</u> partnership, the technical and economic feasibility of blue hydrogen production from the province's offshore resources was explored.
- In late 2022, econext led a <u>trade mission</u> to Germany and The Netherlands to better understand clean fuels demand and build international partnerships.



The topics explored and recommendations made in this discussion paper were developed through engagement within the *econext* membership and network of partners.

Going forward, one of *econext*'s primary objectives will be to help to drive research, development, and innovation in NL's emerging clean energy industry – including clean fuels. The organization is working to ensure that the present and future workforce are ready to participate, and that the province and its communities attract investment and maximize the associated economic development opportunities.

Opportunity: Aim to be a Global Leader in Research, Development, Training, and Innovation

The International Energy Agency (IEA) <u>says</u> that 'alongside cost reduction from economies of scale, R&D is crucial to lower costs and improve performance' within the industry. Further, 'government actions... are critical in setting the research agenda, taking risks, and attracting private capital for innovation.'

As an early entrant into global clean fuels production, NL is in a position to take a leadership role in R&D and innovation – and accrue the benefits thereof. The Organisation for Economic Co-Operation and Development (OECD) provides empirical evidence of the positive and substantial impact that investment in R&D can have on the productivity and economic growth at firm, industry and country levels.

While jobs are one important indicator of economic development, they invariably spike during construction phases and contribute to 'boom and bust' cycles. A deliberate focus by NL on R&D, training, and innovation will help ensure that the impact of the clean fuels industry within the province extends beyond construction, production, and clean fuel export. In addition to the fuel itself, expertise developed in NL can become an exportable commodity on an international scale.

NL will not be starting from scratch in this regard. Within its research institutions the province has existing expertise in energy, process engineering, biofuels, cleantech, and more that can



be positioned to support the success of domestic industry and position the province as a leading contributor in specific areas of interest. NL has the potential to be a 'centre of excellence' in clean fuels R&D.

In the process, universities and colleges can attract investment, grants, high quality personnel, and students interested in clean fuels and the activity happening in NL. Startups, technology developers, and innovators will likewise have reason to engage in NL. This is true on an international basis, but even from within Canada where substantive expertise exists (particularly in Western Canada).

In addition to R&D, local educational institutions are already taking action to meet the workforce needs of an emerging domestic industry, and efforts are underway to greatly expand on these efforts. It is becoming clear that a bottleneck for the clean fuels industry will be access to skilled labour. World class training and professional development programs can help to supply the industry's labour needs by providing new opportunities to local workers and attracting newcomers who can both train and find employment within NL. Moreover, the programming and expertise developed in training – helping students to master technologies and manufacturing processes – can be marketed worldwide. The opportunity is clear and present for academic institutions in NL.

econext has established an Industry Advisory Committee to help prioritize clean energy R&D and workforce development initiatives in NL. To become a leader in these areas, a deliberate strategy must be developed and implemented.

Recommendation: Support econext's efforts to delineate, prioritize, promote, and

attract investment for clean fuels R&D expertise and activity in NL.

Recommendation: Include in R&D priorities environmental impacts of the industry's

emergence in NL, e.g., water use and management.

Recommendation: Support efforts by education and research institutions to provide

training and professional development programming and become

centres of excellence.



Recommendation: Support the creation of clean fuels research and training facilities in

NL that support technology access, development, demonstration,

and deployment.

Recommendation: Set the expectation that clean fuels producers in NL to contribute

to local R&D initiatives.

Opportunity: Attract New 'Green' Industrial Activity

Hydrogen use today is dominated by oil refining processes, ammonia production, methanol production, and steel production. Ammonia is used widely in agriculture for fertilizer and in chemical manufacturing. Methanol is used in pharmaceuticals, agrichemicals, adhesives, paints, plywood, synthetic fabrics, and more. Steel is the world's most important engineering and construction material. It is used in every aspect of our lives; in cars and construction products, refrigerators and washing machines, cargo ships and surgical scalpels.

Hydrogen (and its derivatives like ammonia and methanol) can be produced through a variety of methods; today virtually all of the hydrogen supplied for industrial activities is produced using fossil fuels in high-GHG emitting processes. All of the products listed above are, therefore, very impactful from a GHG perspective. Thus, the use of clean fuels presents the potential for significant global GHG emissions reductions and the decarbonization of a variety of industries.

