

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

**Title:** Seal Cove Quarry Permit

**29.(1)(a), 40.(1)**

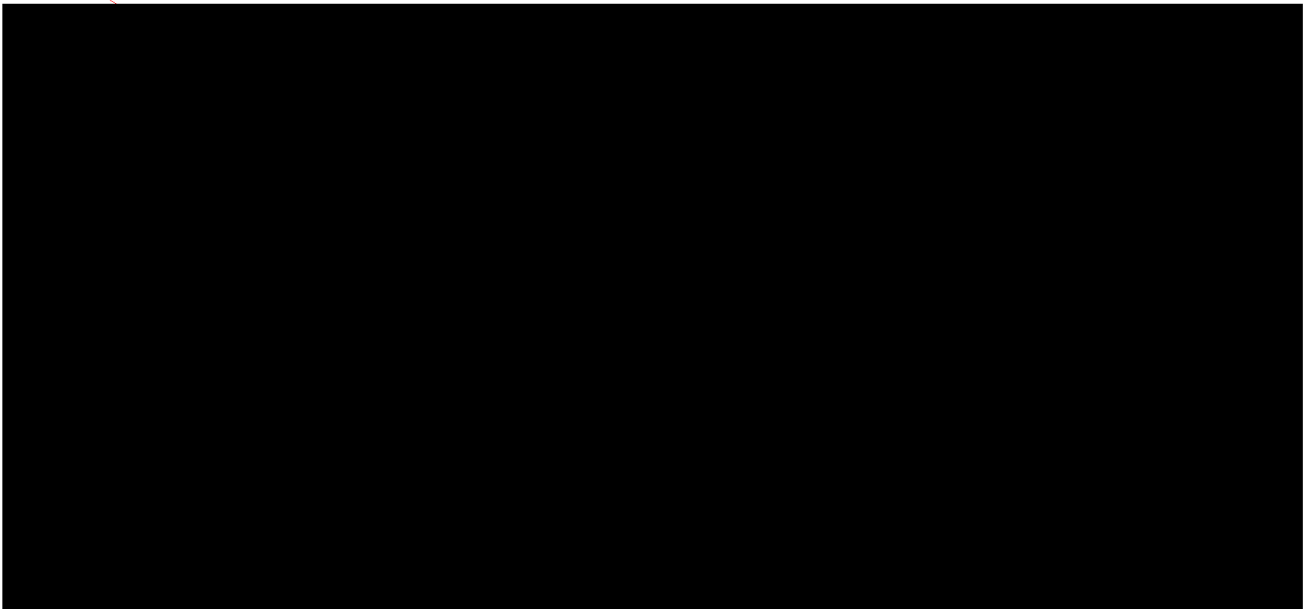
**Decision/Direction Required:**



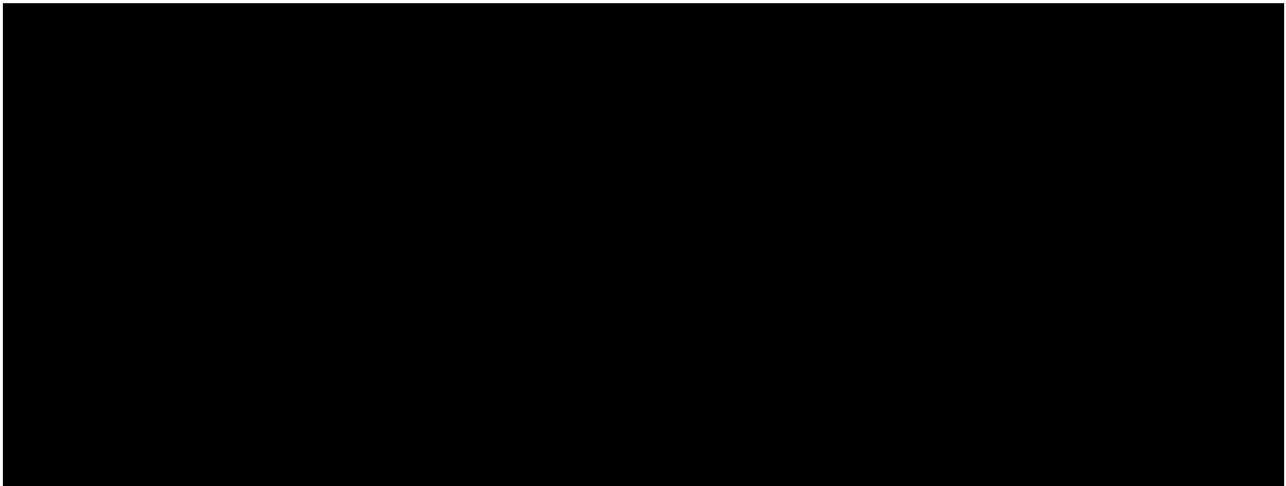
**Background and Current Status:**

- Aggregate in the White Hill Pond area in Seal Cove, CBS has been mapped by the Geological Survey Division as a source of sand suitable for the production of concrete.
  - There is high demand for quarries in this aggregate resource area as it contains one of the few sources of suitable concrete sand on the Avalon peninsula.
  - There are several existing quarries and new quarry applications in this area (e.g., JCL Investments, MacMix Concrete, Weirs Construction, Farrell's Excavating Ltd.).

**35.(1)(d), 40.(1)**



**Analysis:**



**29.(1)(a), 35.(1)(d), 40.(1)**

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

**Title:** Voisey's Bay Mine Expansion Project

**Decision/Direction Required:**

- Whether to reduce the amount of the Contingent Unprocessed Nickel Charge (CUNC) in accordance with article 4.3A.2 of the Voisey's Bay Development Agreement.

**Background and Current Status:**

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

- VNL operates the Voisey's Bay Mine in Labrador and a commercial nickel processing plant in Long Harbour, subject to terms of the Voisey's Bay Development Agreement (DA).
- The Fifth Amendment to the DA included a commitment to develop the post-Ovoid underground mine, the VBME Project, such that continuous operation at Voisey's Bay is maintained. The commitment was secured through a [REDACTED] security that was built up as nickel-in-concentrate was exported from the province. This is known as the Contingent Unprocessed Nickel Charge (CUNC). 35.(1)(d) 35.(1)(d) 35.(1)(d)
- The CUNC was comprised of [REDACTED] in Letters of Credit (LOC) and [REDACTED] as a general security agreement and a collateral realty mortgage. The DA allows for the reduction of the value of the CUNC as the project is developed, with the amount of LOCs being reduced first.
