

**Submission to Environment  
and Climate Change Canada  
on  
*A Regulatory Framework to Cap Oil and Gas Sector  
Greenhouse Gas Emissions***

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## Introduction

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. Energy NL members are a diverse representation of businesses involved in a range of activities related to both renewable and non-renewable energy development, construction, and operations. This includes, but is not limited to, areas such as direct offshore and onshore supply, health and safety equipment and training, engineering solutions and fabricators, law firms, and human resource agencies.

Energy NL is pleased to have an opportunity to provide this submission in response to the “*Regulatory Framework to Cap Oil and Gas Sector Greenhouse Gas Emissions*” which was released by Environment and Climate Change Canada on December 7, 2023.

Canada’s oil and gas industry, including the offshore, has an important role to play and has committed to being active participants in working towards Canada’s climate change goals. In fact, the entire industry has been undertaking significant efforts and measures to do just that, without the imposition of an emissions or production cap, and is working towards reaching net-zero. With this in mind, Energy NL’s position with respect to the design of a cap is that it needs to include the following principles, combined with implementation that truly gives effect to these principles:

- Allow room for growth for future lower-carbon oil and gas projects which will help Canada both achieve emission targets and meet global energy demand, while also providing energy security to Canadians.
- Recognition of the measures already implemented, and commitments made by oil and gas industry participants to reduce emissions on their pathway to net-zero by 2050.
- Recognize that Canada’s oil and gas industry is not one homogenous industry, but in fact is comprised of unique components and projects all of which are not alike, and each can require varied solutions to properly contribute towards any industry-wide, national target. For example, oil extracted offshore Newfoundland and Labrador is 30% below the global greenhouse gas emission average and can play a significant role in meeting global energy demand and achieving net zero.
- Provide assurance and certainty for investors, so as to not unduly hinder Canada’s competitiveness with other oil and gas producing countries which are also pursuing net-zero targets.
- Minimize unnecessary administrative burden.
- Recognize Canada’s historical role and allow for a continued contribution to global energy security with responsibly produced products. Canada has been recognized as a leader in ESG energy production and a cap must not stifle that globally needed production.

Energy NL has serious concerns that the Government of Canada’s approach to date towards a cap either does not fully incorporate or stand true to such principles. Primarily, Energy NL does not see a pathway to allow future lower-carbon projects. Further, the potential impact of this legislation on business investment, not just in Canada’s offshore, but in Canada’s entire energy industry, and Canada as a

whole, is gravely concerning. Significant potential exists for this to have an immediate, long-lasting impact on Canada's economic well-being by curtailing investment, including foreign direct investment, and economic opportunities for Canadians, while at the same time potentially facilitating the unintended consequence of an increase in global emissions. Investment will migrate to jurisdictions with higher emissions.

Further, Energy NL feels there is a lack of details and clarity within the regulatory framework for the sector to comprehensively respond during this current consultation period. Energy NL encourages the Government of Canada to provide more substantive details on the mechanisms of the cap for upcoming consultations.

For the reasons noted immediately above, namely the lack of certainty for future growth and the lack of clarity in the information provided as to the functioning of the cap, Energy NL does not support the regulatory framework as presented.

### **Newfoundland and Labrador's Offshore Oil and Gas Industry**

Energy NL's submission of September 30, 2020, to Environment and Climate Change Canada in response to options proposed to Cap and Cut Oil and Gas Sector Greenhouse Gas Emissions provides details regarding the background on Canada's offshore oil and gas industry, its unique characteristics, its current operations, and its extremely low production emissions. We refer you to that document for details, but key considerations for the offshore industry are:

