

Information Note
Department of Industry, Energy and Technology (IET)

Title: Mineral Regulations

Issue: Amendment of Mineral Regulations to create Exempt Mineral Land (EML) at the Grey River tungsten deposit.

Background and Current Status:

- Section 4(1) (b) of the **Mineral Act** (the **Act**) allows areas of the province to be “exempted from the application of the **Act** by the regulations”. This prevents anyone from obtaining the mineral rights to these areas.
- Section 41.1 of the **Act** gives the Minister authority to make regulations under Section 4(1) (b) of the **Act** to designate areas as EML. The amendment to the regulations requires the signature of the Minister for approval and would come into effect upon being published in the Newfoundland and Labrador Gazette. Cabinet approval is not required.
- The attached decision note approved the creation of an EML at the Grey River tungsten deposit and authorized Legislative Counsel to draft the regulations.
- Legislative Counsel has drafted the regulations.

Analysis:



29.(1)(a), 30.(1)(a), 30.(1)(b)

Action Being Taken:

- Once the Minister signs the regulations, they will be Gazetted so that they come into effect.

Prepared/Approved by: A. Smith
Ministerial Approval:

November 20, 2024

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Decision Note
Department of Industry, Energy and Technology (IET)

Title: Exempt Mineral Land

Decision/Direction Required:

- Whether to approve creation of a new Exempt Mineral Land over the Grey River tungsten deposit at Grey River in southern Newfoundland and Labrador.

29.(1)(a)

Background and Current Status:

- Section 4(1)(b) of the **Mineral Act** (the Act) allows areas of the province to be “exempted from the application of the Act by the regulations”. These areas are termed Exempt Mineral Land (EML), and this designation prevents application for mineral rights via standard processes in these areas.
- Section 41.1 of the Act gives the Minister authority to make regulations under Section 4(1)(b) to designate areas as EML.
- Descriptions of EMLs are given in Schedule A of the **Mineral Regulations** (the Regulations) and new EMLs are created by amending the Regulations.
- The Grey River tungsten deposit is located on former Mineral Licence 23302M, which was held by Playfair Mining Limited (Playfair). Mineral Licence 23302M officially expired on September 25, 2021, and remains unavailable for accepting applications for mineral licences.
- Playfair’s total exploration expenditures on this licence exceeded \$1 million dollars over 20 years.
- The Grey River tungsten deposit contains an inferred resource of 852,000 tonnes of that mineral.
- An existing EML containing a molybdenum deposit was established in 2022 and is located immediately north of former Mineral Licence 23302M.

Analysis:

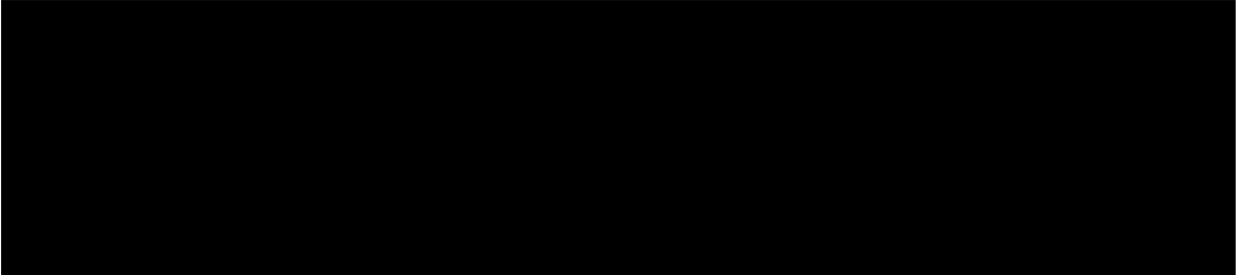
29.(1)(a), 35.(1)(d)

- The allowed timeline for Playfair to apply for reinstatement under Section 28.2 of the Act or grieve to the Mineral Rights Adjudication Board has passed.
- Given the known mineral potential (tungsten) and location of former Mineral Licence 23302M adjacent to the existing EML (molybdenum), this area will not be open for mineral licence applications so that it can be considered for creation of an EML.
- Tungsten is a critical mineral under the provincial Critical Minerals Plan and is on Canada's Critical Minerals List.
- EMLs are created over an area containing a significant mineral resource where the mineral rights have reverted to the crown to prevent the possibility that the deposit may be split between different licence holders through the normal claim staking process and to allow the Department to exercise greater control over the development of the mineral resource.
- If the EML was created, the rights to the deposit would likely be awarded in the future through a request for proposal (RFP) process. This would have the side benefit of bringing increased exposure to critical minerals in the province.



29.(1)(a), 30.(1)(a), 30.(1)(b)

Alternatives:



29.(1)(a)

Prepared/Approved by: T. Adams/J. Lake/K. Sheppard/A. Smith
Ministerial Approval:

November 12, 2024

Decision/Direction Note
Department of Industry, Energy and Technology (IET)

Title: Canada Fluorspar (NL) Incorporated

Decision/Direction Required:

- Whether, by way of a consent and acknowledgement agreement, to allow Canada Fluorspar (NL) Incorporated (CFINL) and Newspaper [REDACTED]

35.(1)(d)

[REDACTED]

29.(1)(a)

Background and Current Status:

- CFINL is the registered holder of surface leases, mining leases, and mineral licences as part of the St. Lawrence Fluorspar Mining Property (the Property).
- Newspaper is a general partnership comprising CFINL and CFI Newspaper Holdings Incorporated (CFI Newspaper) and is the beneficial owner of leases and mineral licences comprising the Property.

35.(1)(d)

- CFINL, CFI Newspaper, and Newspaper have requested the consent of Government to grant [REDACTED] the Property to [REDACTED] and permit the transfer of title by way of [REDACTED] in accordance with section 15(ii) of Schedule C of the various Surface Leases and sections 24(1) and 31(5)(d) of the **Mineral Act**.

35.(1)(d)

- [REDACTED] is an international company that provides solutions sourcing, logistics, financing, and marketing services to move metals and minerals to the global markets.

35.(1)(d)

- Consent of the Minister of Industry, Energy and Technology is required to execute the Agreement.

Analysis:

- The terms and conditions of the surface leases held by CFINL require the leases to be assigned in their entirety [REDACTED]
- Prior written consent of the Minister is required 60 days before such an assignment can occur. In practice, this time requirement has been waived when entering into similar consent agreements in the past.
- The leases and licences are currently in good standing and certificates of compliance have been issued to CFINL.

35.(1)(d)

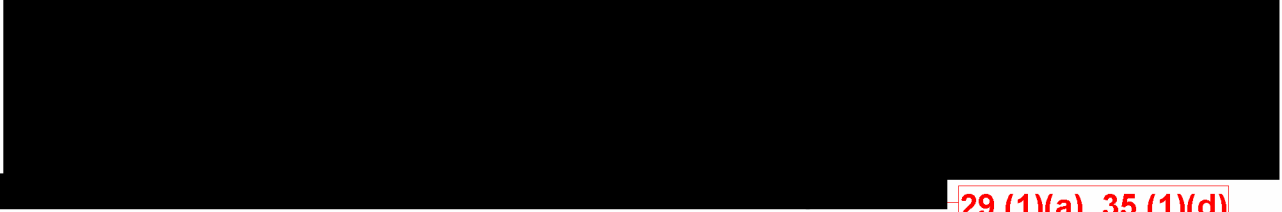
[REDACTED]

29.(1)(a)

[REDACTED]

30.(1)(b)

Alternatives:



29.(1)(a), 35.(1)(d)

Prepared/Approved by: K. Sheppard/A. Smith
Ministerial Approval:

November 15, 2024

Decision/Direction Note
Department of Industry, Energy and Technology (IET)

Title: Consent Agreement

Decision/Direction Required:

- Whether to consent to Labrador Iron Ore Royalty Corporation assigning Surface Leases 2024-01, 2024-02, 2024-03 and 2024-04 [REDACTED] and subleasing the area covering these leases to Iron Ore Company of Canada. 35.(1)(d)

[REDACTED]
[REDACTED] 29.(1)(a)

Background and Current Status:

- Labrador Iron Ore Royalty Corporation (LIORC) is the holder of twelve mining leases, 8 surface leases and a tailings disposal licenses ('the leases') issued under the **Labrador Mining and Exploration Company Limited Act (LM&E Act)**.
- LIORC subleases these leases to the Iron Ore Company of Canada (IOC) to facilitate it's mining and processing operation at Labrador City.
- LIORC was recently issued Surface Leases 2024-01, 2024-02, 2024-03 and 2024-04 (the leases; OC2024-172 refers).

Analysis:

- The terms and conditions of the leases require the prior approval of the Minister before both assignment and sublease can occur.
- LIORC has requested the consent of the Minister to sublease the area covered by the leases to IOC to allow IOC to continue to access the area to facilitate its mining operations.
- LIORC has also requested the consent of the Minister to assign the leases, [REDACTED]

[REDACTED] 29.(1)(a), 35.(1)(d)

- The consent requests that the Minister waive the requirement that the request for the consent be submitted 60-days prior to the anticipated transfer date of the leases. [REDACTED]

[REDACTED] 30.(1)(b)

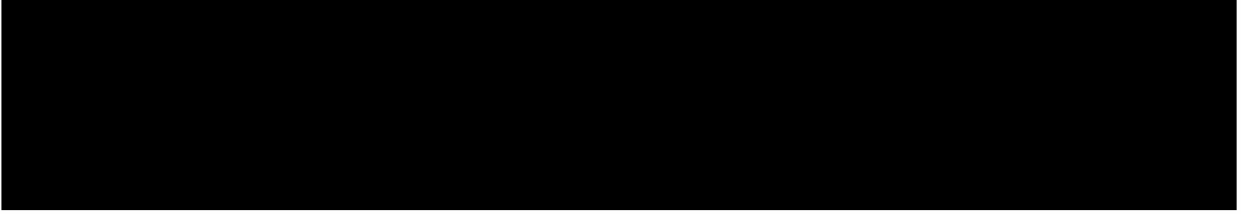
- Similar consent has previously been given for other leases held by LIORC, and all of its other leases areas are both subleased to IOC [REDACTED]

[REDACTED] 35.(1)(d)

[REDACTED] 30.(1)(b)

Alternatives:

29.(1)(a), 35.(1)(d)



Prepared/Approved by:
Ministerial Approval:

J. Lake/K. Sheppard/A. Smith

November 21, 2024

A handwritten signature in black ink, appearing to read 'A. Smith', is written over the 'Ministerial Approval' line. The signature is stylized and cursive.

Information Note
Department of Industry, Energy and Technology (IET)

Title: Quarry - York Harbour area

Issue:

- Amendment of a quarry permit boundary [REDACTED]

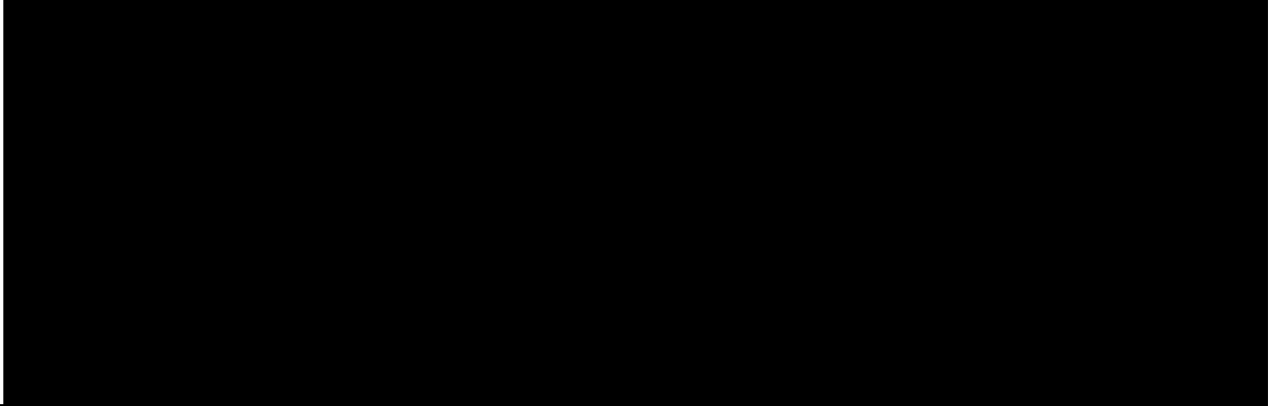
[REDACTED] **29.(1)(a)**

Background and Current Status:

- In 2018, Marine Contractors (Marine) applied for and obtained a quarry permit for a five-hectare quarry in the Town of York Harbour (File Number 71112500; Appendix A). There has been no site development or production at this site.
- Marine's application area was designed to avoid overlap with a site that was then permitted to G & F Murley Excavations (Murley) but resulted in the application being sited at a higher elevation with steeper topography than Murley's site. Murley's permit expired in 2020.
- The Federal Government recently awarded contracts in Lark Harbour, including:
 - \$9.3M Harbour Development project in Lark Harbour to Marine Contractors, and
 - \$15.2M Wharf Construction project in Lark Harbour to RJG Construction (RJG).
- Prior to the award of the contracts, four quarry permit applications were received from companies bidding on the contracts. The applications were rejected by the municipalities of Lark Harbour and York Harbour, and TCAR (Department of Tourism, Culture, Arts and Recreation).
- Coady Construction applied for two quarry permits – one was rejected by the Town of Lark Harbour, the other rejected by TCAR,
 - RJG submitted two applications immediately adjacent to Marine's quarry permit, but both were rejected by the Town of York Harbour.
- The Town of York Harbour's concerns with quarry development in this area include:
 - Potential development of a quarry cluster,
 - Visibility of operations from the road, communities, and tourism attractions,
 - Potential instability of the existing steep natural slopes, once quarried, and
 - Potential impacts to the only route to and from the communities of Lark Harbour and York Harbour should there be a landslide.
- TCAR requires management of developments that have potential to impact attractions and touring corridors to minimize negative visual impacts and dust and noise.
 - Marine's quarry permit is in the vicinity of Blow Me Down Provincial Park, the Cape Blow Me Down Hiking Trail, and the International Appalachian Trail of Newfoundland and Labrador.
- In accordance with the **Urban and Rural Planning Act**, quarry permittees are required to obtain approval from the municipality (development permit) prior to commencing operations.
- Marine, upon being awarded the government contract, submitted a request to IET to amend its quarry permit boundary to address concerns raised by the Town of York Harbour.