- Article 4.3A.2 of the DA (Annex A) states that "where the Proponent believes that Overall Progress has reached a percentage completion that would trigger the reduction of the amount of the Contingent Unprocessed Nickel Charge, the Proponent shall so indicate in its monthly progress report delivered to the Government under Section 15.3 and the Contingent Unprocessed Nickel Charge shall be reduced in accordance with this Section 4.3A.2 only following confirmation of such assessment by the Engineer in the applicable Engineer's Assessment."
- A contract is in place with HKA Global (Canada) Inc., formerly Knowles Consultancy Services, appointing them to act as the Independent Engineer (IE) for the VBME Project. Per Article 15.4 of the DA (Annex A), the IE's assessment in relation to the VBME Project shall include "whether Overall Progress has reached a percentage completion that would trigger the reduction of the Contingent Unprocessed Nickel Charge in accordance with Section 4.3A.2." VNL and the department share the cost of the assessments performed under this contract equally.

**Analysis:**

- Four reductions to the CUNC have previously taken place after confirmation by the IE:
  - Upon VBME Project sanction in July 2015, the CUNC was reduced to [REDACTED]
  - Upon reaching 15% overall completion, the CUNC was reduced to [REDACTED]
  - Upon reaching 30% overall completion, the CUNC was reduced to [REDACTED]
  - Upon reaching 60% overall completion, the CUNC was reduced to [REDACTED]

35.(1)(d)

- In a letter dated April 24, 2024, VNL indicated that they have reached the "Start of Mining Milestone" with 90% overall completion of the VBME Project and were requesting that the amount of the CUNC be reduced to \$0 in accordance with the Development Agreement.
- The IE's Report Work Task Order (WTO) #5, dated March 19, 2024, confirms that VNL has reached the 90% overall progress threshold and the "Start of Mining" milestone that trigger the final reduction in the amount of the CUNC.