If NL is to become a global hub for clean fuels production, are there opportunities for the attraction of secondary manufacturing operations such as those listed above? An abundance of clean fuels and access to clean electricity (present and future) may present a compelling case in the attraction of new investment for the province. In addition, the abundance of iron ore and other critical minerals required for the global energy transition may create synergistic opportunities between mining and energy industries.



The growth of industry that creates domestic demand for clean fuels will increase the resilience of the emerging industry into the long term and add a layer of protection for the provincial economy from international supply/demand disruptions like that which are seen in the oil and gas industry.

Recommendation: Target and attract green industrial activity to NL.

Opportunity: Energy Storage

Much of the clean fuels production in NL in the near term is envisioned to be done so utilizing wind energy. Wind is an intermittent source of energy in that it cannot be counted on for continuous production at a constant rate; wind is variable and so is its electricity output. Clean fuels processes require stable electricity access. While wind resources in NL may seem unlimited, the availability of hydro electricity from the grid is not. Thus, storage is an important enabler of the clean fuels industry.

Beyond supporting clean fuels production, energy storage presents significant opportunities for NL's electricity grid. NL has excess energy capacity in the Summer months, while it has very little excess capacity (if any) during the coldest periods of the year in the Winter when electricity demand is higher. With accelerated electrification of the economy underway and growing demands for clean electricity, managing these peak periods will become more challenging. Energy storage systems can help balance supply and demand.

Underground Clean Fuels Storage

Large quantities of hydrogen can be stored in caverns for many years. The storage of large quantities of hydrogen underground in solution-mined caverns within salt domes, aquifers, excavated rock caverns, or mines can function as 'energy' storage – and a method by which the supply and demand of energy can be balanced in a number of important ways.



When surplus electricity is available (from the grid or from clean fuels production operations) hydrogen can be produced and stored. From the clean fuel producer's perspective, this provides reserve product that can be utilized when intermittent electricity access reduces production at other times. It also provides access to energy that can be utilized to meet electricity needs of local operations.

In the context of the provincial electricity grid, stored hydrogen reserves can be mobilized to meet electricity needs when demand hits its peak periods (i.e., winter) - providing a source of clean electricity that will be an improvement on the GHG-emitting Holyrood generating station.

Underground Compressed Air Storage

In the same way that caverns can facilitate clean fuels storage, the possibility also exists to use clean electricity to compress and store (compressed) air within them. This air can be released through turbine generators to create electricity when required, thus performing the same energy supply/demand role as stored clean fuels.

Recommendation: Identify underground storage opportunities. Develop resource assessment plan to uncover underground storage opportunities. Conduct a technical and economic analysis to better understand potential role of underground storage opportunities for NL.

Pumped Water Storage

'Pumped water' storage can accomplish many of the same outcomes. This approach sees water being pumped to a location on higher ground where it can subsequently be released when required through turbines to create hydroelectricity. Water can be stored when wind is strong or excess electricity exists - and released when electricity supply (for localized operations of the grid at large) is low.



Recommendation: Identify pumped water storage opportunities. Develop resource assessment plan to uncover currently unknown pumped storage opportunities. Conduct a technical and economic analysis to better understand potential role of pumped storage opportunities for NL.

Opportunity: Extracting Value from Waste Streams

From forestry to aquaculture and fisheries to various forms of agriculture, biomass resources exist in NL that are not being utilized to their maximum potential. Various applications for this resource exist, and there are intriguing possibilities associated with supporting NL's emerging clean fuels industry. Biomass itself can be converted into clean fuels. There is also the potential for biomass to be used in clean electricity generation, which could add capacity to the grid or meet the needs of specific producers. econext is engaged in a preliminary assessment of the potential for biomass to support the clean fuels industry in NL. Next steps in this regard will require more technical study and analysis.

Recommendation: Further explore the technical and economic feasibility of using biomass in support of the clean fuels industry.

Other opportunities to support the clean fuels industry in NL related to waste management in NL may exist. For example, methane captured at provincial landfills could be used to strengthen the supply of electricity, or other waste streams (organic or inorganic) may provide value.

Recommendation: Understand other value from waste opportunities that could support the clean fuels industry.