Analysis:

- The municipalities of York Harbour and Lark Harbour lie immediately north and along the flanks of the steep topography of the Blow Me Down Massif,



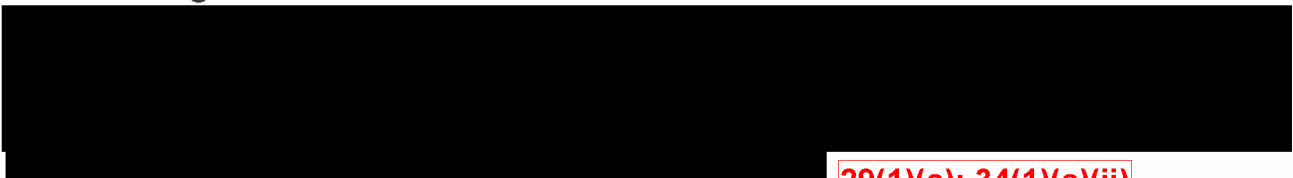
29.(1)(a), 34.(1)(a)(iii), 35.(1)(d)

- Marine's amended boundary partially overlaps small areas of the rejected RJG applications (0.4 ha of one; 0.35 ha of the second application) and encompasses the entire area previously developed by Murley.
- IET notified RJG that the two applications were rejected by the Town of York Harbour and advised that the files were closed.



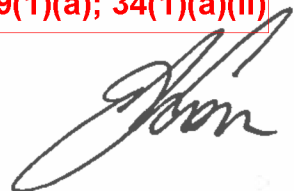
29(1)(a); 34(1)(a)(ii); 35(1)(d)

Actions Being Taken:



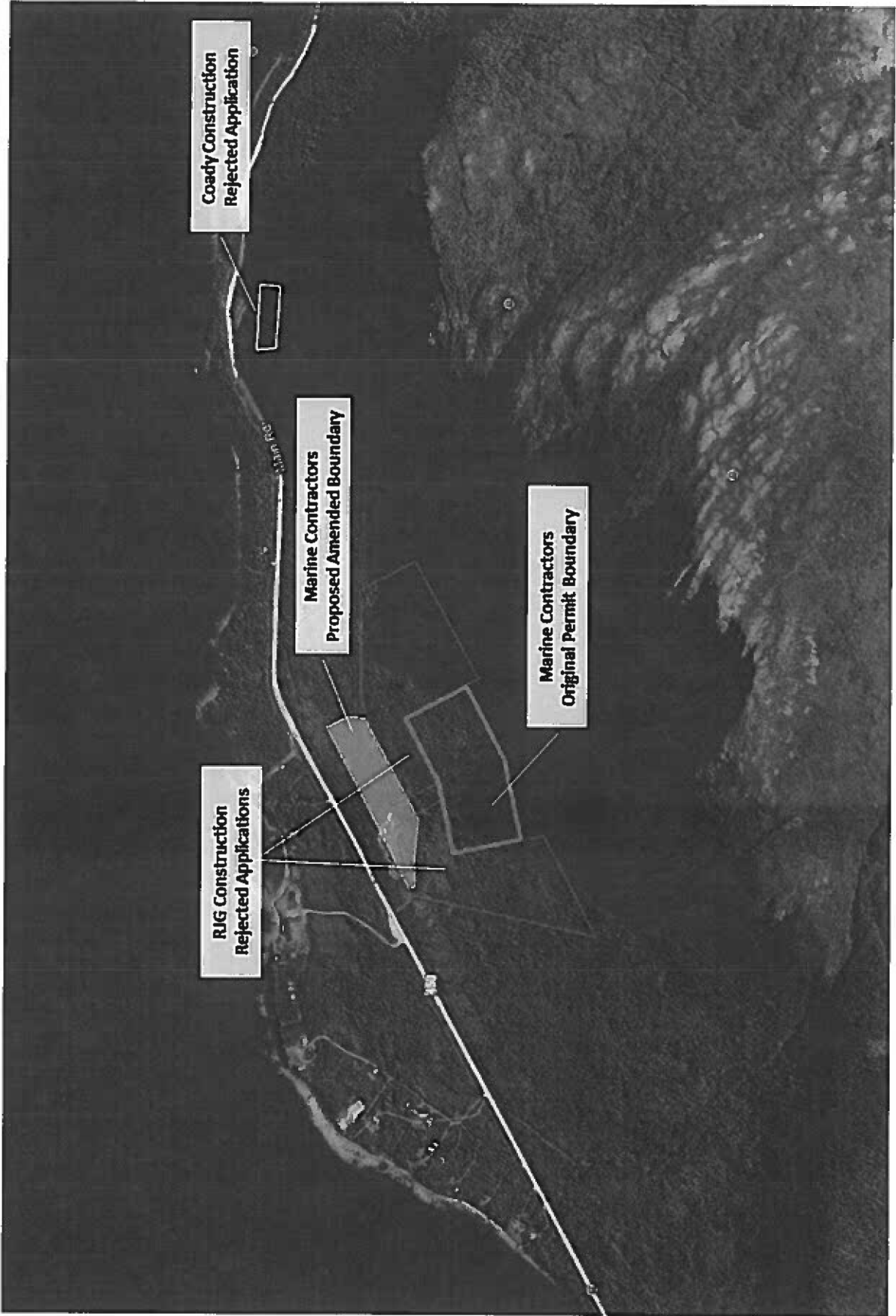
29(1)(a); 34(1)(a)(ii)

Prepared/Approved by: A. Devereaux/K. Sheppard/A. Smith
Deputy Minister Approval:



November 12, 2024

Appendix A



Information Note
Department of Industry, Energy and Technology (IET)

Title: Uranium Update

Issue: To provide information related to the uranium market and exploration in the province.

Background and Current Status:

- Uranium is used entirely in the energy industry with some minor use in the production of medical isotopes.
- There are multiple occurrences of uranium in the province, mostly in Labrador east of Lake Melville and around Makkovik, in an area known as the Central Mineral Belt (CMB). The CMB has been recognized as one of the top exploration regions in Canada for uranium, following the Athabasca Basin in Saskatchewan.
- Canada is the world's second largest producer of uranium with all supply currently coming from projects located in the Athabasca Basin, Saskatchewan.
- Paladin Energy Ltd. (subsidiary of Aurora Energy) has the Michelin deposit located in the CMB that is among the largest uranium deposits in North America. Michelin contains total measured and indicated uranium resources of 82.2 million pounds (U₃O₈) based on NI 43-101 published in 2014.
- Several other companies are actively exploring the uranium occurrences in Newfoundland and Labrador, including:
 - Atha Energy Corp., exploring the Moran Trend, Anna Lake Trend and Mustang Lake Property, several uranium prospects with substantial past exploration work completed, and over 140 targets identified for further exploration in Labrador.
 - Dark Star Minerals announced a Letter of Intent to purchase uranium assets in the CMB at the Ghost Lake Property.
 - Saga Metals Corp. completed its inaugural field program at its Double Mer Uranium Project 90 km northeast of Happy Valley-Gosse Bay.
 - Benton Resources and its joint venture partner Sokoman Minerals Corp. are exploring the potential at its Kepenkeck Project in central Newfoundland and Labrador (NL).
 - Infini Resources is undertaking an exploration program at their Portland Creek Project located near Gros Morne.
 - Mega Watt acquired a 100% interest in the Benedict Mountains Uranium Property, in the CMB approximately 200 km from Goose Bay.
 - New Peak Metals recently acquired the Steward Lake Project, a high-grade uranium project in Labrador.

Analysis:

- Uranium has been designated as a critical mineral by Newfoundland and Labrador, Canada, and Japan. The US recognizing the strategic importance of uranium, in May 2024, banned Russian uranium imports through the end of 2040 as ongoing political unrest and the global shift toward green energy continue to influence uranium supply and prices.

- To attract critical mineral exploration investment to Newfoundland and Labrador (NL), the Junior Exploration Assistance Program has delivered additional funding to support exploration targeting critical minerals including exploration. This includes the \$1.3 million provincial critical mineral assistance in 2024 and the \$1.3 million annually for three years (2023-2025) ACOA critical mineral assistance. Companies targeting uranium have received or applied for funding including Aurora Energy, Infini Resources, Latitude Uranium and Critical Minerals NL Corp.
- Canada is also supporting uranium exploration as a critical mineral through a 30% critical mineral exploration tax credit introduced in April 2022. This is intended to support specified exploration expenditures applicable to specific critical minerals including uranium.
- In June 2024, the US Department of Energy announced plans to invest up to US\$2.7 billion to stimulate the development of the country's uranium enrichment capacity and nuclear fuel supply chain. Canada has been considered domestic supply so this initiative could support supply development in this country.
- Canadian uranium is shipped to North America and Latin America (64%), Asia (19%), and Europe (17%). In 2022, 27% of uranium purchased by American nuclear reactors came from Canada, making Canada the largest foreign supplier of uranium to the United States (US).
- The revival of nuclear power has sent uranium prices to their highest levels in over 15 years, up from US\$30 per pound at the start of 2021 to an all-time high of US\$136.22 per pound in June 2024. Prices as of September 12, 2024, are US\$77.62. In the short-term, analysts are forecasting uranium to trade around US\$80, with a long-term optimistic price outlook between \$125-130 and pessimistic at \$70-75.
- Major cuts to global uranium production resulted from Kazakhstan, the world's largest uranium-producing country responsible for 43% of global uranium production, reducing its annual production levels in 2018. In 2023 Kazakhstan warned of a possible major supply deficit in the uranium market post 2030.
- The World Nuclear Association reported that supply deficits are likely to continue. Restarting idled mines, developing new mines, advancing exploration, and timely investment will be required to meet future demand.

Action Being Taken:

- The Mineral Development Division will continue to monitor the uranium market and exploration in the province.

Prepared/Approved by: T. Walters/K. Bradbury/A. Smith

Ministerial Approval:

November 14, 2024

A handwritten signature in black ink, appearing to be a stylized name, possibly 'John' or 'John A.', written over a large, faint circular stamp or watermark.

Backgrounder
Department of Industry, Energy and Technology (IET)
Minister and Tata Steel Minerals Canada
Friday, November 15, 2024, at 10:00 am
Virtual

Attendees:

Mukesh Ranjan, CEO and Managing Director (Bio: Annex A)
 Cathy Dornan, Tata Steel Minerals Canada

Andrew Parson, KC, Minister
 John Cowan, Deputy Minister
 Staff as required

Purpose of the Meeting:

- Tata Steel Minerals Canada to provide an update and discuss its Labrador iron ore operation.

Background:

- Tata Steel Minerals Canada (TSMC) is an iron ore miner operating in the Menihek region of Newfoundland and Labrador and the province of Quebec. They are a joint venture between Tata Steel of India (77.68%), Ressources Quebec (18%), and New Millennium Iron Corp. (4.32%).
- TSMC currently has **Mining Act** approval to develop ten iron ore deposits in Labrador. The deposits are divided into two general areas known as DSO3 (Timmins area) and DSO4 (Kivivic/Goodwood area) and are collectively known as the DSO Project. Ore is processed in Labrador and shipped by rail to the port in Sept-Îles, Québec.
- TSMC direct shipping ore (DSO) iron ore deposits have a high iron content with a high portion requiring crushing and screening to produce a product between 60% and 62% iron. Ore is also processed through the concentrator to upgrade iron content to approximately 64%.
- TSMC has **Mining Act** plans previously approved or conditionally approved for their existing operations (Kivivic 1C, 2, 3N, 4, 5, Timmins 2N, 3N, 4 and 7, Flemming 7N) from 2018 that require a five-year update. TSMC has been working to renew these plans and consolidate them under a site wide Development Plan and Rehabilitation and Closure Plan.
- The Development Plan and the Rehabilitation and Closure Plan for the Howse Project were approved on July 04, 2018, [REDACTED]. The Howse deposit contains 43 million tonnes of iron ore with an average grade of 62% iron.
- TSMC submitted a site wide Development Plan and the Rehabilitation and Closure Plan, including the Howse Project, on June 18, 2024. [REDACTED]

29.(1)(a),
35.(1)(d)

29.(1)(a), 35.(1)(d)

29.(1)(a), 35.(1)(d)

- On September 16, 2024, TSMC submitted a Timmins 3N Abridged Plan reflecting a shift in production to Timmins 3N including an expansion of the Timmins pit. The Timmins 3N Abridged plan is to allow an expansion of a previously approved pit within an existing disturbed area. The expansion would fall within a historical IOC pit and TSMCs haul road adjacent to the pit.
- The Timmins 3N Abridged Plan has been reviewed by the MDD with comments sent to TSMC on October 3 and October 17, 2024. The Company provided an updated abridged plan that is currently being reviewed by the MDD.
- [REDACTED] Howse was approved for development in 2018 and IET is holding financial assurance of \$1,991,906 for rehabilitation and closure costs for the project.

29.(1)(a), 35.(1)(d)

- Indigenous consultations are required for each **Mining Act** approval and are governed by the project specific Aboriginal Consultation Guidelines for Provincial Regulatory Applications. The guidelines require that the company consult with five Indigenous groups in Labrador and Quebec and provide an Aboriginal Consultation Report. If the company is unable to confirm there are no outstanding concerns with the plan or if any Aboriginal group continues to express concerns with the plan, IET must complete the consultations. The consultation period, once IET becomes involved, is 60 days.

Prepared/Approved by: L. Wells/P. Philpott/T. Walters/K. Bradbury/A. Smith
Ministerial Approval:

November 13, 2024



ANNEX B Biography



Mukesh Ranjan, CEO and Managing Director

Mukesh Ranjan is a Mining Engineer with 25 years of experience in Iron Ore Mine development, operation, project management & construction. He has been CEO of Tata Steel Mineral Canada since December 2021.

Mukesh started with Tata Steel in November 2005, as a Senior Manager (Mining) and held many roles since that time, at projects around the world including business manager, head of planning, chief ferrous minerals, director general, and chief of projects. Prior to working with Tata Steel, Mukesh was the Manager (Mining) for Global Steel Holding Limited, and Assistant Manager (Mining) for NMDC Limited.

Mukesh holds a Bachelor of Technology, Mining Engineering from Banaras Hindu University, and has received additional training from Tata Management Training Centre, and the Indian Institute of Management.