- Canada's offshore oil production, which is currently exclusively undertaken in Newfoundland and Labrador, is inherently different than onshore oil and gas operations.
- The economic impact of the offshore oil and gas industry has had a transformative impact on the economy of Newfoundland and Labrador; it provides a substantial contribution towards jobs, GDP, and economic and social well-being upon which this province has become truly reliant.
- By any measure, Newfoundland and Labrador's offshore oil and gas industry greenhouse gas (GHG) emissions are low. In 2019, the year referred to in the framework, the four offshore oil projects collectively emitted 1.8 Mt CO<sub>2</sub>e, comprising just 1% of the national oil and gas sector and just 0.25% (one quarter of a percent) of Canada's *total* emissions. Some single-site industrial operations in Canada, such as some in the steel industry, emit amounts equating to multiple times that of the entire offshore oil and gas industry, and yet they are not subjected to a cap.
- Notwithstanding the low level of emissions, Newfoundland and Labrador's offshore industry is working collaboratively to identify and implement measures to further reduce emissions and participants are committed to reaching net zero by 2050.
- The uniqueness of offshore development, construction, and operations are important to consider whenever policy or regulatory measures are being designed for Canada's oil and gas industry, as blanket approaches do not work and have the potential to unnecessarily impede one aspect of the industry more than another. This was recently recognized by the Government of Canada with the approach taken to reduce methane emissions in Canada's oil and gas industry.

Methane regulation for Canada's offshore facilities will take a different approach than for onshore facilities as it will be regulated under the Frontier Offshore Regulatory Renewal Initiative.

### **Economic Impact of the Offshore Oil & Gas Sector**

In 2018, Energy NL commissioned an economic impact report regarding the offshore oil and gas industry. While the information is now approximately six years old and Energy NL is working on updating the report, the context of the staggering impact of the sector on the Newfoundland and Labrador remains relevant. At the peak of the industry in 2007, \$9.5 billion of Newfoundland and Labrador's GDP was derived from the oil and gas industry. The GDP contribution was within that contribution level for seven years.

In 2017, the oil and gas industry generated 23,500 full-time equivalent jobs in the province (including direct, indirect, and induced jobs). This resulted in approximately \$2 billion in labour income – which is 15 per cent of the provincial total – and \$1.45 billion in consumer spending. The industry generated \$973 million in capital expenditure, \$920 million in royalty payments, and over \$1.4 billion in total tax and royalty revenue.

The study also demonstrated significant economic impacts for Canadians. For every direct job in Newfoundland and Labrador in the oil and gas industry, 1.8 jobs are created in Canada. \$755 million in labour income, \$561.5 million in consumer spending and \$680 million in tax revenue was generated in the rest of Canada in 2017 as a result of the offshore oil and gas industry.

The study forecasted royalty and tax revenue to Newfoundland and Labrador to exceed \$100 billion by 2045, with 56,000 jobs created in 2033. Labour income is modelled to more than double to \$4.6 billion, as is consumer spending to \$3.5 billion. At the time of the study, the oil and gas sector had the potential to generate more revenue for the province than the entire economy currently does. Similarly, for Canada, the future impacts are significant. By 2033, every direct job in Newfoundland and Labrador's oil and gas industry is expected to create 2.3 jobs in Canada. Forecasted impacts include \$1.6 billion in labour income, \$1.2 billion in consumer spending, and \$3.3 billion in tax revenue, all in the rest of Canada.

An economic impact report prepared for Energy NL by Jupia Consultants in 2022 illustrates what could be lost to Canada by the imposition of a cap which does not provide room for new projects, based on one project alone. Using an estimate of production of one billion barrels, the Bay du Nord project being developed by Equinor can expect to boost Canada's GDP by \$97.6 billion and create or sustain 13,800 jobs. Most of these jobs would offer above-average wages. While Newfoundland and Labrador would be the largest beneficiary, with \$82 billion in GDP and over 8,900 jobs, Bay du Nord would benefit all of Canada. For example, Quebec would see a GDP boost of \$2.6 billion and over 900 jobs, Ontario would see an additional \$7.2 billion in GDP and over 2,200 jobs, while Alberta would see \$3.1 billion in GDP along with almost 700 jobs.

Government revenues across Canada would also rise, which means a Newfoundland and Labrador project would provide more money to pay for health care, education, and other social priorities. Over the life of the project, Bay du Nord can expect to generate \$11 billion in taxes and another \$12.8 billion in revenue from royalty payments for Newfoundland and Labrador. Meanwhile, the federal government

would gain \$10.7 billion in tax revenue. Provinces and municipalities outside Newfoundland and Labrador could expect to see \$2.8 billion in tax revenue because of Bay du Nord.