• [Redacted]

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

29.(1)(a)

**Alternatives:**

• [Redacted]

• [Redacted]

**Prepared/Approved by:** A. Smith  
**Ministerial Approval:**

May 9, 2024



### Annex A: Applicable section of the Development Agreement

**4.3A.2 Reduction.** The amount of the Contingent Unprocessed Nickel Charge and the corresponding security granted under Section 16.1 shall each be reduced according to the Overall Progress of the Underground Mine, on a schedule determined as follows:

Overall Progress	Reduced Amount of Contingent Unprocessed Nickel Charge
Achievement of the Sanction of the Underground Mine Milestone set forth in Section 4.6A(d) (being 0% Completion)	
15% Completion	
30% Completion	
45% Completion	
60% Completion	
Achievement of the "Start of Mining" Milestone set forth in Section 4.6A(h) (being ~70% Completion)	\$0

35.(1)(d)

35.(1)(d)

Where the Proponent believes that Overall Progress has reached a percentage completion that would trigger the reduction of the amount of the Contingent Unprocessed Nickel Charge, the Proponent shall so indicate in its monthly progress report delivered to the Government under Section 15.3 and the Contingent Unprocessed Nickel Charge shall be reduced in accordance with this Section 4.3A.2 only following confirmation of such assessment by the Engineer in the applicable Engineer's Assessment.

**15.4 Underground Mine Completion - Engineer's Assessments.** The Engineer shall issue an Engineer's Assessment in relation to Underground Mine:

- (a) semi-annually as at February 28<sup>th</sup> and August 31<sup>st</sup> of each year until the start of mining at the Underground Mine, unless otherwise agreed by the parties; and
- (b) otherwise as requested by the Government or the Proponent from time to time, which request shall be in writing and given to the Engineer and the other party.

Such Engineer's Assessment shall include (among other things) the Engineer's independent assessment as to: (i) whether the Proponent is proceeding diligently with the completion of the FEL 3 study with the intent of meeting the Milestone set forth in Section 4.6A(d), (ii) whether the Proponent is proceeding diligently with the Overall Progress on the Underground Mine, with the intent of achieving the start of mining by 31 December 2019 and, if not, the Engineer's assessment of the date on which the start of mining would likely occur, based on reasonable

assumptions, (iii) whether the Proponent has met or failed to meet any of the Milestones set forth in Section 4.6A by the applicable Milestone Date, and (iv) whether Overall Progress has reached a percentage completion that would trigger the reduction of the Contingent Unprocessed Nickel Charge in accordance with Section 4.3A.2. Such Engineer's Assessment shall be delivered to the Government and the Proponent within 30 days of (1) the dates referred to in subparagraph (a), or (2) the date of a request made under subparagraph (b). The Proponent shall make available to the Engineer all such data concerning the engineering and construction of the Underground Mine as may be required to permit the Engineer to issue such Engineer's Assessment (including the Proponent's monthly progress reports) and shall provide a copy of the same to the Government if so requested.

**16.3 Reduction of Security.** Any reductions in the amount of the Contingent Unprocessed Nickel Charge under Section 4.3A.2 shall be applied first to reduce the aggregate outstanding amount under the Letters of Credit and then to reduce the Secured Amount under the GSA and the Collateral Realty Mortgage.

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

**Title:** Baie Verte Peninsula Chamber of Commerce 35th Annual Mining Conference

**Issue:** IET participation at the Baie Verte Mining Conference

**Background and Current Status:**

- The Baie Verte Peninsula Chamber of Commerce has been hosting a mining conference in Baie Verte since 1988. The conference reflects the region's long history of mining and exploration, and it takes place over three days (May 29-31) with participants from the local community, those involved in the local mineral industry, and representatives of mining, mineral exploration, and supply companies.
- The Baie Verte Peninsula has recently seen some important advances in the development front, including the acquisition of the former Rambler Metals operations by Australian company AuTECO's (Firefly Metals), and Signal Gold's Point Rousse operations by Maritime Resources. Many prospectors and other exploration companies also have claims in this region and exploration is ongoing.
- The preliminary conference schedule (attached as Annex A) includes a trade show, technical program, and networking events. The conference is held across several venues in Baie Verte including the Tommy Ricketts Arena, the Baie Vista Inn, College of the North Atlantic and the Baie Verte Mining Museum.