Meeting Note
Department of Industry, Energy and Technology (IET)
Minister and Torngat Metals
Date: TBD
Location: TBD

Attendees:

Christine Burow, Chief Marketing Officer, Torngat Metals
Marilyn Butland, Stakeholder Relations, Torngat Metals

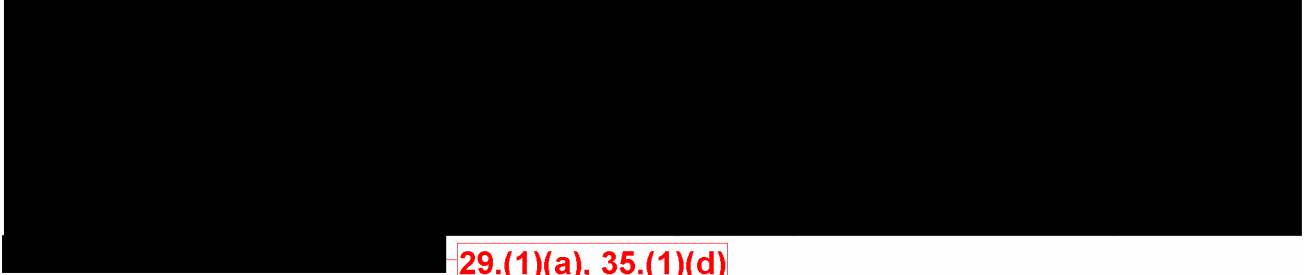
Andrew Parson, KC, Minister
John Cowan, Deputy Minister
Alex Smith, ADM, IET
Paul Carter, ED, IET

Purpose of the Meeting:

- Torngat Metals to provide an update on its Strange Lake Rare Earth Mining Project.

Background:

- Torngat Metals is proposing an open-pit rare earth mine, located in Nunavik, Quebec, approximately 235 kilometers northeast of Schefferville. The company is expected to complete pre-feasibility and feasibility studies by the end of 2025 with production anticipated to begin in 2028.
- Employment created during construction is expected to be 1,000 workers. With a 30-year plus mine life, operations employment is anticipated to be 200 jobs, with recruitment geared toward Indigenous communities in both Quebec and Labrador.
- Torngat submitted the initial project description under the Impact Assessment Agency of Canada during September 2023. The company was advised that an environmental impact assessment study would be required, and it is expected to be completed in 2026.
- The company's registration document outlined plans to build a 180-kilometre seasonal winter access road from the mine site in Quebec to the Voisey's Bay, Labrador port facility as part of the project. This will be used to transport from the mine site to the company's separation facility in Sept-Îles. On October 5, 2023, the road was registered for provincial environmental assessment.
- On December 14, 2023, the Department of Environment and Climate Change (ECC) advised the Company that an Environmental Impact Statement (EIS) is required for the Project. The deadline to issue EIS guidelines has been extended to November 9, 2024.



29.(1)(a), 35.(1)(d)

- Torngat's website now indicates that the port will be "just south of VALE's Voisey's Bay mine which is in Anaktalak Bay."

Prepared/Approved by: T. Walters/K. Bradbury/A. Smith
Ministerial Approval:

November 4, 2024



Christine Burow
Chief Marketing Officer

Christine heads Torngat Metals' Indigenous, Environmental, Social, and Governance (IESG) strategy and oversees the company's marketing, business development and government relations initiatives.

With nearly 30 years of senior experience, she has worked in the rare earths sector since 2013. As president of her own consulting firm, she supported global mining, technology, environmental and manufacturing clients. She formerly worked for Resolute Forest Products, Trojan Technologies, Rayonier and Vale's nickel division.

Christine holds a BSc degree from the University of Waterloo and an executive MBA from Western University.

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Meeting Note
Department of Industry, Energy and Technology (IET)
Minister and Tacora Resources
Tuesday, November 5, 2024, at 11:30 am
Minister's Boardroom

Attendees:

Brian Penney, President & Chief Executive Officer, Tacora Resources
 Graham Letto, Manager Government and Community Relations, Tacora Resources

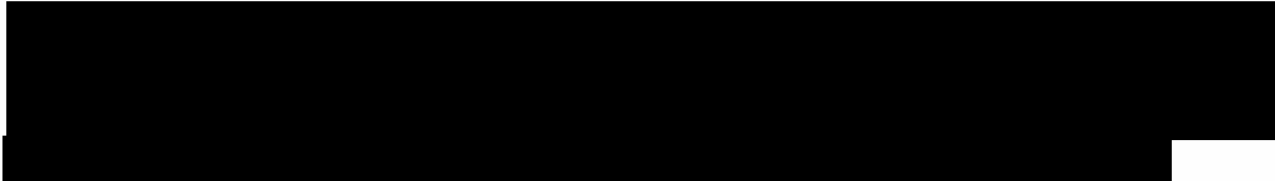
Andrew Parson, KC, Minister, IET
 John Cowan, Deputy Minister
 Alex Smith, ADM, Mines
 Paul Carter, ED, Mining Innovation

Purpose of the Meeting:

- Tacora Resources (Tacora) to introduce its new President and CEO and provide an update on its Labrador operations.

Background:

- Tacora purchased the Scully Mine in 2017 and restarted mining operations during 2019 with a nominal capacity of 6 million tonnes per year. During 2023 Tacora shipped [REDACTED] tonnes of iron ore valued at [REDACTED] and employed approximately 680 employees and contractors. 35.(1)(d)
- In 2022-2023, Tacora faced liquidity challenges due to capital constraints requiring the Company to initiate *Companies' Creditors Arrangement Act* (CCAA) proceedings.
- An investor group (Millstreet Capital Management LLC and Cargill) emerged as the successful bidder through a transaction that provides an equity injection of US\$250 million, allowing Tacora to exit the CCAA proceedings with a fully funded capital plan.
- This agreement includes a new 10-year offtake agreement with Cargill at competitive market terms, restructuring of other contracts that will result in higher cash flow, and new capital to upgrade and modernize the Scully Mine to achieve the Company's objective of producing more than six million tonnes of high-grade iron ore concentrate per year.
- The sale was approved by the Ontario Superior Court on August 1, 2024, and on September 20, 2024, Tacora announced the completion of the sales transaction.
- On August 26, 2024, Tacora announced the appointment of Brian Penney as President and Chief Executive Officer. Mr. Penney's bio is attached.

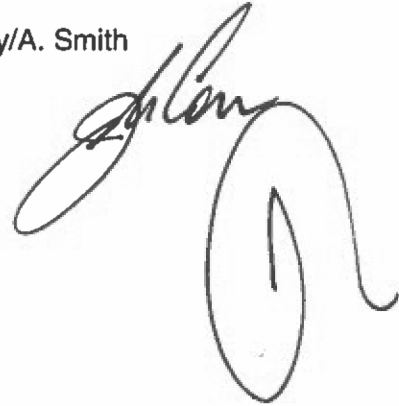


29.(1)(a), 35.(1)(d)

- Electrification of mining in Labrador West is constrained by the capacity limits of transmission lines from the Churchill Falls generation station. In 2023, Newfoundland and Labrador Hydro (NLH) completed a System Impact Study (SIS), which NLH is updating. A Regional Facilities Study is the next step with the cost of this study being shared by mining applicants including IOC, Tacora and Champion as well as both the Government of Newfoundland and Labrador (Julienne Lake) and the Government of Canada.
- In June 2023, Tacora received \$1.25 million from the Atlantic Canada Opportunities Agency for research and development related to a manganese sulfate purification plant. Tacora has stockpiled material and expects to be able to produce 99.7% pure manganese with the construction of a new plant.

Prepared/Approved by: S. Brewer/T. Walters/K. Bradbury/A. Smith
Ministerial Approval:

November 4, 2024

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Brian Penney
President & Chief Executive Officer

Brian is a seasoned expert in the mining industry, with over 32 years of experience in the field and 27 years dedicated to the iron ore sector.

He has held several key leadership roles throughout his career, including CEO of Baffinland Iron Mines and COO of Alderon Iron Ore. Brian also held multiple senior management positions at the Iron Ore Company of Canada (IOC). His extensive expertise and leadership have been instrumental in advancing mining operations and optimizing iron ore production, making him a highly respected figure in the industry.

Meeting Note
Department of Industry, Energy and Technology (IET)
Minister and AuMEGA Metals
Thursday, November 7, 2024, at 12:30 pm
Ministers Boardroom

Attendees:

Sam Pazuki, CEO and Managing Director
Rick Greenwood, VP Exploration

John Cowan, Deputy Minister
Alex Smith, ADM, Mines
Paul Carter, ED, Mining Innovation

Purpose of the Meeting:

- AuMEGA Metals to provide an update on its current exploration projects.

Background:

- On June 1, 2024, Matador Mining Limited rebranded to AuMEGA Metals to better reflect their new strategic focus including a strategy is to grow the value of its business by making significant gold discoveries in Newfoundland and Labrador (NL).
- AuMEGA is primarily focused on growing the Cape Ray Gold Project and Hermitage Project, identified by the Company as highly prospective for gold exploration. The Cape Ray Project includes approximately 110 kilometres of continuous strike along the Cape Ray Shear Zone in southwestern NL. The Hermitage Project includes twenty-seven kilometres of continuous strike located on the Hermitage Flexure, a major geological structure with multiple gold and other critical metals showings.
- In May 2024, the Company acquired the Blue Cove Project, a highly prospective copper asset on the Burin Peninsula.
- In 2016, Matador and Benton Resources registered the Cape Ray Gold Partnership Project for Environmental Assessment (EA). It was determined that an Environment Impact Statement (EIS) was required but the company did not file an EIS resulting in the registration expiring. Matador subsequently registered the Cape Ray Gold Mine Project for EA in November 2022 but subsequently withdrew the project in December 2022.
- In May 2023, AuMEGA released an updated mineral resource estimate for the Cape Ray Gold Mine Project. The 2023 estimate identified 9.7 million tonnes of ore grading an average 1.96 grams per tonne for a total of 610,000 ounces of gold.
- The Company's 2024 exploration program is fully funded.

Prepared/Approved by: T. Walters/K. Bradbury/A. Smith
Ministerial Approval:

November 4, 2024

A large, stylized handwritten signature in black ink, consisting of a large loop on the left and a vertical line extending downwards on the right.

Meeting Note
Department of Industry, Energy and Technology (IET)
Minister and FireFly Metals
Tuesday, November 5, 2024, at 11:00 am
Minister's Boardroom

Attendees:

Darren Cooke, Chief Executive Officer, FireFly Metals

Tabatha R. LeBlanc, Vice President, Environment and Community, FireFly Metals

Andrew Parson, KC, Minister

John Cowan, Deputy Minister

Alex Smith, ADM, Mines

Paul Carter, ED, Mining Innovation

Purpose of the Meeting:

- FireFly Metals to provide an update on the project.

Background:

- In September 2023, Firefly Metals (FireFly), an emerging copper-gold company based in Australia, acquired the Green Bay Copper-Gold Project through the Rambler Metals and Mining *Companies' Creditors Arrangement Act* process. The Project comprises the operationally ready Ming Mine underground deposit, Little Deer exploration project, the Nugget Pond processing facility and Goodyear's Cove port.
- Firefly has subsequently secured an 8.4% interest in Maritime Resources for \$2.5 million. Firefly also entered into a port access agreement with Maritime, granting port facility access to Firefly at Maritime's Point Rouse project for the purpose of storing and exporting copper concentrates.

35.(1)(d)

- On October 31, 2024, Firefly released its quarterly report citing a 42% increase in the mineral resource estimate. The total resource now stands at 59 million tonnes (Mt) at 2% copper equivalent. The resource consists of two components, the Ming Mine (49.9Mt) and the Little Deer deposit (9.1Mt).
- Since acquiring Green Bay, over 1,400m of underground development has been advanced at Green Bay's Ming deposit. Up to four drill rigs have been operating and approximately 40,000 metres of diamond drilling has been completed so far.
- On October 25, 2024, the Company announced it had experienced better than expected results from a capital raise (share purchase plan) and increased the amount raised to \$8 million from \$5 million. The funds, together with the Company's existing cash reserves, will be directed towards:
 - advancing the exploration and development of the Green Bay Copper-Gold Project;
 - expenses of the share placement plan; and
 - general working capital.



35.(1)(d)

A draft of the plan has been prepared and FireFly officials are meeting with representatives from the Mineral Development Division on November 4, 2024, to review aspects of the Plan prior to formal submission.

Prepared/Approved by: S. Brewer/T. Walters/K. Bradbury/A. Smith
Ministerial Approval:

November 4, 2024

Two handwritten signatures in black ink. The signature on the left is a large, stylized 'A' with a vertical line through it. The signature on the right is a cursive signature that appears to be 'A. Smith'.

Decision / Direction Note
Department of Industry, Energy and Technology (IET)

Title: Calibre Mining Corp.

Decision / Direction Required:

- Whether to approve Calibre Mining Corp.'s Valentine Gold Project - Development Plan and Rehabilitation and Closure Plan, pursuant to sections 6(2) and 9(2) of the **Mining Act** subject to the provision of financial assurance as per the attached schedule, "Valentine Gold Mine Financial Assurance Schedule".

29.(1)(a), 30.(1)(a)

Background and Current Status:

- Marathon Gold Corporation (Marathon), a subsidiary of Calibre Gold Corp. (Calibre), is the lease holder for the Valentine Gold Project (project). Calibre acquired all the issued and outstanding shares of Marathon and holds 100% ownership of the project.
- The project was required to complete an Environmental Impact Statement (EIS) with Provincial Environmental Assessment (EA) and was conditionally released in March 2022. The Berry Pit expansion was released from the environmental assessment process in October 2023. The project was also conditionally released from the Impact Assessment Agency of Canada in July 2024.
- The development plan for the project was previously approved in May 2023 and the rehabilitation and closure plan was previously accepted in August 2024.
- The development plan and the rehabilitation and closure plan have been amended to include the addition of the Berry Pit to the project. Calibre submitted the final version of Valentine Gold Project Development Plan on October 18, 2024. The final version of the Rehabilitation and Closure Plan was submitted on October 29, 2024.
- The project will consist of three open pit gold mines (Marathon, Leprechaun and Berry), waste rock dumps and stockpiles, processing facility, tailings management facility (TMF), mine support facilities and accommodations complex. Commissioning is tentatively scheduled for Q1 of 2025. The life of the project is approximately 15 years.
- Calibre will mine 51 million tonnes of gold ore (1.62 grams per tonnes) and 545 million tonnes (Mt) of waste at a 10.6 stripping ratio. Mining will be completed in 2037 but the mill will continue to process the low grade ore stockpile until 2039. Approximately 2,553,000 ounces of gold at a 94.5% recovery will be produced over the life of the project.
- A total of 51.6 Mt of thickened tailings will be produced over the life of the project. For the first 10 years of operations, approximately 32 Mt of tailings will be disposed in the TMF. From 2034 to 2039, the tailings are planned to be disposed in the mined-out Berry Pit.
- The ore from the Marathon (50%), Leprechaun (4%) and Berry (58%) mines is considered potentially acid generating (PAG). The ore will be either directly processed or temporarily placed in engineered stockpiles where water drainage is controlled. Blending and processing of the PAG and non-PAG ores will result in non-PAG tailings.