This is just one project, and if a cap prevents development of new projects or project extensions, the only reduction realized will be a reduction in livelihoods and the economic health of the province, as emissions displaced in Canada will be emitted elsewhere. In essence, there will be no reduction of total global emissions, simply a reduction in employment and economic benefits to Newfoundland and Labrador and Canada.

## **Energy NL Feedback on the Proposed Regulatory Framework**

### Accommodation for New Projects and Increase in Recoverable Reserves/Resources

A major concern for Energy NL with respect to the regulatory framework relates to the approach to allow for new, low-emitting projects, and production increases. As an example, and one that is of high importance to Energy NL, is how the cap could impact on the proposed Bay du Nord project in Newfoundland and Labrador's offshore, which as noted above, will have a significant economic benefit to the country. It would seem that under a closed, zero-sum system, in order for a new project/facility to be accommodated, allowances would have to come from other, possibly competitor projects, which seems complicated and even unlikely. A major determinant as to whether an emissions cap will be a production cap will be its ability to adequately accommodate and incorporate new projects, especially lower-carbon projects such as those offshore Newfoundland and Labrador.

In addition to the Bay du Nord project, going forward Canada has the ability to increasingly displace higher carbon oil on the global market with low-emitting products through numerous tiebacks<sup>1</sup> to existing facilities as well as new projects. With a cap, such initiatives are most likely not to occur and Canada's real contribution to the lowering of global emissions would be diminished.

A common occurrence with Canada's offshore projects has been an increase in recoverable reserves after projects have commenced operation. Hibernia's anticipated production has increased more than three times the original recoverable reserve estimate. In fact, Hibernia has already produced more than twice the originally estimated amount. Recoverable oil estimate increases have occurred with other offshore projects as well. An emissions cap needs to be designed to accommodate such increases, as projects often produce more than originally estimated.

An approach to emissions reduction that does not take into consideration the realities of offshore oil and gas production, including lower carbon production, as well as the very likely scenario of tiebacks and pool increases, will make it difficult to attract investment and for new projects to receive approval.

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<sup>1</sup> *A subsea tieback is a connection to an existing production platform which incorporates subsea wellheads and flowlines to access new pools or reservoirs beyond the initial/existing project. Subsea tiebacks to existing facilities can extend the production of existing projects and have become increasingly viable, both technically and economically. Norway has become a global leader in subsea tiebacks. Rystad Energy data indicates that the value of such projects in Norway, over the next five years, to be in the range of \$55 billion. Numerous reservoirs and pools exist within a 30-40km range of Newfoundland and Labrador's existing offshore production area which provide potential tie-back opportunities, similar to the Hibernia South Extension tieback completed in 2013.*

Companies evaluating investment opportunities take into consideration potential growth opportunities of their business, such as tiebacks, as they provide a future revenue source once payback has occurred and as initial reserves are depleting. Investment is most likely to move to jurisdictions such as Norway where tiebacks provide considerably enhanced return on investment.

#### Establishment of Cap and Approach for Allowances

Our review of the regulatory framework leads to a number of concerns, questions, and considerations related to the establishment of the cap and the approach to allowances. Primary among these is the ability for allowances or credits to be easily traded away from projects/facilities which are low-emitting towards high-emitting projects/facilities. For example, it does seem possible that an offshore operator in Newfoundland and Labrador (where emissions are low) could trade all of their allowances allocated for the Newfoundland and Labrador to higher emitting projects elsewhere, resulting in Newfoundland and Labrador with no earned credits, or space for new projects. This clearly would be contrary to Government of Canada intentions and could significantly impact certain aspects of the industry or regions of the country more than other aspects/regions.

The approach to establishing allowance must recognize the great efforts which the oil and gas industry has been undertaking to reduce emissions to date. From the perspective of Energy NL, this is no more prevalent than in the offshore where emissions are lower than the global average and where operators are already seeking operational solutions to realize lower emissions. The proposed approach appears to offer no such consideration, and in fact, could have the effect of hindering investments the industry is making in emissions reduction. The benefits of many of these investments are only starting to now be recognized, and the approach taken with a cap could significantly distract from such initiatives and progress.