**Analysis:**

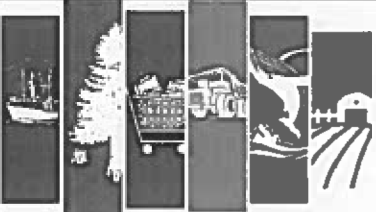
- IET will have an exhibition display at the trade show floor. Monica Squires, Promotions Geologist with the Marketing and Promotions Division, will service the booth to raise awareness about the value of the NL mining and mineral resources sector. This event represents an important venue for relationship building, local outreach and promotion and to connect with stakeholders currently active in the region.
- Mines Branch would have one employee from Mineral Development Division, one from Mineral Lands Division and a member of the Executive attend.
- The booth fee is \$225 and registration per person is \$330. The registration fee includes most events and meals for the registrant from the opening to closing. Travel expenses are approximately \$650 per person for accommodations, meals and per diem expenses for the duration of the conference. Mineral Development staff will travel earlier in the week for Mineral Incentive Program related field visits with prospectors/companies.
- Travel and registration expenses are identified in the Marketing and Promotions Division, Mineral Development Division and Mineral Lands Division's zero-based budget and are within the allocated amounts.

**Prepared/Approved by:** C. Valverde/M. Power /M. Nesbitt / A.Smith  
**Deputy Minister Approval:**

May 22, 2024

A handwritten signature in black ink, consisting of a large, stylized initial 'S' followed by a series of loops and a long horizontal stroke extending to the right.

## Annex A



**BAIE VERTE PENINSULA  
CHAMBER OF COMMERCE**  
INDUSTRY POWERED. COMMUNITY FOCUSED.

**35th Annual Mining Conference Schedule**

**Wednesday, May 29<sup>th</sup>**

<b>11:00 – 4:00</b>	<b>Booth Set-up and Attendee Registration</b>	<i>College of the North Atlantic</i>
<b>4:00 – 9:00</b>	<b>Booth Visits/Networking</b>	
<b>7:00 – 9:00</b>	<b>Retired Mine Workers "Meet and Greet"</b>	<i>College of the North Atlantic</i>
<b>9:30</b>	<b>Networking Reception/Hospitality Suite</b>	<i>Baie Vista Inn Conference Room</i>

**Thursday, May 30<sup>th</sup>**

<b>7:30 – 8:30</b>	<b>Breakfast (Registration continued)</b>	<i>College of the North Atlantic</i>
<b>9:00</b>	<b>Presentations Begin</b>	
<b>10:00 – 11:00</b>	<b>Booth Visits / Coffee Break</b>	
<b>11:00</b>	<b>Presentations Resume</b>	
<b>12:00 – 1:30</b>	<b>Lunch / Booth Visits</b>	
<b>1:30</b>	<b>Presentations Resume</b>	
<b>2:30 – 4:30</b>	<b>Booth Visits / Coffee Break</b>	
<b>3:30 -5:30</b>	<b>Wine &amp; Cheese/Networking</b>	<i>Baie Verte Miners Museum</i>
<b>6:00</b>	<b>Cocktails (Silent Auction Begins)</b>	<i>Tommy Ricketts Arena</i>
<b>7:00</b>	<b>Formal Supper</b>	<i>Tommy Ricketts Arena</i>

**Friday, May 31<sup>st</sup>**

<b>7:30 – 8:30</b>	<b>Breakfast</b>	<i>College of the North Atlantic</i>
<b>9:00</b>	<b>Presentations Begin</b>	
<b>10:00 – 11:00</b>	<b>Booth Visits / Coffee Break</b>	
<b>11:00</b>	<b>Presentations Resume</b>	
<b>12:00 -1:30</b>	<b>Keynote Speaker Luncheon</b>	<i>Tommy Ricketts Arena</i>
<b>1:30</b>	<b>Booth Clean-up</b>	<i>College of the North Atlantic</i>

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

**Title:** The Mining Investment Event of the North

**Decision/Direction Required:**

- It is recommended that approval be provided for two IET delegates to attend 'The Mining Investment Event of the North' at the Centre des congrès de Québec (June 4-6, 2024).