- A portion of the waste rock from Marathon (4%), Leprechaun (1%) and Berry (11%) will be PAG [REDACTED] 29.(1)(a)
- Calibre will create 465 positions on the construction team and 545 positions on the operations team. [REDACTED] 35.(1)(d)

Analysis:

[REDACTED] 29.(1)(a)

- With the inclusion of Berry Pit and modified economic factors, Calibre adjusted the ore cutoff grade from 0.30 grams/tonne (g/t) to 0.38 g/t. The average grade of the ore reserves has increased from 1.36 g/t to 1.62 g/t. The cutoff grade for low grade stockpiled material remains at 0.30g/t.
- The Phase III Acid Rock Drainage/Metal Leaching (ARD/ML) Assessment Report and the ARD Management Plan are stamped by the ARD qualified professional. The reports detail the potential for the generation and the controls for managing ARD/ML for the project. [REDACTED] 29.(1)(a)
- The low grade ore stockpiles are considered PAG and are scheduled to be processed at the end of mine life while the PAG high grade ore stockpile will be processed throughout the life of the mine. For contingency, the cost to relocate the low and high grade ore stockpiles for sub-aqueous disposal in the mined-out pits have been included in the closure cost estimate.
- The current closure cost requirement for the project is \$25,579,957.33 that is covered by financial assurance in place with the department. As the mine is developed, the total closure liability will increase to \$125,867,905.72 by 2031 as per the attached Valentine Gold Mine Financial Assurance Schedule. The payment schedule allows the financial assurance held by IET to coincide with rehabilitation liabilities that accrue as the site is developed. The closure cost estimate has been verified as reasonable by Gemtec Consulting.

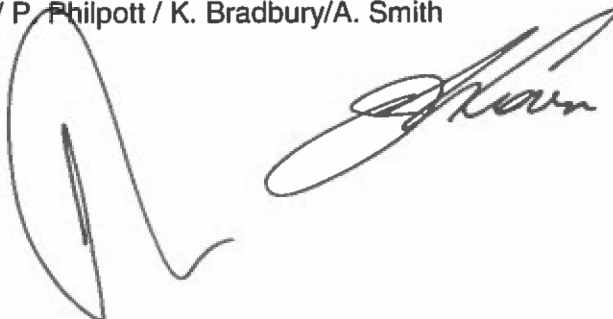
[REDACTED] 29.(1)(a), 30.(1)(a)

Alternatives:

[REDACTED] 29.(1)(a)

Prepared/Approved by: L. Wells / P. Philpott / K. Bradbury/A. Smith
Ministerial Approval:

November 18, 2024



Valentine Gold Mine Financial Assurance Schedule

3-Pit Project (Berry Pit included)

Posting Date (estimated)	Financial Assurance Post (Amount)	Financial Assurance Post (Cumulative)
Current	\$25,579,957.33	\$25,579,957.33
January 2025	\$18,296,483.32	\$43,876,440.65
January 2026	\$29,683,297.05	\$73,559,737.70
January 2028	\$35,344,969.74	\$108,904,707.44
January 2031	\$16,963,198.28	\$125,867,905.72

Information Note
Department of Industry, Energy and Technology

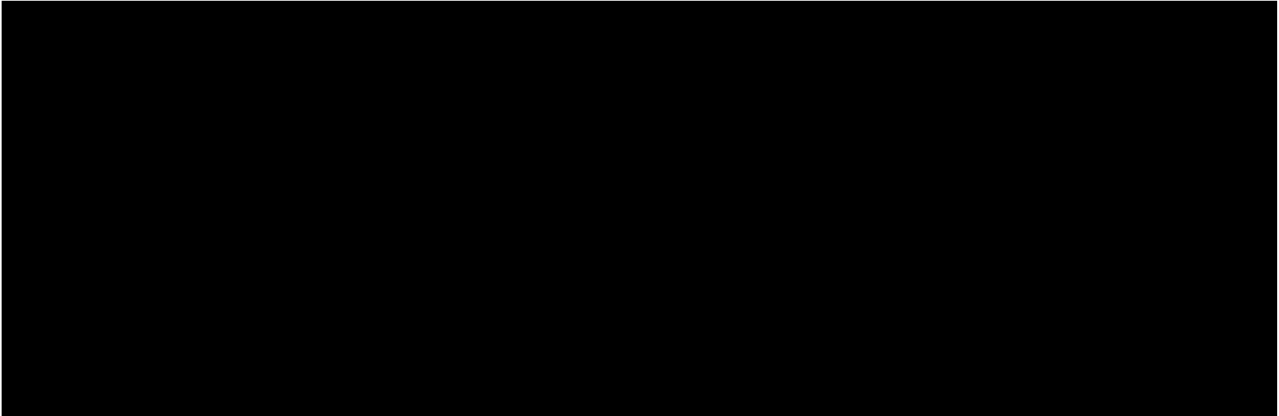
Title: Wind Energy Land Reserve and Mineral Rights [REDACTED] **35(1)(c), 35(1)(d)**

Issue: [REDACTED] **29(1)(a), 35(1)(c), 35(1)(d)**

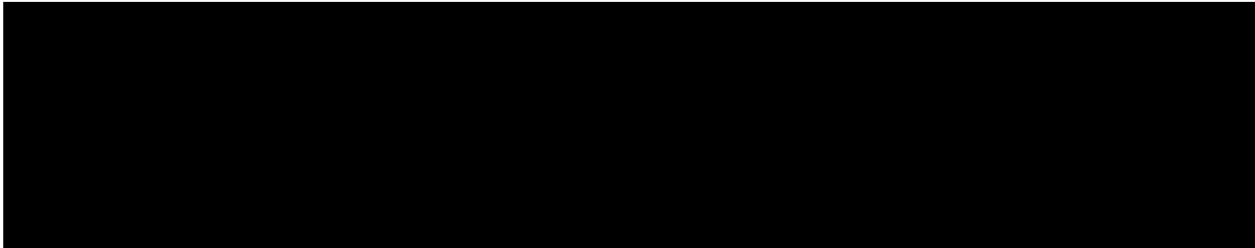
Background and Current Status:

- The Province possesses world class wind resources and geology, with significant potential for renewable energy and mineral development. IET works to advance an efficient and competitive regulatory regime to compete globally for investment in both sectors.
- In accordance with the **Mineral Act** (the Act) and regulations, a mineral licence may be applied for through IET's Mineral Lands Administration Portal (MinLAP) system. All land and land under water, where the minerals are vested in the Crown, are available for application with some exceptions.
- A mineral licence:
 - is issued for a five-year term and may be renewed.
 - gives the holder the exclusive right to explore for minerals but does not convey any surface rights.
- Approval from IET is required prior to any exploration activity. Some exploration activity (e.g., large drill rigs or work camps) on Crown land also requires surface rights from FFA under the **Lands Act**. Accordingly, any mineral exploration that requires surface rights under the **Lands Act** is currently not possible within a Crown land reserve. Where a licence is issued on privately owned land, approval from the landowner is required prior to undertaking exploration.
- A licence holder has the right to convert any part of a mineral licence to a mining lease provided all requirements of the Act are met. However, it takes many years, sometimes decades, of exploration work before a prospect can be developed into a mine.
- IET and FFA have established three land reserves under the **Lands Act**. The **Wind Energy Land Reserve Order** (86/22) established in December 2022 reserved Crown land prior to the Crown land Call for Bids, and was reduced in August 2023 to cover the project areas for the four successful bids. The **Wind Energy Contingency Land Reserve Order** (16/24) established a reserve for Argentia Renewables in March 2024 and the **Wind Hydrogen Hub Land Reserve Order** (47/24) established a reserve for NARL in July 2024. All companies received a Recommendation Letter (RL) granting the exclusive right to pursue development of the project through Government's Crown land application and approval process. However, it does not guarantee such land will be granted through that process.
- The reserve orders prohibit FFA from accepting Crown land applications within the area of the reserve, with limited exceptions.
- The reserve orders do not prohibit applications for mineral licences to be submitted and accepted through MinLAP. However, the reserves overlap with mineral licences that pre-date and post-date establishment of the orders.

29(1)(a), 35(1)(d), 35(1)(f), 35(1)(g)



- The Province has been consistently ranked as a top-tier jurisdiction for investment attractiveness for mineral exploration, including regulatory framework, policy perception, and land access. However, the 2023 report from the Fraser Institute on this issue, noted the Province's Policy Perception Index score decreased by almost eight points this year, which moved the province down in the ranking to 11 (of 86) after ranking 5 (of 62) in 2022. This was due to miners' concerned about the uncertainty concerning regulatory duplication (+26 points), protected areas (+22 points), and uncertainty regarding disputed land claims (+17 points).



29.(1)(a)

Action Being Taken:



29(1)(a),
35(1)(c)

Prepared/Approved by: J. Wicks/ R. Hodder/ S. Wilkins/ A. Smith/ C. Martin

November 18, 2024

Information Note
Department of Industry, Energy and Technology

Title: ABO Energy

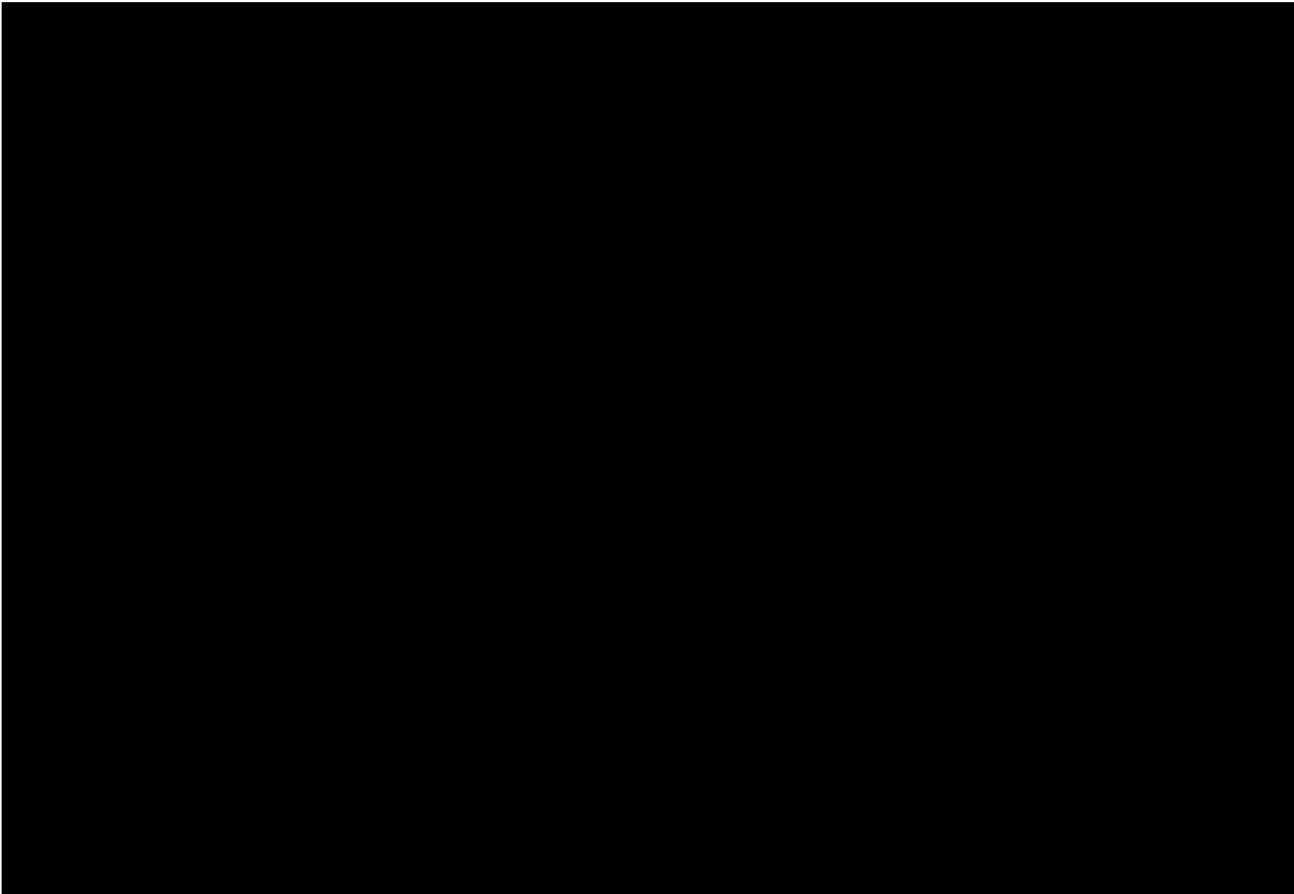
Issue: ABO Energy (ABO) is seeking final approval for its proposed partnership with Copenhagen Infrastructure Partners (CIP) Partnership.

Background and Current Status:

- On August 30, 2023, Toqlukuti'k Wind and Hydrogen Ltd. (Toqlukuti'k), wholly owned by ABO, was selected through the Crown Land Call for Bids for Wind Energy Projects (Call for Bids) as one of four successful bidders to receive a Wind Application Recommendation Letter (WARL).

Analysis:

- The WARL issued to Toqlukuti'k advised that the recommendation may not apply should the project change materially from the bid submitted or should material assumptions or statements be found to be inaccurate.
- On April 16, 2024, ABO advised IET it had signed a non-binding term sheet with CIP. ABO advised that under this term sheet, CIP is expected to become the majority shareholder with ninety per cent of the shares in Toqlukuti'k. ABO would hold the remaining 10 per cent of the shares and serve in a key development role for the project.
- As the proposed purchase of 90 per cent of the shares of Toqlukuti'k by CIP was considered a material change, IET, consistent with JPS advice, undertook an assessment process to protect the public interest and maintain the integrity of the Call for Bids process.



29(1)(a); 30(1)(a); 30(1)(b); 35(1)(d); 35(1)(g)

Action Being Taken:

- IET will work with JPS to draft a formal response to ABO that provides final approval for the proposed change, on the basis of the information presented to Government for review and approval.