Opportunity: Energy Pathways Modeling

Clean fuels production processes require access to renewable energy sources. While NL's electricity grid is predominantly 'clean', there is limited capacity available to supply industrial projects. Yet there are abundant renewable energy resources that can be developed or optimized to increase the grid's capability to support clean fuels projects. Moreover, as described above there are a number of energy storage and energy efficiency options that exist which can accomplish the same, in addition to waste resources which could play a role as well. Not all options would be implemented simultaneously, but a combination of some of them could help balance supply and demand for electricity in NL and maximize its clean energy output. Modeling is required to understand what the best combination of activities would be to most efficiently maximize growth opportunities. Such analysis goes above and beyond a singular project; a holistic view is required to understand what infrastructure can be shared that can benefit multiple parties simultaneously and the energy system at large.

Recommendation: Undertake domestic energy pathways modeling – with the

participation of decision makers, utilities, developers, and other key

stakeholders - to maximize clean energy opportunities and

investments in NL.

Opportunity: Domestic Decarbonization

Clean fuels are playing an important role in decarbonization internationally. With domestic production of clean fuels within the province it is logical to explore how they can contribute to the decarbonization of the NL economy.

The primary benefit of decarbonization is the lessening of environmental impacts and the avoidance of carbon pricing. There are other benefits that should be considered within the context of clean fuels and economic development:



- The use of locally produced clean fuels can help contribute to the long-term resilience and success of the industry;
- Exploring domestic use cases for clean fuels presents R&D opportunities; and
- The use of clean fuels domestically contributes to the 'story' of NL being a global leader in clean energy and can assist in attracting new interest, investments, etc.

Transportation

Transportation accounts for approximately 34% of NL's GHGs. The transport of goods, services, and people via cars, busses, transport trucks, ferries, aviation, etc. has a significant environmental impact.

Recommendation: Conduct a technical, environmental, and economic analysis of

clean fuels decarbonization opportunities for transportation in NL – focusing on heavy transport, bussing, marine, and rail. Develop a

plan that aligns with NL's net zero by 2050 commitments.

Recommendation: Invest in clean fuels (e.g., hydrogen) fueling stations to facilitate the

adoption and use of clean fuels in road and marine transportation.

Ports

Seaports are vital economic infrastructure throughout NL, enabling industrial and commercial activity in almost all sectors by virtue of Newfoundland being an island and the vast coastline of Labrador. Therefore, ports also represent an important avenue of decarbonization for NL, with the ability to facilitate advancements towards net zero for multiple sectors simultaneously. While some decarbonization activities associated with ports and their operations will involve a degree of electrification, it is likely that the use of clean fuels will also be involved. This is



accentuated by the fact that most major wind-to-hydrogen production projects being explored in NL are in partnership with or have ties to specific ports.

Recommendation: Develop and implement strategies for the decarbonization of NL

ports and their operations.

Heavy Industry

Heavy industry (mining, offshore oil and gas, etc.) accounts for over 40% of NL's GHGs. Some of the processes involved in these activities are not technically or economically feasible for electrification. The displacement of fossil fuels in the heating, manufacturing, electricity generation, and transportation processes often found in heavy industrial sites with clean fuels can have a significant effect on GHGs – for present and future operations.

Recommendation: Work with industry partners to conduct technical and economic

analysis of clean fuels decarbonization opportunities for their operations. Develop a plan that aligns with NL's net zero by 2050

commitments.

Electricity

Electricity generation currently accounts for approximately 12% of NL's GHGs. While this is predominantly associated with the Holyrood generating station, the capacity lost through its decommissioning will need to be replaced. As described above, clean fuels is one of the leading options for storing renewable energy and can be deployed when necessary. The most direct approach is the use of hydrogen and its derivatives in gas turbines. Gas turbines, specifically engineered for clean fuels, are now being produced. Even present-day diesel turbines can accept fuel blends – i.e., the mixing of hydrogen into the diesel fuel – at various rates to allow for significant GHG reductions. Services are emerging to modify existing diesel engines to significant increase intake capabilities for clean fuels. These options are important



considerations for the province's electricity grid, heavy industrial activities, as well as remoteoff grid communities who rely on diesel turbines for electricity.