**Background and Current Status:**

- The event, promoted as Canada's only Tier One Global Investment Conference, is held annually in Québec City, and is sponsored by the Government of Québec, and financial and mining communities at large. The invitation-only conference, hosts over one hundred participating mining companies, and facilitates privately arranged meetings between mining companies, international investors, and various mining government authorities.
- In its third year, the event will feature a three-day program, two Sponsors Networking events, and a ExplorCo Lounge featuring small-cap companies. The event also promotes sustainability via education and innovation through its Student Sponsorship and SHE-Co Initiatives.
- The program will feature a mix of exploration, mining, and royalty companies, as well as keynotes and panels with well-known industry thought leaders. It includes a 'Battery and Critical Metals Day,' and a 'Newfoundland and Labrador Spotlight' with representatives from the province's mining industry.
- To date, there are approximately ninety-five confirmed companies from Canada, the U.S., and several other jurisdictions, including several with Newfoundland and Labrador (NL) affiliations: Firefly Metals Ltd., Exploits Discovery Corp., Maritime Resources Corp., and Rio Tinto. The organizers have confirmed Yukon's participation for the next three years and remain in high level conversations with the Northwest Territories and Ontario regarding participation. The registration number has exceeded one hundred and is expected to continue to grow.
- Gary Stanley, Managing Director of Global Mineral Strategies and former Director of the Office of Critical Minerals and Metals with the U.S. Department of Commerce met with the Marketing and Promotions team at PDAC and has been involved in profiling the event to the U.S., which has been identified by the event organizers as a key target market/audience.

**Analysis:**

- An introductory package was proposed this year to attend and observe the event as a potential future sponsor. The package includes two delegate registration passes at a reduced rate of \$1000 each (normally \$2000) and the option to participate in the Newfoundland and Labrador Spotlight by providing a keynote presentation and/or moderating the session, or by participating in the panel discussion.
- Participation allows IET the opportunity to continue to collaborate with the event organizers to better align any future participation with the department's promotions and investment attraction goals.

- Participation allows IET to promote critical mineral potential and attract new investments in critical mineral exploration and development, in alignment with the NL Critical Minerals Plan. Participation is consistent with the Action Plan bullet expressed in the 'Mining the Future' strategy, to "enhance global promotion to grow investment, exploration and development" in our minerals sector.
- The total cost for participation is estimated at \$8,800, which includes \$2,000 for registration and \$6800 for travel for two staff. One staff from the Marketing and Promotions Division (Mineral Exploration Consultant Geologist) and the Executive Director for Mining Innovation would be in attendance. The Executive Director would participate in the Newfoundland and Labrador Spotlight panel discussion.
- IET will participate in lieu of the 2024 Xplor Convention (Montreal, October 28-31) identified in the Marketing and Promotions budget, and funds will be reallocated for this purpose.

**Alternatives:**

**Option 1: Provide approval for two delegates to attend The Mining Investment Event of the North (RECOMMENDED)**

**Advantages:**

- IET promotes NL's mineral resource opportunities, while supporting the province's neighboring mining jurisdiction, and NL affiliated companies already committed to attend.

29.(1)(a)

[REDACTED]

The province has attended their conferences regularly for over a decade.

- IET promotes NL as a favorable exploration and mineral development destination to a global (primarily North American) audience and makes important new connections with potential investors/clients.
- Delegate participation is a cost-efficient option to attend and evaluate future participation for 2025 and later years.

**Disadvantages:**

- IET incurs approximately \$8,800 to attend the event, which includes \$2,000 for registration and \$6800 for travel for two staff.

**Option 2: Do not provide approval to secure IET's participation at The Mining Investment Event of the North (NOT RECOMMENDED)**

**Advantages:**

- Would result in savings.