Prepared/Approved by: S. Kinch / R. Hodder (in consultation with JPS) / S. Wilkins / C. Martin

Ministerial Approval:

November 22, 2024

Two handwritten signatures in black ink. The first signature is a cursive name, likely 'S. Kinch', and the second is a large, stylized initial or name.

Meeting Note
Department of Industry, Energy and Technology
H.E. Jarl Frijs-Madsen, Ambassador of Denmark
November 5, 2024, 12:30 - 1:15PM
7th Floor, IET Building, St. John's

Attendees:

- His Excellency, Jarl Frijs-Madsen, Ambassador of Denmark to Canada
- Hon. Andrew Parsons, Minister of IET
- John Cowan, Deputy Minister, IET
- Craig Martin, Associate Deputy Minister, IET
- Susan Wilkins, Executive Director, Renewable Energy, IET

Purpose of Meeting:

- Ambassador Frijs-Madsen and Minister Parsons will meet to discuss Danish-provincial relations and opportunities for renewable energy sector collaboration. See Annex A for biography of Ambassador Frijs-Madsen.

Background:

- The Kingdom of Denmark is a sovereign state that consists of metropolitan Denmark (also referred to as "Denmark") and two autonomous regions: Greenland and the Faroe Islands.
- Denmark is located in Northern Europe and shares a land border with Germany. It has a total land area of 42,943 kilometers squared (km²), consisting of the Jutland peninsula of mainland Europe and the Danish Archipelago. Denmark has a population of 5.8 million people and a population density of 147/km².
- Greenland is an island located in North America, east of the Canadian Arctic Archipelago. Greenland has a land area of 2,166,086 km², and a population of 56,583 people. It has a population density of 0.028/km², making it the least densely populated region (country or dependency) in the world.
- The Faroe Islands are located in the North Atlantic Ocean, roughly halfway between Norway and Iceland. The islands have a total land area of 1,399 km², a population of 54,000, and a population density of 38.6/km².
- See Annex B for comparison of Newfoundland and Labrador (NL) and Denmark.
- Denmark has established a number of greenhouse gas (GHG) emissions and energy supply targets, including legally binding targets to reduce GHG emissions to 70 per cent by 2030 and reach net zero by 2050, with annual approval of the Danish Government's climate strategy required by Parliament. Denmark has also committed to a coal phase-out by 2030, 100 per cent renewable electricity by 2030, and 55 per cent total energy supply (TES) from renewables by 2030.
- According to the Embassy of Denmark to Canada, wind and solar currently make up over 60 per cent of Denmark's electricity mix, while biogas accounts for nearly 40 per cent of its gas consumption – with a goal to achieve 100 per cent green gas use by 2030. According to the embassy, Denmark ranked second out of 115 countries in the World Economic Forum's Global Energy Transition Index for 2024.

- As of 2023 (latest data available), NL exports to Denmark were valued at approximately \$24.3 million consisting mainly of cold-water shrimps and prawns (approximately \$14.8 million). Imports from Denmark to NL were valued at approximately \$11.1 million consisting mainly of machine parts (\$2.4 million) and cardboard products (\$1.9 million). See Annex C.
- Denmark has an honorary consulate in St. John's. The Honourary Consul is Simon Jarding and the Assisting Consular Officer is Jette Jarding.

Agenda item #1 (Wind-Hydrogen Developments)

- The Minister and Ambassador may wish to discuss wind-hydrogen developments in Denmark and NL.

Analysis

- According to the International Renewable Energy Agency (IRENA), as of 2023 (latest data available), Denmark had approximately 4,832 MW of installed onshore wind capacity and 2,650 of installed offshore wind capacity.
- Denmark has announced a target of 13 GW of offshore wind capacity by 2030. In 2020, Denmark announced the construction of an artificial island in the North Sea as a hub for 3 GW of offshore wind, with the potential for up to 10 GW, and green hydrogen production. A primary purpose of the artificial island is to serve as a hub for collecting and distributing power to Germany. According to Reuters, in August 2024, Denmark has announced a delay to construction of the artificial island due to increased cost, with the earliest completion date now 2036 instead of 2033.
- In February 2023, Denmark paused its offshore wind development program due to possible infringement of European Union (EU) law. [REDACTED] In April 2024, the Danish Energy Agency had announced it would call tenders for 6 GW of offshore wind. On October 14, 2024, the agency set April 1, 2025 bid date for 2 GW of the offshore wind tender; and in November 2024, granted RWE Offshore Wind GmbH the construction permit for its 1.1GW Danish offshore wind farm, Thor. Trade publication WindTech International reports that RWE now has all necessary permits to begin construction at sea in spring 2025. 29.(1)(a)
- Ørsted is a Danish multinational energy company. The company claims it has built more offshore wind farms than any other developer and has wind farms in Europe, the US, and the Asia-Pacific region. Ørsted currently has 9.8 GW of installed offshore wind capacity and an additional 9.4 GW under construction or awarded. Its largest windfarm is Hornsea 2, located 89 km from the coast of Yorkshire, England, and consists of 165 8 MW turbines with 1.32 GW total installed capacity. Ørsted notes this wind farm is the world's largest.
- In October 2024, Ørsted sold a 12.45 per cent minority stake in its UK windfarms to Brookfield Renewables for \$2.3 billion. In August 2024, Ørsted announced it would delay start of commercial operations of the 704 MW offshore Rhode Island and Connecticut wind farm to 2026 after cancelling Ocean Wind I and II projects off New Jersey in 2023 citing increased costs.
- In 2021, the Danish Ministry of Climate, Energy and Utilities released its Power to-X (PtX) - strategy. The strategy established a target of 4-6 GW of installed electrolyzer capacity in Denmark by 2030, as well as commitments for regulatory framework review and revision of the Energy Export Strategy to support PtX products and technology.

- In February 2023, the European Commission approved Denmark's EUR 170 million program on PtX technologies to support renewable hydrogen production. With the program, Denmark aims to introduce 100-200 MW of electrolysis capacity through a public tender that provides a direct grant to the winning companies for a ten-year period.
- In April 2023, Denmark launched a PtX tender to support green hydrogen production. The tender included DKK 1.25 billion in support and closed September 2023. In October 2023, Denmark announced that five companies would receive funding: Plug Power (Idomlund Denmark); European Energy (Windtestcenter Måde K/S); European Energy (Padborg PtX ApS); Electrochaea (Biocat Roslev); and European Energy (Kassø PtX Expansion ApS). As there was funding remaining, HyProDenmark/Everfuel were also awarded a tender. [REDACTED] The funding support will be paid out over a 10-year period. Each company has four years to build their hydrogen production facility from the signing of the contract. Details of the contracts and funding amounts are not available publicly.
- Denmark has decided that the state-owned transmission system operator Energinet and gas distribution company Evida will own and run the future hydrogen pipeline infrastructure. Denmark and Germany plan to build a hydrogen pipeline by 2028 and in May 2023, agreed to co-operate on offshore wind and on Carbon Capture, Utilization and Storage (CCUS) collaboration projects. [REDACTED]
- In January 2023, H2Carrier announced a plan to produce green hydrogen and ammonia on board a ship connected to 1.5 GW of onshore wind in Greenland. The ship concept includes an onboard desalination and electrolyzer. The use of a mobile production platform is intended to minimize environmental impacts and decrease costs. There has been no further public update on the project status since the announcement.
- Copenhagen Infrastructure Partners (CIP) was founded in 2012. According to CIP, it is the world's largest dedicated fund manager within greenfield renewable energy investments and a global leader in offshore wind. The funds managed by CIP focuses on investments in offshore and onshore wind, solar PV, biomass and energy-from-waste, transmission and distribution, reserve capacity, storage, advanced bioenergy, and Power-to-X.
- A market assessment conducted by CIP in 2023 reported that the Danish Energy Agency has stated Denmark will be "more than self-sufficient" in green hydrogen by 2030. The assessment also reports that by 2030, Germany, the Netherlands, and Belgium combined expect to consume approximately 215 TWh, with imports making up over 140 TWh, and that Denmark has the potential to supply 16 TWh, or just over 10 per cent, of the total hydrogen import need of these countries, with an increasing import potential over time.
- There are six wind-hydrogen projects in development in NL. The estimated capital cost of all projects is \$72 billion. Once all project phases are completed, total wind installed capacity is estimated to be more than 18 GW, with total hydrogen electrolyzer capacity of over 13 GW. Subject to final offtake agreements, NL projects will produce 1 million tonnes of hydrogen and approximately 4.7 million tonnes of ammonia annually.
- Toqlukuti'k Wind and Hydrogen Ltd., owned by ABO Energy, is developing a wind-hydrogen project in the Avalon isthmus region. [REDACTED]

29.(1)(a),
34.(1)(a)(iii)
35.(1)(d),
35.(1)(g)

29.(1)(a)

29.(1)(a), 35.(1)(d), 35.(1)(g)

[REDACTED]

[REDACTED]

29.(1)(a), 35.(1)(d), 35.(1)(g)

- Since approximately 2013, Beothuk Energy of St. John's, NL, has expressed interest in developing offshore wind energy in St. George's Bay. In 2016, CBC News reported that Beothuk Energy had secured CIP as a project financial backer. IET notes that CIP and Beothuk Energy had also formed a partnership, Atlantic Canada Offshore Developments (ACOD), backed by Shell Canada Energy.
- IET and Nalcor Energy met with ACOD multiple times from 2015 to 2021 regarding the offshore wind farm concept in St. George's Bay

[REDACTED]

29.(1)(a), 35.(1)(d), 35.(1)(g)

- The NL offshore is managed jointly with the Government of Canada. NL is working with the Government of Canada to expand the mandate of the Canada-NL Offshore Petroleum Board (C-NLOPB) to include renewables. Bill C-49 has passed Parliament amending the Atlantic Accords to facilitate the expansion of the C-NLOPB's mandate. Mirror legislation will be tabled in the House of Assembly.
- In December 2023, NL and Canada signed a MOU allowing the Province to regulate offshore wind in 16 provincial bays outside of the joint management regime. St. George's Bay is included in the MOU.

Potential Speaking Points

- Newfoundland and Labrador is developing a significant onshore wind industry and we are in the regulatory planning stages to launch offshore wind development.
- Denmark has significant experience in offshore wind and my department was pleased to have visited Denmark last October to learn about developments there. We were happy to host a delegation from Denmark to the province in June during the Energy NL Conference.
- We would welcome further cooperation to grow the wind-hydrogen sector on both sides of the Atlantic.

Proposed Actions

- IET will continue discussions with Danish officials on wind-hydrogen collaboration and knowledge exchange.

Agenda item #2

[REDACTED]

[REDACTED]

29.(1)(a), 34.(1)(a)(iii), 35.(1)(d)

Analysis

- On March 24, 2023, Denmark and Germany agreed to build a land-based pipeline, enabling green hydrogen to flow cross border by 2028. The declaration recognizes the importance of regional cooperation on dedicated cross-border hydrogen infrastructure, linking Danish production and German demand for green Hydrogen. Denmark also has agreements in place with Belgium and Germany to connect offshore wind networks via subsea cables.

[REDACTED]

29.(1)(a)

- Since 2022, to support the development of hydrogen supply chains with Europe, business and knowledge exchange, marketing and port development, NL has signed non-exclusive agreements with the City of Hamburg, Germany; the Port of Rotterdam, the Netherlands; and the Port of Antwerp-Bruges, Belgium. See Annex D for further details on the agreement areas.

29.(1)(a), 34.(1)(a)(iii), 35.(1)(d)

[REDACTED]

Potential Speaking Points

- Newfoundland and Labrador has a number of agreements in place to support the development of hydrogen supply chains between the province and Europe.
- We currently have non-exclusive agreements with partners in Hamburg, Rotterdam, and the Port of Antwerp-Bruges.

29.(1)(a), 34.(1)(a)(iii), 35.(1)(d)

[REDACTED]

Proposed Actions

[REDACTED]

29.(1)(a), 34.(1)(a)(iii), 35.(1)(d)

Agenda item #3 (NL Delegation to Denmark, December 2024)

- The Embassy of Denmark to Canada has invited IET to join a delegation to Denmark regarding Energy Transition from December 1-7, 2024.

Analysis

- At the invitation of the Danish Ministry of Foreign Affairs, IET took part in Denmark's North America Energy Transition delegation from October 8-14, 2023. The delegation visited the

Port of Esbjerg, toured waste-to-energy facilities, and met with Power-to-X companies and held meetings with companies across the Power-to-X value chain.

- From June 4-7, 2024, IET facilitated the Ministry of Foreign Affairs Trade Council attendance at the Energy NL conference. The delegation included eight Danish energy companies spanning the full wind and hydrogen value chains, along with CIP. Over three days, the group met with key government officials, built partnerships aimed at supporting the development of NL's clean energy supply chain, engaged with the developers of up-and-coming wind-to-hydrogen projects in the area, and attended the Energy NL conference.
- During the Energy Transition delegation to Denmark planned for December 1-7, 2024, the delegation will learn about Denmark's experiences with the development of the offshore wind sector, hydrogen technology and how the energy systems are regulated, balanced and operated, and hear from industry leaders. The delegation will visit industry leaders and dive into discussions regarding Denmark's ambitions for hydrogen and how other green energy sources, such as biogas, play a role in the robustness and flexibility of Denmark's energy system. The delegation will also partly focus on Danish experiences with a coexisting offshore wind sector and sustainable fishery.
- Similar to the October 2023 delegation agenda, the proposed 2024 delegation agenda includes visits to logistics company Maersk; CIP; electrolyzer manufacturer Topsoe; the Port of Odense and Vestas Wind Systems; electricity and gas system operator Energinet; biogas company Nature Energy; climate change company Stiesdal; and a tour of the Port of Esbjerg and Semco Maritime and the Greenlab Skive industrial park.
- The invitation was extended to a number of Atlantic Canada partners, including: IET, Newfoundland and Labrador Hydro, and the Canada-Newfoundland and Labrador Offshore Petroleum Board (CNLOPB), as well as Natural Resources Canada (NRCAN), the Government of Nova Scotia and the Canada-Nova Scotia Offshore Petroleum Board.

Potential Speaking Points

- IET officials enjoyed their participation in the 2023 Energy Transition delegation and look forward to the opportunity to participate in the 2024 delegation.

Proposed Actions

- IET representative(s) will potentially join the 2024 Energy Transition delegation to Denmark.

Prepared/Approved by: M. Hunter/ B. Norman/K. Day/

Ministerial Approval:

November 4, 2024

A handwritten signature in black ink, consisting of a large, stylized loop followed by a smaller loop and a trailing line.