Offshore projects have already implemented emissions reduction measures. Even without the impetus of a cap, significant reductions have been achieved by the sector, as highlighted below:

- The SeaRose FPSO has reduced emissions from 2007 to 2021 by almost 50% through the use of a product called “emissions.AI” that monitors energy consumption, as well as using a real-time dashboard that monitors emissions, along with a focus on emissions reduction in flaring.
- The Hebron offshore platform has reduced emissions by 33% through implementation of a gas management strategy and between 2019 and 2021 reduced emissions from flaring by an estimated 77%.
- Hibernia has reduced GHG emissions by 29% from 2005 to 2021 through initiatives such as reducing flare emissions by about 50% and replacing diesel-power cranes with electric cranes.
- The Terra Nova FPSO has recently undergone an asset life extension with upgrades leading to potential reductions in emissions including through increased reliability and corrosion mitigation.

#### *Legal Upper Bound*

Setting an upper cap limit (the legal upper bound) based on 2019 production levels directly ties allowances and emissions reduction to production. A natural direct correlation exists between production and emissions levels and the two cannot be entirely delinked. While emissions can be

reduced per unit of production, it will always be the case that reducing or ceasing production will lower or eliminate emissions. The proposed approach to an emissions cap will influence production decisions at the project level, and not necessarily in a manner which ensures that low emission projects will be the highest priority. In reality, the cap as envisioned, will limit the amount of production that Canada, especially certain regions of the country such as Newfoundland and Labrador are capable of achieving. This approach will lead to higher global emissions, as other offshore jurisdictions without a lower-carbon product and stringent health and safety regulations will replace Canada's product in the marketplace.

During the consultation period on the *Regulatory Framework to Cap Oil and Gas Sector Greenhouse Gas Emissions* Energy NL has sought clarity on the 25-megaton compliance flexibility and how that will apply on a project/facility basis. Energy NL is appreciative of the responses provided by Environment and Climate Change Canada officials and looks forward to further clarification being provided as the process moves forward. Energy NL is likely to have further questions as the approach develops.

#### *Best Performer*

The draft regulatory framework proposes to recognize "better performers." The ability of the framework to accomplish that will be dependent on the specific definition of "better performers" and how that is implemented over time. Will better performers be expected to reduce the same percentage as poor performers? Does the definition of better performers change over time?

#### *Offshore Context*

Canada's already low emitting offshore oil industry has few technically achievable options to reduce emissions based upon the very nature of offshore Newfoundland and Labrador production facilities operating in harsh environments, deepwater, and with limited facility space. In this context, it is unclear how the technologies upon which Canada's Energy Regulator Net-Zero Production Scenario will be applied, or as to how offshore facilities could be expected to meet comparable reductions. Similarly, new projects, which are required to be "best in class," can expect to commence operations using the best emission-reducing technologies and, as such, may have limited capacity to later employ additional technologies, and thus be disadvantaged compared to rates of reduction at existing projects.

#### *Contingency Plan*

Energy NL will also ask if the approach will incorporate a contingency plan to mitigate market distortions which may be created/caused by the implementation of this cap system? As an example, should the implementation of the emissions cap significantly distort (i.e. lead to significantly high) the cost of allowances, can there be a process to quickly adjust the measures?

Canada is charting new ground with this type of cap, and as with anything new at such a large scale, Government needs to be prepared to quickly identify and react to unintended consequences. An appropriate monitoring system with quick-action measures is required.

#### Lack of Detail

The regulatory framework proposed provides little detail as to how the emissions cap will work at the project/facility level. Given the current level of information in the regulatory framework document, it is difficult for stakeholders to estimate the direct intended and unintended impacts of its implementation, or even how various scenarios for program parameters (i.e. approach to allowance allocation) will impact aspects of the industry or influence decision-making at the project/facility level. Similarly, any of

the details provided in the regulatory framework only address up to and including 2030. The document is void of clarity as to how it will work, in practice, post 2030.

The type of cap-and-trade system proposed has few precedents in Canada, and certainly nothing at this scale which is targeted to just one industry. Much more detail and consultation with industry should be required before the proposed measures are advanced, allowing adequate time and opportunity for industry-led modelling to determine the impacts.