29.(1)(a)

**Disadvantages:**

- A loss of opportunity to promote mineral resource opportunities [REDACTED]

**Prepared/Approved by:** C Valverde Cardenas/M. Power/A. Smith/M. Nesbitt  
**Ministerial Approval:**

May 24, 2024

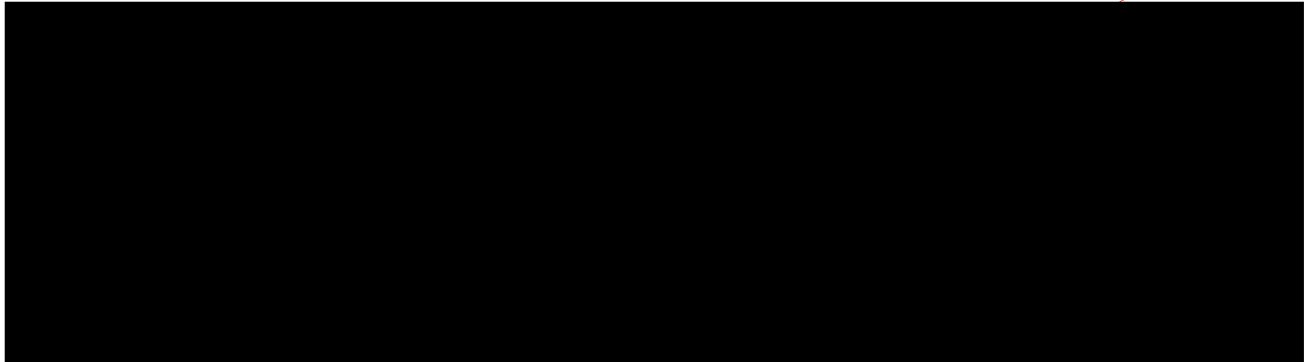
**Backgrounder**  
**Department of Industry, Energy and Technology (IET)**  
**Novamera Inc.**

**Title:** Novamera Inc.

**Background and Current Status:**

- Novamera is a Canadian company headquartered in Oakville Ontario focused on assisting mining companies turn uneconomic narrow vein mineral resources into profitable, mineable deposits, through its surgical mining technologies. The company is registered as an extra-provincial corporation with operations in Newfoundland and Labrador (NL). Novamera's employees are located in Ontario with the exception of one in NL.
- The company was created out of a research and development program initiated by Anaconda Mining in 2017 to develop and optimize a Narrow Vein Mining (NVM) system, now termed Surgical Mining Technology (SMT).
- Novamera has been supported previously by the provincial and federal governments including a non-repayable contribution of \$521,433, under the province's research and development program.
- Novamera's SMT is designed to work with conventional drilling equipment, using hardware and innovative software to be able to pinpoint, map, navigate and extract high-value narrow vein deposits without the need for costly infrastructure.
- SMT involves drilling a pilot hole guided by borehole imaging to effectively follow mineralization. A second larger hole is then drilled to ream out the vein to the width of the mineralization and transport the ore to surface. The hole would be subsequently filled with low strength cement and tailings.
- In June 2021, Anaconda Mining received an approval for a SMT project at the Romeo and Juliet Deposit on Mining Lease 149 that was covered under the existing **Mining Act** (the Act) permitting at the time. The intent of the program was to test the performance of the SMT but did not include an approval to process the ore to generate revenue.