Annex A

Biography of Ambassador Jarl Frijs-Madsen

- According to the Ambassador's linkedin profile, Jarl Frijs-Madsen holds a Master of Economics degree from the University of Copenhagen and an Executive Certificate in Management from the Henley Business School.
- Prior to joining the civil service, Jarl Frijs-Madsen served as the senior partner with Copenhagen Brussel Consulting Group.
- Jarl Frijs-Madsen joined the Danish civil service in 2000 as Head of Commercial and Economic Department, Danish Embassy, where he helped Danish companies enter the Polish market.
- From 2004 to 2009, Jarl Frijs-Madsen held positions with the Trade Council of Denmark as Head of Department, Customer Relations, Under-Secretary Ambassador, and Global Head of the Trade Council of Denmark. In these roles they supported customer relations management, global sales, with key accounts involving Novo Nordisk, Maersk and other companies, and were responsible for export promotion, internationalization and assisting Danish companies in global expansion.
- In 2010, Jarl Frijs-Madsen was appointed Ambassador, Consul General of Denmark in New York and has held Danish ambassador positions to Norway and the Netherlands, before being appointed the Danish ambassador to Canada in 2024.

Annex B
NL and Denmark Compared

	Metropolitan Denmark	NL
Population	8,587,000	510,500
Land area	42,943 km ²	358,170.37 km ²
Population density	147 people/km ²	1.4 people/km ²
Marine coastline	8,750 km	29,000 km
Offshore wind - installed capacity	2,650 MW (approx.)	0
Onshore wind - installed capacity	4,832 MW (approx.)	54 MW
Renewable Electricity Mix (does not include nuclear)	84% (2022 – latest data available) (Varies by year due to high proportion of variable renewables)	Over 90%
Net zero commitment	Yes	Yes

	Greenland	NL
Population	56,583	510,500
Land area	2,166,086 km ²	358,170.37 km ²
Population density	0.028/km ²	1.4 people/km ²
Marine coastline	44,087 km	29,000 km
Offshore wind - installed capacity	0 MW	0
Onshore wind - installed capacity	0 MW	54 MW
Renewable Electricity Mix (does not include nuclear)	83% (2022- latest data available)	Over 90%
Net zero commitment	None identified	Yes

Note: NL population, land area, and population density is from Statistics Canada, Census Profile, 2021 Census of Population.

Annex C
NL-Danish Trade

NL Exports to Denmark	
Category	Value (2023)
Cold-water shrimps and prawns, frozen, in shell or not, including in shell cooked in water	\$14,828,071
Lobsters, not elsewhere specified, frozen, in shell, including boiled in shell	\$2,972,002
Cod, salted or in brine, but not dried or smoked	\$1,501,258
Parts and accessories for use with the instruments and appliances	\$925,939
Machinery for mixing/kneading/crushing/grinding/ not elsewhere specified, having individual function	\$637,973
Shrimps and prawns, prepared or preserved, not in airtight containers	\$624,756
Cod dried, whether or not salted but not smoked	\$580,000
Rock lobster and other sea rawfish, dried, salted, brine, smoked, cooked	\$576,273
Fillets of fish, families Bregma, Eucli, Gadidae, Moridae, dried, salted, brine, smoked	\$343,781
Winding wire, insulated, copper, electric, including enameled / anodized	\$315,855
Fish meat, not elsewhere specified, minced or not, frozen	\$252,501
Radar apparatus	\$174,232
Instruments, apparatus and models, designed for demonstrational purposes	\$121,365
Parts, not elsewhere specified, of airplanes, helicopters or unmanned aircraft	\$91,513
Parts of machinery	\$75,198
Parts, of machines and mechanical appliances, not elsewhere specified, having individual functions	\$69,692
Instruments and appliances for surveying, hydrographic, ocean, hydrological, etc., not elsewhere specified	\$47,198
Reciprocating positive displacement pumps, not elsewhere specified	\$35,983
Taps, cocks, valves and similar appliances, not elsewhere specified	\$21,080
Appliances for transmission/reception of voice/image/data, including from communication in wired/wireless network, not elsewhere specified	\$16,437
Pulley tackle/hoists, not elsewhere specified, other than skip hoists or hoists for raising vehicles	\$16,305
Navigational instruments and appliances, not elsewhere specified	\$10,251
Winches or capstans, not elsewhere specified	\$10,000
Boring or sinking machinery, self-propelled, not elsewhere specified	\$6,855
Brushes, not elsewhere specified, constituting parts of machines, appliances or vehicles	\$6,500
Sub-total	\$24,261,018
Others	\$19,042
Total (All Products)	\$24,280,060

Source: Innovation, Science and Economic Development Canada, Trade Data Online.

Danish Exports to NL

Category	Value (2023)
Parts, of machines and mechanical appliances, not elsewhere specified, having individual functions	\$2,376,127
Cartons, boxes and cases, folding, of non-corrugated paper or paperboard	\$1,885,875
Machinery for the preparation of meat or poultry	\$867,697
Buoys, beacons, coffer-dams, pontoons and other floating structures	\$561,923
Articles, iron or steel, not elsewhere specified	\$482,444
Articles of plastics or of other materials not elsewhere specified	\$479,875
Zinc oxide; zinc peroxide	\$428,705
Made up fishing nets, of man-made textile materials	\$288,629
Non-ionic, organic surface-active agent, whether or not put up for retail sale	\$261,848
Flanges, iron or steel, not elsewhere specified	\$233,114
Stranded wire, ropes and cables of iron or steel, not electrically insulated	\$216,116
Parts of machine appliances, hand-operated or not, for projected/dispersed or spray liquid or powders	\$200,204
Centrifugal pumps, not elsewhere specified	\$197,779
Machinery, not elsewhere specified, for industrial preparation and manufacturing of food/drink, other than extraction/preparation of vegetable fats/oils	\$197,680
Parts of refrigerating or freezing equipment, not elsewhere specified	\$157,624
Luminaires and lighting fittings, electrical, other than photovoltaic, designed for industrial use solely with LED light source	\$145,311
Articles of vulcanized rubber, not elsewhere specified, other than hard rubber	\$138,483
Hydraulic power engines and motors, linear acting (cylinders)	\$113,193
Parts of cranes, work-trucks, shovels, and other construction machinery	\$88,191
Machinery for preparing, tanning or working hides, skins or leather	\$82,187
Parts of boring or sinking machinery, whether or not self-propelled	\$73,703
Measuring or checking instruments, appliances and machines, not elsewhere specified	\$66,887
Parts of pumps for liquid whether or not fitted with a measuring device	\$59,530
Knotted netting of twine/cordage/rope, and other made-up nets, of multi-material textile materials	\$57,920
Mussels, prepared or preserved	\$56,741
Sub-total	\$9,717,786
Others	\$1,393,326
Total (All Products)	\$11,111,112

Source: Innovation, Science and Economic Development Canada, Trade Data Online.

Annex D**Overview of NL Agreements on Hydrogen Supply Chain Development**

- On September 27, 2022, NL signed a Joint Declaration of Intent with the City of Hamburg. The parties agreed to:
 - Explore the economic and environmental opportunities of hydrogen technology, for the purpose of achieving the Paris climate goals;
 - Drive the scaling of the domestic green hydrogen economy in both side regions;
 - Establish an understanding of the commercial opportunity and scale of the future import market into Hamburg and the future export market from NL;
 - Assess the potential to establish international supply chains between Hamburg and NL for green hydrogen and its derivatives, with a view to supplying both Hamburg and the wider German and northern European hinterland;
 - Evaluate technical, scientific and functional concepts for the production, international transport and use of green hydrogen in industry, transport and possibly the heating sector;
 - Encourage the development of common standards in areas of sustainability and safety;
 - Encourage the development and expansion of renewable energies (e.g. wind energy, solar energy, hydro) for the production of green hydrogen and current energy industry challenges (e.g., use of surplus wind, sector coupling and storage);
 - Identify existing obstacles (e.g., law, regulatory gaps costs) and evaluate them with regard to their effect on economic success, and to share knowledge to support the mitigation of these obstacles, for example through the adaptation of legal frameworks or certification regulations; and,
 - Work collaboratively to unlock private sector and federal government investment in support of joint projects or initiatives.

- On May 9, 2023, NL signed a MOU with the Port of Rotterdam, the Netherlands. The parties agreed to:
 - Establish an understanding of the commercial opportunity and scale of the future green hydrogen import market via the Port of Rotterdam into the Netherlands and other areas of northwestern Europe, to be able to support the development of the future green hydrogen export market from NL;
 - Assess the potential to establish international supply chains between NL and the Port of Rotterdam for green hydrogen and its derivatives, with a view to supplying parties in the Netherlands and the wider northwestern European area;
 - Identify existing obstacles (e.g. law, regulatory gaps, costs) to establishing international supply chains between NL and the Port of Rotterdam for green hydrogen and its derivatives, evaluating these obstacles with regard to their effect on economic success, and sharing knowledge to support the mitigation of these obstacles;
 - Work collaboratively to unlock private sector and federal government investment in support of joint projects or initiatives for the development of international supply chains between NL and the Port of Rotterdam for green hydrogen and its derivatives;
 - Identify opportunities to collaborate with the goal of enhancing knowledge and sharing of best practices, as well as creating opportunities for collaborative development in the areas of supply chain development; commercial partner coalition; stakeholder engagement; potential joint planning; first initiatives; and port development, infrastructure and management.

- On September 27, 2024, NL signed a MOU with the Port of Antwerp-Bruges, Belgium. The parties agreed to:

- Explore further possibility and opportunities to enhance mutual cooperation in bridging the future NL supply and European demand of renewable and green molecules;
- Work together on advancing green energy initiatives, including import-export cooperation, sharing of experience, and best practices and platform building and establishing a green shipping corridor between NL and the Port; and,
- Consider information exchange on joint marketing and trade; company exchange; encouragement of events and networking of stakeholders; and joint communications to the public to improve perceptions of the benefits of hydrogen technology and the regions.

Decision/Direction Note
Department of Industry, Energy and Technology (IET)

Title: Business & Exploration Opportunities Show (BEOS) 2025

Decision/Direction Required:

- It is recommended that approval be provided to secure and service a trade show booth for BEOS.

Background and Current Status:

- BEOS, held in London, United Kingdom, is designed as a global forum to buy, sell, and promote international upstream exploration and production deals to key international players.
- BEOS is organized in partnership with the American Association of Petroleum Geologists (AAPG) and the Petroleum Exploration Society of Great Britain (PESGB). It is heralded as a global event in promoting new exploration opportunities. Many exploration and production companies maintain their international and new venture teams in London and attend this conference to source new prospects and business opportunities. The show brings together oil and gas majors, governments, exploration, and production firms and many of the world's leading banks, financiers, lawyers, and advisories.
- Building on its record as the one stop shop for oil and gas prospects, BEOS will now offer a dedicated and complimentary stream of energy transition perspectives and opportunities from renowned leaders across the energy sector.
- IET has attended the show annually since 2008. In 2024, IET exhibited in the International Pavilion with an 8m² booth and two representatives. The Director of Petroleum Geoscience gave a 10-minute presentation in the main program.

Analysis:

- IET proposes to secure a full scheme booth package at 8m² costing approximately \$5,700 CAD. This includes:
 - White wall panels
 - Fascia sign with Government of NL name
 - Lighting and electricity
 - Furniture package (includes bistro table and two chairs, lockable cabinet, and counter stool)
 - Two full conference complimentary registrations
 - Possibility to provide a talk in the main program - upon availability.
- There is a possibility that IET could secure a speaking opportunity, as they are provided on a first-come, first-served basis after registration. The conference's program is relevant and timely. It explores topics such as navigating the energy transition, carbon capture and storage, subsurface energy storage, and the future for exploration geosciences.

- BEOS organizers are providing a price freeze in 2025 for 2024 exhibitors, and first choice of stand location if online booking is completed by December 6, 2024.

Alternatives:**Option 1: Provide approval to secure and service a trade show booth for BEOS. (RECOMMENDED)****Advantages:**

- BEOS is an excellent venue to promote the current and future licensing rounds, geoscience data and resource assessments to a targeted audience. It allows IET to maintain the heightened interest in the province's oil and gas prospectivity.
- It maintains momentum of interest within the province's energy sector to build on recent developments in the responsible development of petroleum, including lower carbon oil and hydrogen.
- The event is part of Marketing and Promotions' trade show circuit. Funds have been allocated within the Petroleum Development and Marketing and Promotions division for travel.

Disadvantages:

- Department incurs expenditures to attend.

Option 2: Do not provide approval to secure and service a trade show booth for BEOS. (NOT RECOMMENDED)**Advantages:**

- IET would not incur expenditures to attend.

Disadvantages:

- Loss of opportunity to promote the resource potential in the region and the positive developments in the province's industry to an international audience.
- Not attending the show may signal to oil and gas companies and investors that Government support for the new exploration is less certain.

Prepared/Approved by: A. Coates/ M. Power/M. Nesbitt/N. Abundo
Ministerial Approval:

November 27, 2024




**Information Note
Department of Natural Resources**

Title: Electricity system winter readiness update

Issue: To summarize the November update on Newfoundland and Labrador Hydro's (NLH) 2024–2025 winter readiness planning

Background and Current Status:

- In compliance with the Board of Commissioners of Public Utilities (PUB) directive, Newfoundland and Labrador Hydro (NLH) filed an update to its 2024–2025 Winter Readiness Planning Report on November 13, 2024. The report covers the Island Interconnected System (IIS) and the Labrador Interconnected System (LIS) for the period ending October 31, 2024.
- Key highlights of the update include:
 - NLH reports it is progressing towards completion of its Annual Work Plan (AWP) and Winter Readiness (WR) activities;
 - NLH anticipates the full availability of all generation sources by December 1, 2024 with the exception of Unit 1 at the Holyrood Thermal Generating Station and Unit 2 at Muskrat Falls;
 - Holyrood Unit 1 return to service is now extended to mid-January 2025 due to additional work to refurbish the turbine rotor identified during the planned Unit 1 turbine overhaul; and,
 - Unit 2 at Muskrat Falls is planned to undergo repair, which will result in it being unavailable for the entire 2024-2025 winter season. The expected return to service date for Unit 2 is mid-May 2025. NLH indicates this does not impact winter readiness.