#### Joint Management & Role of the Canada-Newfoundland and Labrador Offshore Petroleum Board

With the *Atlantic Accord* and the *Atlantic Accord Implementation Act*, the Government of Canada agreed to joint federal-provincial management of Newfoundland and Labrador's offshore oil and gas activities. With that was the creation of the Canada-Newfoundland and Labrador Offshore Petroleum Board, which reports to both Natural Resources Canada and the Government of Newfoundland and Labrador Department of Industry, Energy and Technology. Furthermore, this legislation stipulates that, in the case of inconsistency or conflict with any other Act of Parliament or associated regulations that apply to the offshore area, the *Atlantic Accord Implementation Act* has precedence.

In its current form, it is unclear as to how the approach to the establishment of the regulatory framework or its contents meet the requirements of joint management, the *Atlantic Accord* and the role of the Canada-Newfoundland and Labrador Offshore Petroleum Board. Energy NL believes the role of the Canada-Newfoundland and Labrador Offshore Petroleum Board should be clarified.

#### Regulatory Burden

The imposition of a cap-and-trade system for an emissions cap, an entirely new system, in addition to the established carbon pricing measures inherently adds significant administrative burden. This adds duplication in monitoring, verification, reporting and cost, not just for operators but also for Government as Environment and Climate Change Canada implements and manages the new system. In addition, there is much uncertainty as to how this approach to an emissions cap would interact with existing carbon pricing mechanisms. Energy NL has long been concerned that regulatory uncertainty has hindered the growth of our national energy sector and this regulatory framework does not alleviate, but enhances those concerns.

#### Future Opportunities for Input

The regulatory framework to cap oil and gas sector greenhouse emissions will be one of the most defining pieces of legislation to shape the future of Canada's energy industry and its ability to contribute towards Canada's economic well being and efficiently achieve net zero. As such, taking time to ensure that it is structured to reduce unintended consequences while ensuring it meets the intended objectives, is important. The framework as outlined will require much more detail prior to being enshrined in legislation and the next steps will require significant continued industry input. For future iterations, it would be important for Environment and Climate Change Canada to provide examples of how such a system could be applied and practically operate for various aspects of the oil and gas industry, specifically the offshore. As such, Energy NL recommends further consultation documents provide examples for various types of projects/facilities.

Energy NL would appreciate the opportunity to comment and input into the process, as the regulatory framework is further developed, and certainly before Government reaches Canada Gazette Part 1 publication.



## Conclusion

Energy NL is appreciative of the opportunity to provide input to *A Regulatory Framework to Cap Oil and Gas Sector Greenhouse Gas Emissions*, as well as discussions with officials of Environment and Climate Change Canada. Energy NL has also held discussions with its members and there is consensus that many questions remain about the regulatory framework and the future approach to emissions reduction by the Government of Canada.

As outlined above, there are a number of principles Energy NL advises the Government of Canada to incorporate as it develops sector-specific regulations pertaining to emissions reduction in the oil and gas industry. Critical for Energy NL is recognition of the already lower emitting oil produced offshore Newfoundland and Labrador and the role its continued production can have to meet global demand as we move through the energy evolution and achieve net zero objectives. Any framework must include a clear pathway for new lower-carbon production which will help Canada both achieve emission targets and meet global energy demand, while also providing energy security to Canadians.

To help improve the ability of stakeholders to provide fulsome comment in the future, Energy NL requests that further details about the framework be provided as the process moves forward, especially when further consultation is to occur. Energy NL also requests that more analysis on detailed scenarios be provided (as outlined above) for future consultation – especially for the proposed final allowances formula – so all stakeholders may adequately understand, prepare, and respond to future iterations of the framework.

Coinciding with this is the effort already underway by producers to further lower emissions through operational solutions. Dramatic decreases have already occurred within offshore Newfoundland and Labrador without the impetus of a cap. The Newfoundland and Labrador offshore is unique in the product extracted and the processes required to do so. Any cap must recognize this, and take advantage of the unique opportunities available to Canada, and the world.

Any action which, if inadvertently, limits production offshore Newfoundland and Labrador does not limit total global emissions as another jurisdiction – with a higher emitting product and likely lower ESG standards – will fill the production gap. Such action will only limit livelihoods.