Recommendation: Conduct a technical and economic analysis of clean fuels

decarbonization opportunities for NL's electricity grid.

Recommendation: Require that future infrastructure investments are capable of

blended fuel intake (if not the use of pure clean fuels).

Carbon Removal

Direct air capture (DAC) technologies extract CO2 directly from the atmosphere. The CO2 can be permanently stored in deep geological formations in saline aquifers or can be utilized in processes such as food processing or synthetic fuel generation. For DAC processes to be achieve net negative emissions, the energy used to power the facilities must be clean.

The prospect of new wind energy developments in NL may present interesting DAC opportunities. When winds are high and electricity is in low demand, DAC systems could be powered by this excess clean electricity. DAC is most effectively used in areas that are windy (increasing the natural airflow through the fans), which makes their use in NL attractive. Once the CO2 is captured it can be injected into geologic formations (onshore or offshore) that have CO2 storage potential. Such a process could create much-needed carbon offset opportunities for NL and its industries, and result in green hydrogen production that has net negative GHGs.

Recommendation: Explore the concept of DAC within the context of deployment when

excess clean electricity exists.

Recommendation: Support efforts to assess geologic storage potential of CO2 in NL.

Recommendation: Create a framework by which negative emissions projects are

eligible for carbon offset accreditation and promote them as

investment opportunities.



Opportunity: Leverage the Emerging Industry to Facilitate Regional Economic Development Initiatives

Communities throughout NL are facing significant challenges such as ageing populations, outmigration, uncontested elections, the ability to form committees and councils, and thus a lack of capacity to pursue economic opportunities.

The growth of the clean fuels industry may provide opportunities to organize regional economic development initiatives in and around the areas of production.

While a competitive process for crown land access for wind development is still currently underway, based on the <u>results</u> of the land nomination process it is reasonable to assume that there will be multiple geographies of interest for development spread throughout the province. Moreover, the crown lands awarded are likely to border on a number of different communities – not just one. These major projects will not be confined to arbitrary municipal boundaries.

Communities that feature, are adjacent to, or are near clean fuels projects will benefit from the jobs and presence of commercial/industrial activities that are associated with them.

But beyond these direct and immediate benefits, these communities are also presented with many opportunities that have been identified in this discussion paper that can have a lasting impact. The pursuit of these opportunities, however, will require both dedicated resources and a degree of collaboration within a region.

Recommendation: Implement a regional economic development pilot project through the lens of green economic growth.

Requirement: Implement an Aggressive Investment Attraction Strategy

To maximize the potential associated with the emerging cleans fuels industry, it is most important to first ensure that the clean fuels industry comes to fruition in NL. The provincial



government has accomplished a great deal within a short period of time in this regard and should be commended. Work remains to finish the job. Prospective developers need certainty soon in order to secure the investment and equipment required for their projects to advance.

Recommendation: Conclude the review of competitive bids submitted and award exclusive land rights in a timely matter. If the volume of material to be reviewed and analyzed presents challenges in this regard, attribute the resources that are required to accomplish the task...

Having a clear and competitive policy and regulatory framework is vital for attracting and retaining investment. Developers require investors, and investors demand transparency, consistency, stability, predictability, and – above all things – certainty. This is particularly important within the global context, where corporations have a range of compelling options when it comes to investing in new markets and required equipment and technologies becoming scarce. Capital is not unlimited, and choices will be made.

Incentivizing, not Disincentivizing

The advantageous characteristics that NL features, described at the outset of this discussion paper, have collectively brought significant attention to NL as being a prime location for clean fuels production. NL has reacted swiftly and effectively to meet these opportunities in establishing fair and open processes for prospective developers to participate in, including the crown lands competition which is currently underway.

Canadian tax incentives for clean energy and hydrogen production announced in Budget 2023 are powerful vehicles for investment attraction for the country. NL must be careful not to diminish their impact by applying too aggressive conditions on project developers within the province.

It is, of course, important for NL to see direct benefit from these projects and their use of the people's land and water - but NL must also appreciate that clean energy investment into the



province is by no means a guarantee. Jurisdictions around the world are vying for such investment, competition is fierce, and supply chains stressed.