Details of Update

- Planned work for the Holyrood combustion turbine, Hardwoods, Stephenville and Happy Valley gas turbines and hydraulic generation facilities is on target for December 1, 2024 completion.
- All planned WR activities for transmission lines, IIS and LIS terminal station facilities, and network facilities are scheduled for completion by December 1, 2024. Hydro reports some terminal station equipment outages remain, the results of which will be reflected in the WR filing scheduled for December 10, 2024.
- NLH anticipates completion all WR activities for Muskrat Falls Units 1,3 and 4 by December 1, 2024 and notes the planned outage of Muskrat Falls Unit 2 from late October 2024 to mid-May 2025 does not impact WR as energy from Muskrat Falls Units 1, 3, and 4 is readily available to serve customers on the IIS via the LIL. NLH notes it will not attain 80% completion of the proposed 2024 AWP for the Muskrat Falls generating assets. However, NLH indicates this does not impact the ability to reliably serve customers this winter. The majority of the outstanding AWP activities relate to balance of plant preventive maintenance activities. Priority activities will be completed.
- Subject to the completion of the high-power testing, which is planned for Q4 of 2024, the LIL will be operated up to 900 MW as system conditions permit. Overall AWP completion for the LIL, LTA, and synchronous condensers at Soldiers Pond is 62.0% to date. WR completion status is 57.6% for 2024. The majority of the outstanding WR activities are scheduled for completion prior to December 1, 2024. Similar to the Muskrat Falls generation assets, the LIL/LTA AWP will also not be fully met, however priority AWP activities are on target for

completion by December 1, 2024. NLH indicates that the AWP is not complete primarily due to the assets being newly commissioned and NLH not having experience in creating an AWP for them. As NLH gains more experience with the assets it will be better positioned to appropriately determine work execution resource allocation. Outstanding work is related primarily to preventive maintenance activities.

- NLH notes as of November 1, 2024, the WR scope for 10 of the 17 capital projects and programs is complete, and the WR scope for an additional 6 projects and programs is expected to be completed by December 1, 2024. A portion of the WR scope within one program – overhaul of Holyrood Unit 1 - is expected to be completed after December 1, 2024. The expected return to service date for this generating unit is mid-January 2025 and is required as a result of the unanticipated need to refurbish the Unit 1 turbine rotor.
- With regard to the LIL turnbuckles replacement and airflow spoiler installation program, NLH is actively addressing recommendations arising from investigations into localized failures experienced on the LIL over the past three winters. This program focuses on high-priority areas of the LIL and is expected to be 98 per cent complete by the end of 2024 with 90 per cent of turnbuckles replaced. To date, 74 per cent of air spoilers have been installed, with the remaining to be completed in 2025. Similarly, 24 of 61 A3 tower top plates have been reinforced, with the remaining to be completed by the end of the year.
- NLH notes WR work for all hydraulic generation facilities is on target for completion by December 1, 2024. NLH has continued to complete annual inspection of Bay d'Espoir Units 1, 2 and 3 to monitor penstock condition and ensure reliability in short term. The completion of annual maintenance activities remains outstanding on Holyrood CT, and the LIL. NLH has identified four risks to winter readiness of Bay d'Espoir generation facility (see Annex A) which is expected to be fully available by December 1, 2024. NLH intends completion of the work prior to the winter operating season.
- NLH reports that its critical spares status leading into the 2024–2025 winter season is strong.
- NLH concludes it is progressing towards completion of its AWP and WR activities and anticipates the full availability of generation sources by December 1, 2024, with the exception of Unit 1 at the HTGS and Unit 2 at Muskrat Falls. HTGS Unit 1's return to service is extended to mid-January 2025. Muskrat Falls Unit 2 will be unavailable for the 2024–2025 winter season and is expected to return to service in mid-May 2025.
- NLH notes it will continue to monitor the risks to WR and provide a further update in its next 2024–2025 Winter Readiness Planning Report, scheduled to be filed on December 10, 2024.

Analysis:

- If current dry hydrologic conditions persist, there is the potential that thermal generation from the HTGS above minimum will be required to support Island reservoir storage.

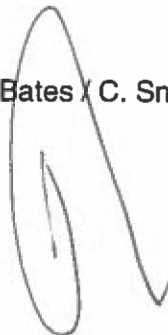
Action Being Taken:

- NR continues to monitor NLH filings on winter readiness. Next updated to be filed December 10, 2024

Prepared/approved by:
Ministerial Approval:

Y. Khan, R. Bates / C. Snook / C. Martin

November 14, 2024




Annex A

Bay d'Espoir generation facility winter readiness risks identified.

Bay d'Espoir Penstocks:

Penstock 3 was inspected in May 2024; during the inspection, seven weld indications were discovered. Weld repairs were completed, and the penstock was returned to service. The inspection of Penstock 2 was completed in August 2024; during the inspection, there were no immediate concerns discovered and the penstock was returned to service.

The inspection of Penstock 1 was completed in October 2024, and although minor indications were found, it was determined that these indications posed no material concerns that would impact the penstock through the upcoming winter operating period. This decision was made considering the ongoing operational restrictions to limit starts, stops and rough operation as well as the fact that Penstock 1 is scheduled to be dewatered in spring of 2025 for commencement of life extension work.

Although NLH has mitigated risk of penstock failure to the extent possible, there is residual risk that a failure could occur before further life extension work is completed. Modifications remain in place which are designed to limit the amount of rough zone operation, as well as the more prescriptive operating regime for Units 1 and 2. Hydro has estimated a 13- to 23-day repair timeline depending on circumstances, should a new failure occur, and has continued to take proactive measures to reduce generating unit downtime in the event of failure.

There remains residual risk that a failure could occur on Bay d'Espoir Penstock 1 before further life extension work on Penstock 1 is completed.

Hinds Lake Unit Vibration 1 and Shaft Seal Leakage:

Leading up to the annual outage in 2024, the Hinds Lake Unit experienced higher than normal vibration levels and shaft seal leakage rates. Upon further investigation, no immediate concerns were identified with the equipment and measures were taken to further mitigate risk.

The Hinds Lake Unit will be available at full capacity this coming winter. Hydro continues to monitor both issues, and to mitigate risk should concerns worsen, Hydro has proceeded with the procurement of bearing components and replacement parts for the shaft seal to ensure they are on hand in the event an outage is required. If unit condition does not worsen, Hydro intends to replace the procured parts during the planned 2026 overhaul.

Bay d'Espoir Unit 7 Generating Bearing Coolers:

During the return to service of Bay d'Espoir Unit 7 following the 2024 scheduled annual outage, Hydro experienced leaks in generating bearing coolers, resulting in a forced outage which lasted 13 days. Initial investigation revealed that all four bearing coolers had experienced tube failures. Hydro used two available spares in inventory and worked with a local fabricator to assemble the outstanding coolers and return the unit to service in August 2024. In the near term, Hydro has identified that there is a risk of the re-assembled coolers developing a leak, which would result in an outage of approximately six to seven days to install the new coolers.

Hydro has initiated procurement of two new coolers with anticipated delivery in November 2024; however, it is unlikely that installation will occur prior to the winter operating season. In the near-term, Hydro has identified that there is a risk of the re-assembled coolers developing a leak, which would result in an outage of approximately six to seven days to install the new coolers.

Bay d'Espoir Surge Tank 3 Heating System

As a result of the failure of the 600 V water heater for Surge Tank 3 in October 2024, the de-icing system for this surge tank is currently not functional. The de-icing system is designed to eliminate the risk associated with ice formation at the top of the surge tank. In the event of a unit trip or other abnormal conditions, the surge tank functions to alleviate pressure associated with abrupt changes in operation. If this occurs during the winter period, it is crucial to ensure ice cover at the top of the surge tank does not impede the dissipation of this pressure. Failure to remove ice cover could result in significant damage to generation assets, potentially causing a forced outage of the two hydraulic units associated with the surge tank.

Hydro has initiated procurement of two water heaters, one as a replacement for the failed heater, and the other to supplement critical spare inventory. Delivery of the water heaters is expected in early December, and Hydro plans to replace the failed heater upon arrival. Until replacement occurs, Hydro will continue to closely monitor weather conditions to identify those which promote the formation of Procurement of ice cover in the surge tank. If the heater is not replaced before icing conditions occur, Hydro will mitigate risk through increased operational monitoring.

Information Note
Department of Natural Resources

Title: Newfoundland and Labrador Hydro 2024-2025 Winter Readiness Planning Report

Issue: To provide an overview of Newfoundland and Labrador Hydro's (NLH) 2024–2025 Winter Readiness Planning (WRP) Report

Background and Current Status:

- In compliance with a Board of Commissioners of Public Utilities (PUB) directive, NLH filed its 2024–2025 Winter Readiness Planning Report on October 10, 2024. The report covers the Island Interconnected System (IIS) and the Labrador Interconnected System (LIS) for the period ending September 30, 2024. The report addresses the following items:
 - The status of annual work plan (AWP) items, for generating plant, transmission, and terminal stations, including the completion to date, outstanding items to complete, and any risks to completion or as a result of failure to complete;
 - A description and schedule for all outstanding 2024 capital projects and progress.
 - Identification of all equipment and plant testing to be carried out in advance of the winter period;
 - The planned generation outage schedule from September 1 to December 31, 2024, and an explanation for any planned outages extending beyond December 1, 2024.
 - An update of critical spares assessment and procurement; and,
 - Identification of any risks affecting the winter readiness as of December 1, 2024.
- All planned Holyrood Thermal Generating Station (HTGS) 2024 winter readiness work is on target for December 1, 2024 completion except Unit 1, which is expected to return to service by mid-January 2025 due to additional work required to refurbish the turbine rotor identified during the planned turbine overhaul.
- Planned work for the Holyrood combustion turbine, Hardwoods, Stephenville and Happy Valley gas turbines and hydraulic generation facilities is on target for December 1, 2024 completion.
- All planned winter readiness (WR) activities for transmission lines, IIS and LIS terminal station facilities, and network facilities are scheduled for completion by December 1, 2024.
- Overall AWP completion for Muskrat Falls Units 1 to 4 is 53% to date while Winter Readiness (WR) activities are 42% complete for 2024. Unit 2 is scheduled to be offline for major turbine repairs on October 28, 2024, and will be out of service until mid-May 2025. WR activities are scheduled for completion prior to December 1, 2024, except for Unit 2 activities to address vibration issues first observed in 2021 that require corrective action, including full unit dismantling, to be completed under warranty by the turbine manufacturer. There have been no issues with vibration on the remaining units.
- NLH notes the planned outage of Muskrat Falls Unit 2 does not impact WR, as energy from Units 1, 3 and 4 is available to the IIS via the Labrador Island Link (LIL) subject to the completion of high-power testing, which NLH continues to plan for execution in mid-December. WR and AWP activities for the Muskrat Falls Transmission Assets are at risk of not being completed due to equipment, resource and outage availability. NLH notes it will continue to monitor the risks to WR and provide a further update in its next 2024–2025 Winter Readiness Planning Report, scheduled to be filed on November 12, 2024.

- NLH notes as of October 1, 2024, the WR scope for 9 of the 17 capital projects and programs is complete, and the WR scope for an additional 7 projects and programs is expected to be completed by December 1, 2024. A portion of the WR scope within one program is expected to be completed after December 1, 2024.
- The LIL turnbuckles replacement and airflow spoiler installation program work is expected to be complete by the end of 2024 with 65-70% work already completed.
- NLH notes maintenance activities are underway on Bay d'Espoir Units 1 and 2 to accommodate a penstock inspection, and Upper Salmon. The completion of annual maintenance activities remains on Star Lake, Hardwoods GT, Happy Valley GT, Holyrood CT, and the LIL. NLH has identified four risks to winter readiness of Bay d'Espoir generation facility which is expected to be fully available by December 1, 2024. See Annex A for risk details.
- NLH reports that its critical spares status leading into the 2024–2025 winter season is strong.
- NLH concludes it is progressing towards completion of its AWP and WR activities and anticipates the full availability of generation sources by December 1, 2024, with the exception of Unit 1 at the HTGS and Unit 2 at Muskrat Falls.
- In order to reliably serve customers, NLH maintains minimum limits (developed annually) for aggregate energy storage in its major hydroelectric reservoirs on the Island Interconnected System. The 2024–2025 limits assume two Holyrood TGS units will be online at minimum output during winter 2024–2025 and does not include the use of standby thermal generation to support reservoir storage.
- Since May 2024, NLH 's Island reservoirs have experienced persistent below average inflows. As of September 30, 2024, aggregate reservoir storage was 1,478 GWh, which is 60% of the maximum operating level.
- NLH notes it will continue to monitor the risks to WR and provide a further update in its next 2024–2025 Winter Readiness Planning Report, scheduled to be filed on November 12, 2024.

Analysis:

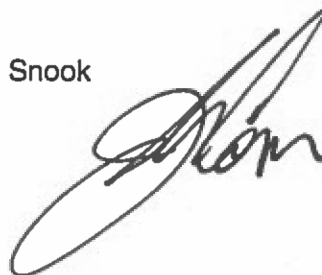
- NLH is progressing towards completion of its AWP and winter readiness activities, and it anticipates the completion of all winter readiness activities and full availability of generation sources by December 1, 2024.
- Since May 2024, NLH's Island reservoirs have experienced persistent below average inflows. If the current dry hydrologic conditions persist, there is the potential that thermal generation from the HTGS above minimum will be required to support Island reservoir storage.
- The next 2024–2025 Winter Readiness Planning Report is scheduled for November 12, 2024.

Action Being Taken:

- NR continues to monitor NLH filings on winter readiness.

Prepared/approved by: Y. Khan, R. Bates / C. Snook
Associate Deputy Minister Approval: C. Martin

November 1, 2024



Annex A

Bay d'Espoir generation facility winter readiness risks identified.

Bay d'Espoir Penstocks:

Penstock 3 was inspected in May 2024; during the inspection, seven weld indications were discovered. Weld repairs were completed, and the penstock was returned to service. The inspection of Penstock 2 was completed in August 2024; during the inspection, there were no immediate concerns discovered and the penstock was returned to service.

The inspection of Penstock 1 is scheduled to commence the week of October 7, 2024, the results of which will be discussed in the filing of the next 2024–2025 Winter Readiness Planning Report.

Although NLH has mitigated risk of penstock failure to the extent possible, there is residual risk that a failure could occur before further life extension work is completed. Modifications remain in place which are designed to limit the amount of rough zone operation, as well as the more prescriptive operating regime for Units 1 and 2.26 Hydro has estimated a 13- to 23-day repair timeline depending on circumstances, should a new failure occur, and has continued to take proactive measures to reduce generating unit downtime in the event of failure.