Energy NL is greatly concerned that as proposed, the *Regulatory Framework to Cap Oil and Gas Sector Greenhouse Gas Emissions* will leave no room for growth within the Newfoundland and Labrador offshore oil and gas sector. This will be detrimental to the offshore oil and gas sector, to the people and communities of the province, and to the net zero objectives of both Newfoundland and Labrador and Canada. For this reason, and others outlined in the provided submission (including a lack of clarity on the functioning of the cap), Energy NL does not support the regulatory framework as presented.

**Submission to Department of Finance,  
Government of Canada**

**on**

**the Clean Hydrogen Investment Tax Credit  
Legislative Proposal**

**February 5, 2024**

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## **About Energy NL**

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. Energy NL members are a diverse representation of businesses involved in a range of activities related to both renewable and non-renewable energy development, construction, and operations. This includes, but is not limited to, areas such as direct offshore and onshore supply, health and safety equipment and training, engineering solutions and fabricators, law firms, and human resource agencies.

Energy NL is pleased to have an opportunity to provide this submission on the clean hydrogen investment tax credit legislative proposal. Energy NL supports the energy evolution and the importance of reaching net zero as we all work towards improving the global environment and mitigating climate change, and we agree that development of Canada's hydrogen industry is an important component of Canada's stated climate change goals.

### **Energy NL's Approach to this Submission**

Many aspects of the of the legislative proposal are quite technical and project specific. Project developers and companies which have the detailed technical and project-specific knowledge (i.e. production pathways, hydrogen demand, project equipment) are best positioned to directly inform the Government of Canada related to the design and implementation of the Investment Tax Credit (ITC). This submission is intended to supplement rather than displace those of other key stakeholders, such as project developers, and we defer to those companies and organizations on the specifics of the final design of the ITC and wording required for the legislation.

### **Comments on the Clean Hydrogen Investment Tax Credit Legislative Proposal**

Energy NL is supportive of the Government of Canada's clean hydrogen investment tax credit, which will incentivize investment in clean fuels production in Canada and reduce risk associated with development of this new industry. The details of the design of the investment tax credit and ability for developers to access the credit will determine its success. Energy NL is pleased that the Government of Canada has been working on the design with developers and, over the past year, has been taking stakeholder feedback into account – something which is evident in various aspects of the legislative proposal.

The following highlights current issues raised by Energy NL members:

Equipment Eligibility: There is a need to broaden the equipment and construction eligibility to ensure all of the types of equipment used for hydrogen production are eligible, and this should also include the equipment associated with the production of other derivative clean fuels, not just hydrogen and ammonia. Some specific examples include the equipment required for vapour capture and compressions. Underground storage facilities (i.e. salt); marine transportation, buildings and site clearing/excavation should also be included. The legislative proposal appears to be overly prescriptive and does not account for the fact that technology and the types of equipment will change as clean fuels processes evolve.

Excluded Property: Clarity is required as to what is included in equipment used for offsite transmission, transportation, distribution, or storage. Projects proposed in Newfoundland and Labrador are predominantly export-based and, in order for them to proceed, will require some extensive investment

in infrastructure and activities to ensure product can reach global markets. These types of investments should also be included in the eligibility for calculation of the tax credit.

Definition of Eligible Power Purchase Agreement: Several aspects of the definition of an “eligible power purchase agreement” require clarification and or adjustment.

- The definition, as stated in the legislative proposal, is restricted to include electricity sourced from hydro, solar, or wind. This definition should be expanded to include a broader range of renewable forms of energy including geothermal, biomass, and nuclear.
- The requirement that power come from a source which first commences electricity no more than one year before the taxpayer’s first clean hydrogen project plan is filed with the Minister of Natural Resources is limiting. The European Union Delegated Acts on Renewable Hydrogen and the United States Clean Hydrogen Production Tax Credit allow for up to 36 months. Consideration should be given to aligning this requirement with other jurisdictions, by extending the timeframe from the currently proposed one year, to three years, so that Canada’s projects can be competitive with those in other jurisdictions.
- The European Union also allows for the incorporation of existing renewable power sources which are operational prior to 2028, and Canada’s clean hydrogen investment tax credit should include similar provisions.
- The requirement that power be for the sole purpose of the hydrogen project is another aspect which is overly prescriptive and could preclude domestic or export benefits which could be derived from other uses of any excess power.