Early movers and investors into clean fuels production and export are entering into an industry that is new and emerging with many unknowns and many risks. Helping these pioneers establish an industry in NL – and succeed – opens the doors to a long-standing industry and a multitude of related and adjacent economic growth opportunities as described above in this discussion paper. NL must take great care to ensure that it is incentivizing investment and activity and not disincentivizing it with overly aggressive measures.

Regulations and Permitting

Appropriate safety, environmental, and other conditions must be in place to allow for the production, storage, transportation, fueling, blending, and other uses of clean fuels. But the 'newness' of the industry means that clean fuels project developers and users alike face hurdles where regulations and permit requirements are unclear, unfit for new purposes, or inconsistent across sectors and countries.

Recommendation: Consult directly with project developers to identify regulatory gaps

that must be addressed on a project-by-project basis. Identify regulatory gaps associated with foreseeable future clean fuels

activities in NL.

Recommendation: Adopt and/or harmonize with regulations that exist in other

jurisdictions federally or provincially. This will accelerate processes

and establish consistency.

Recommendation: Consider fast-tracking regulatory processes for projects of

provincial, national, and international climate change importance.



Recommendation: Review approach to environment assessment (EA) to ensure

unintended consequences are avoided (e.g., time lags that will put

developers at a competitive disadvantage).

Accessing Electricity Supply

The current legislated mandates of NL Hydro and the Public Utilities Board (PUB) require that decisions around electricity investments are done so through the lens of safety, reliability, and cost. Unfortunately, these key stakeholders are not able to give consideration to environmental, economic growth, or socio-economic factors.

'Green' industrial activity requires clean energy, and the greenest forms of energy are not always the least cost option. Further, current decision-making processes regarding electricity grid investments are slow – too slow to meet the needs of an emerging industry where intense global competition exists.

These factors would impede progress on many of the opportunities defined above. The fight against climate change and global energy security concerns demand that processes are accelerated. Via the *Electricity Power Control Act*, the provincial government is able to provide direction to the regulator and its crown corporation to consider other matters in their decision-making.

Recommendation: The NL government should provide direction to the PUB and NL

Hydro to consider environmental, economic, and/or socio-

economic benefits in decision-making.

More flexibility is required to allow for the potential of private sector investment into clean energy in NL, particularly where there is little negative impact on the electricity grid. The private sector can invest in generation and storage technologies that meet the needs of clean fuels producers, but industry requires a clear signal from NL that such investment is welcome.

Recommendation: Create an independent power producer policy for NL.



Offshore Considerations

Following developments onshore in NL, the next frontier for clean fuels production may be via offshore wind. In addition, future offshore exploration may result in the discovery and development of natural gas. Low carbon intensity clean fuels production may take place through new offshore wind energy farms, the utilization of natural gas paired with carbon capture technologies, or a combination of the above. Such developments (or major aspects of the developments) would likely occur in areas that are in joint Canada-NL jurisdiction, meaning that establishing the enabling conditions for such activity will be complex.

Recommendation: Continue pursuing the implementation of enabling conditions for

the production of clean fuels from offshore energy (renewable and

non-renewable).

Branding NL as a Global Leader

To realize the opportunities outlined in this discussion paper, NL must entice new industry, R&D, SMEs, innovators, etc. from across Canada and the world to bring their interests to NL.

Deliberate and strategic **investment attraction** activities must be taken to accomplish this. Investment attraction requires the application of best practices and – above all else – dedicated time and resources.

The benefits of engaging with NL in and around clean fuels must be aggressively promoted on a national and international basis. Long-term international partnerships between different levels of governments, industry groups, and research institutions should be established and leveraged.

There are many other jurisdictions globally vying for attention in the realm of clean fuels. NL must be strong in promoting itself as a destination for activity and investment as to enable future economic development opportunities for the province.



Recommendation: Develop and implement an investment attraction strategy that

positions NL as a global leader in clean fuels production and choice

for global investment.

Conclusion

The emerging clean fuels industry in NL presents substantial long-term economic growth opportunities for the province. This discussion paper explores these opportunities and provides recommended next steps that can be taken within the province to realize them.

econext looks forward to engaging its partners in the pursuit of these ideas and recommendations and is open to exploring other priorities or concepts that readers of this discussion paper may have.

Visit <u>www.econext.ca</u> for more information on *econext* and for details on how to connect.