There remains residual risk that a failure could occur on Bay d'Espoir Penstock 1 before further life extension work on Penstock 1 is completed.

Hinds Lake Unit Vibration 1 and Shaft Seal Leakage:

Leading up to the annual outage in 2024, the Hinds Lake Unit experienced higher than normal vibration levels and shaft seal leakage rates. Upon further investigation, no immediate concerns were identified with the equipment and measures were taken to further mitigate risk.

The Hinds Lake Unit will be available at full capacity this coming winter. Hydro continues to monitor both issues, and to mitigate risk should concerns worsen, Hydro has proceeded with the procurement of bearing components and replacement parts for the shaft seal to ensure they are on hand in the event an outage is required. If unit condition does not worsen, Hydro intends to replace the procured parts during the planned 2026 overhaul.

Bay d'Espoir Unit 7 Generating Bearing Coolers:

During the return to service of Bay d'Espoir Unit 7 following the 2024 scheduled annual outage, Hydro experienced leaks in generating bearing coolers, resulting in a forced outage which lasted 13 days. Initial investigation revealed that all four bearing coolers had experienced tube failures. Hydro used two available spares in inventory and worked with a local fabricator to assemble the outstanding coolers and return the unit to service in August 2024.

Hydro has initiated procurement of two new coolers with anticipated delivery in November 2024; however, it is unlikely that installation will occur prior to the winter operating season. In the near-term, Hydro has identified that there is a risk of the re-assembled coolers developing a leak, which would result in an outage of approximately six to seven days to install the new coolers.

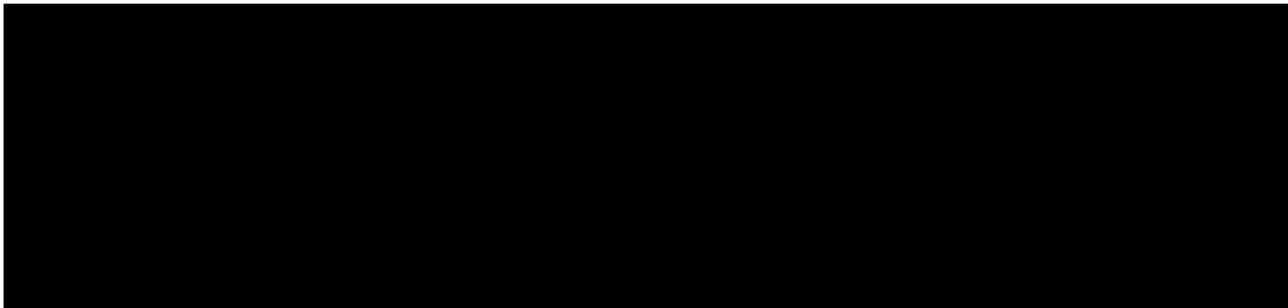
**Backgrounder: CARNEGIE LEARNING
November 15, 2024**

Company Background:

- Carnegie Learning (“Carnegie”) is a leading provider of K-12 education technology, curriculum, and professional learning solutions.
- The company was founded in 1998 in Pittsburg, Pennsylvania at Carnegie Mellon University, and since that time has become a recognized leader in the ed tech space, using artificial intelligence, formative assessment, and adaptive learning to deliver solutions to numerous educational challenges.
- In 2020, Carnegie acquired Scientific Learning, an online reading and language provider. In 2021, the company further diversified its offerings by purchasing Zorbit Math, a supplemental math software solution that uses play-based adaptive learning for elementary students.
- In 2024, Carnegie opened its new office and Canadian Headquarters in St. John’s, NL. The primary focus of its new St. John’s office is to develop the company’s new K-6 mathematics game, MATHia Adventure. MATHia Adventure will use AI to subtly provide hints and suggestions to improve student math performance and engagement.

GNL Support:

- To date, the Province has not provided any funding to Carnegie.
- In August 2023, IET engaged with the company to introduce the JAG program, provided guidance on eligibility criteria, and supported the submission of a concept paper by February 2024. Following the concept paper, Carnegie was invited to submit a full application on March 4, 2024.



29.(1)(a)
35.(1)(d)
35.(1)(g)

- These products are digital/print core elementary math resources (ClearMath Elementary) and middle/secondary school (MATHia).

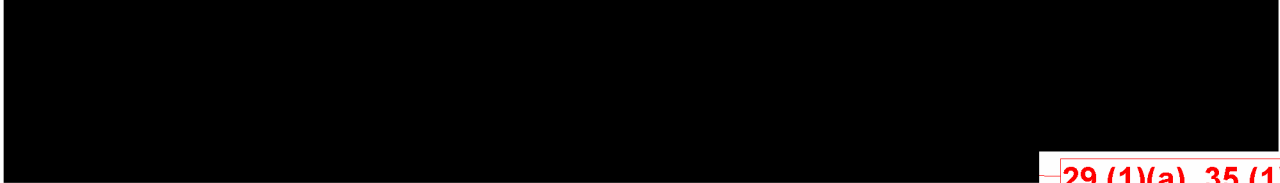


29.(1)(a), 35.(1)(d)

Decision/Direction Note
Department of Industry, Energy and Technology

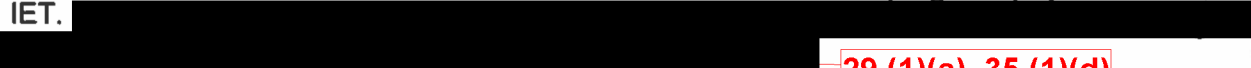
Title: Rental Housing Development Loan Program

Decision/Direction Required:




29.(1)(a), 35.(1)(d)

Background and Current Status:

- The Province announced the launch of RHDLP on January 31, 2024, as part of its five-point plan to increase the availability of housing in Newfoundland and Labrador.
- RHDLP is administered under the Innovation and Business Investment Corporation (IBIC) and IBIC was allocated up to \$50 million to provide reduced cost financing to incentivize the construction of new purpose-built rental units in the province.
- On September 17, 2024, following approval by IBIC, IET issued 11 financing agreements to successful applicants that were signed by October 16, 2024. The financing agreements represent a total loan commitment of \$41,490,279, matched by \$137,421,889 in private investment, which brings the total projected construction value to \$178,912,168.
- The RHDLP Phase III guidelines and Financing Agreement state that construction must begin within six months of acceptance (i.e., from when the financing agreement was signed). Failure to begin construction within this timeframe can result in withdrawal of the letter of offer and termination of the agreement.
- Three projects have commenced construction and received initial progress payments from IET. 
- A policy amendment to RHDLP is required to allow construction start dates to be extended from six to twelve months following acceptance.

29.(1)(a), 35.(1)(d)

Analysis:

- The requested extensions are due to documented challenges including: delays in building permit approvals; workforce shortages; supply chain disruptions; and weather-related concerns associated with beginning construction in winter. 

29.(1)(a)



29.(1)(a), 35.(1)(d)

**Decision/Direction Note
Department of Industry, Energy and Technology**

Title: CGI Information Systems and Management Consultant Inc. (CGI)

Decision/Direction Required:

29.(1)(a), 35.(1)(d), 35.(1)(g)

Background and Current Status:

[Redacted]

35.(1)(d), 35.(1)(g)

- CGI is the largest independent information and communications technology (ICT) and business consulting services company in Canada, and the fifth largest in the world. The company handles the full life cycle of IT requirements, from conception and design to implementation and ongoing operations, support, and enhancement.
- With 91,500 professionals working in 400 locations across the globe, CGI provides comprehensive, scalable, and sustainable IT and business consulting services by staff who are trained globally. The executive and registered office of the Company is situated out of Montréal, Québec. The company is publicly traded on the TSX & NYSE and generated global revenues of \$14.3 billion in 2023.

29.(1)(a),
35.(1)(d)

[Redacted]

Analysis:

[Redacted]

29.(1)(a), 35.(1)(d), 35.(1)(g)

**Decision/Direction Note
Department of Industry, Energy and Technology**

Title: Bombardier Industrial Benefits Agreement

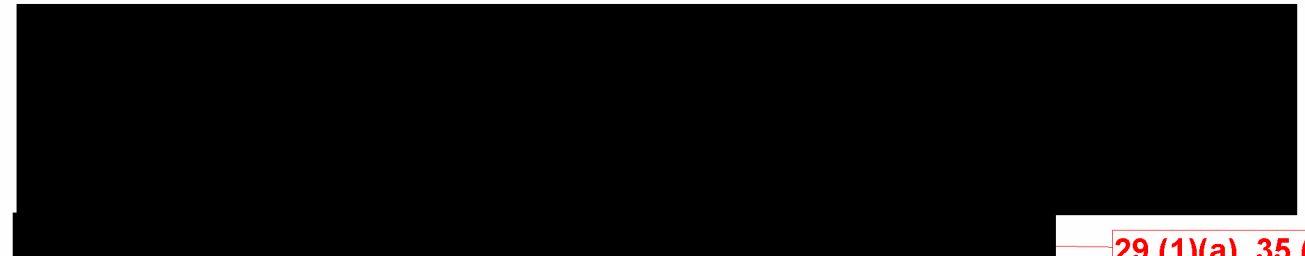
Decision/Direction Required:



29.(1)(a)

Background and Current Status:

- In 2009, the Government of Newfoundland and Labrador (GNL) announced an agreement to acquire four new Bombardier 415 water bombers, which included an IBA between the company and GNL to accrue industrial benefits for the province. Originally set at \$30 million, the IBA was amended in 2011 and 2014 to increase the total to \$47 million.
- The IBA consists of three components: 1) \$20.85 million for capacity building initiatives (CBI); 2) \$24.5 million for contracts with Newfoundland and Labrador firms; and 3) \$1.65 million for educational and training initiatives.
- Spending under the IBA has supported: annual scholarships for engineering students at Memorial University; the hiring of students for work terms; the provision of a plane and parts to the College of the North Atlantic for training programs; and contracts with local suppliers.

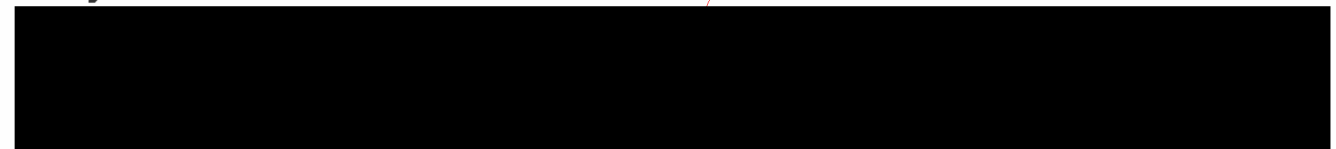


29.(1)(a), 35.(1)(d)

- Bombardier submits annual activity status reports to IET outlining and documenting credits to apply to the IBA commitments.

Analysis:

29.(1)(a), 35.(1)(d), 30.(1)(a), 30.(1)(b)



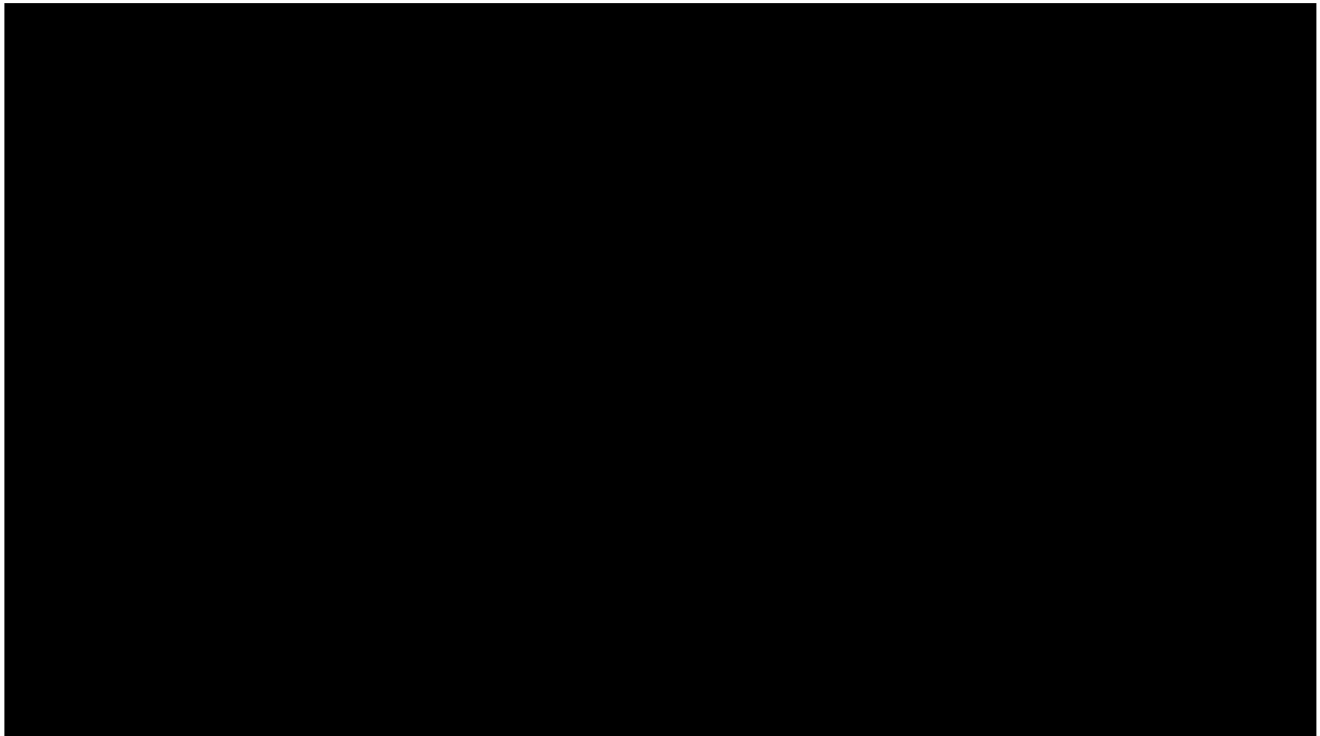
- Bombardier is committed to fulfilling its obligations under the IBA. 



29.(1)(a), 35.(1)(d)

- IET staff are facilitating meetings between Bombardier and companies in the province to help find opportunities to secure the remaining commitment in the IBA.

29(1)(a); 35(1)(d)



Prepared/Approved by:
Ministerial Approval:

S. Butler/K. Youden/J. Ludmer/

November 12, 2024

Two handwritten signatures in black ink are positioned to the right of the text. The signature on the left is more complex and cursive, while the one on the right is a large, simple loop.