Specified Percentage of the Tax Credit for Clean Ammonia and Derivative Fuels: While the maximum credit available for eligible clean hydrogen property is set to 40%, for clean ammonia equipment the maximum credit is limited to just 15%. The treatment of equipment required for production of ammonia and other hydrogen derivatives should be equivalent to that available for clean hydrogen equipment. Projects in Newfoundland and Labrador are primarily export focused, and equipment to produce ammonia and other hydrogen derivatives will be essential.

Determining Carbon Intensity and Application of Canada’s Fuel Life Cycle Assessment Model: The use of Canada’s Fuel Life Cycle Assessment (LCA) Model for determining carbon intensity is cumbersome and adds some significant regulatory burden. A number of areas regarding the use of this model require clarity:

- For projects connected to a grid without an eligible power purchase agreement, would the carbon intensity of the entire provincial grid be used, or just the carbon intensity of the portion of the grid physically connected to the project?
- If the clean power comes from outside of the province where the hydrogen project is located (e.g. Muskrat Falls power provided into Quebec for the purposes of a hydrogen project in Quebec) is the project developer allowed to calculate carbon intensity using the averaging of the

Quebec and NL grids, or just the NL grid (origin of the power), or must they take into account the carbon intensity of only the Quebec grid?

- It is important that the approach to determining the carbon intensity of projects connected to the Newfoundland and Labrador grid be forward-looking, and not include emissions associated with any historical reliance on hydrocarbons. Additional clarity is required regarding the calculation of the carbon intensity of the sale of energy to the grid. Also, any curtailed wind (beyond that used for the project, or back to the grid) should be included as zero carbon intensity.
- If the grid provider can issue a certificate specifying the carbon intensity of the grid electricity delivered to the project, will this be acceptable in determining the carbon intensity of the grid? To clarify, if Hydro-Quebec provides a Quebec-based project with certification that their power is coming 100% from Churchill Falls and Muskrat Falls, is the project going to be able to declare that the carbon intensity of the grid is zero?
- Would the life cycle approach to determining carbon intensity calculation include emissions associated with clean fuels transportation and from final consumption? As many of the proposed projects will be for export, the transportation and final product use will be beyond the control of developers. As indicated in Energy NL's submission of January 6, 2023, Canadian developers should be given full credit for their clean fuels production and this can be best accomplished by measuring carbon intensity at the point of production.
- The LCA Model has lag and uses inputs which may not reflect the current greening of the grid. From the Federal Clean Fuels Regulations, which is the basis for the value in the LCA Model, indications from Environment and Climate Change Canada suggest the value for Newfoundland and Labrador is set pre-Muskrat Falls, and would be 16 g CO<sub>2</sub>e/MJ, which would be higher than the present value. In addition, flexibility should be provided so that going forward, improvements to the greening of the grid are factored into the model.

Treatment of Limited Partnerships: The vast majority of renewable energy projects developed in Canada will prefer to use a limited partnership structure. The current legislative proposal contains provisions which, when applied to limited partnerships, drastically limits the availability of the full value of the clean hydrogen ITC to the limited partners, and instead ascribes much of the value to the general partner (which leads to adverse outcomes in the context of a project which has been debt financed). This proposed language may lead to projects being forced to adopt less preferred corporate structures, which may in turn lead to a selection of alternate jurisdictions for investment

ITC Phase Out at 2034: Can flexibility be built into the design to go beyond this time frame for projects which may experience delays in development and construction? While projects are ramping up quickly, it is a new industry which will require new legislation in some provinces and other factors, such as availability of electrolyzers, which will dictate project scheduling that are beyond the control of developers.

**Concluding Remarks**

Energy NL is supportive of the Government of Canada's plan to encourage investment into local hydrogen development, construction, and production, via a fully refundable investment tax credit commencing when capital is deployed. The design and approach to implementation will dictate the success of the ITC as a tool for transforming Canada's energy sector towards production of clean fuels such as hydrogen. During the past year, the Government of Canada has made impressive progress towards the design and establishment of the clean hydrogen tax credit, and with some adjustments as outlined, can properly position Canada as a world leader in clean fuels production. Energy NL is appreciative of the opportunity to provide input into this consultation and are keen to participate in other such opportunities in future.