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

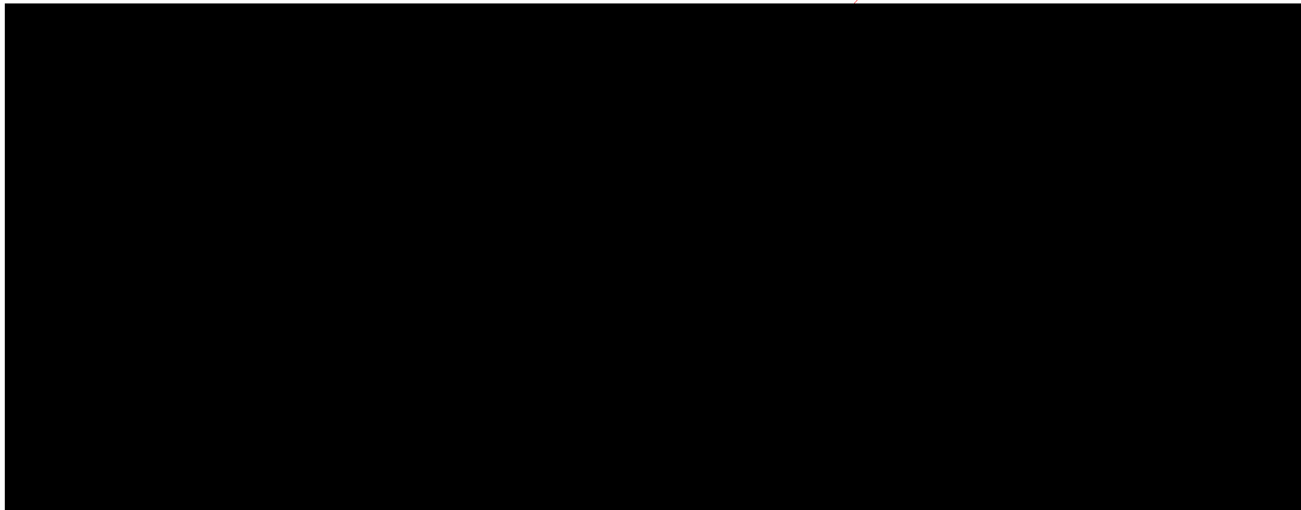
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- On June 29, 2023, Novamera was awarded \$850,005 in funding through MICA for its surgical mining of the Rumbullion Vein project at the Hammerdown mine site.

- In a March 5, 2024, press release, Great Atlantic Resources indicates that a 3,000 tonnes (1,000 cubic metre) bulk sample will be removed from their Golden Promise Gold Property's Jaclyn Main Zone deposit using Novamera's precision mining method. [REDACTED]

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

- Section 3 of the Act states the Minister may exempt a small scale project from the requirements of the Act. The criteria for a small scale project are defined in the Mining Act Guidelines and are based on annual and ultimate volume of material mined, and the area of disturbance. Projects which have the potential to generate acidic water would not be eligible for a small scale project designation.

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



**Prepared/Approved by:** K. Bradbury/ P. Carter/A. Smith  
**Ministerial Approval:**

May 7, 2024

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Fraser Institute Annual Survey of Mining Companies 2023

**Issue:** To provide an update on the results of the 2023 survey, as Newfoundland and Labrador continues to rank as a top ten jurisdiction for global mining investment attractiveness.

**Background and Current Status:**

- The Fraser Institute has been surveying mining industry executives and managers since 1997. The survey identifies the provinces, states, and countries with the most attractive policies to encourage investment in mining exploration and production.
- Approximately 2,045 surveys were sent to exploration, development, and other mining-related companies from August 16, 2023, to January 9, 2024. Based on 293 responses (14 per cent), sufficient data to evaluate 86 jurisdictions was captured. The minimum threshold for inclusion in the survey was five responses.
- Survey respondents assigned scores for each of the 15 factors (Annex A) affecting investment decisions. Annex B summarizes Canadian provincial and territorial rankings. NL's results in overall global ranking for the last five years are summarized in Annex C. NL's rankings for all 15 factors for the last two years are summarized in Annex D, with a detailed breakdown of the greatest changes in Annex E.
- Based on survey responses, summary indices are calculated for the report and include:
  - **Investment Attractiveness Index** – a composite index on which overall ranking is based, combining both the Policy Perception Index (40 per cent) and the Best Practices Mineral Potential Index (60 per cent).
  - **Policy Perception Index (PPI)** – a report card on the attractiveness of a jurisdiction's mining policies.
  - **Best Practices Mineral Potential Index (MPI)** – ranks the jurisdictions' geology with respect to the mineral potential alone, assuming a best practices regulatory environment.

**Analysis:**

- Utah became the top jurisdiction in the world for investment, followed by Nevada and Saskatchewan. Rounding out the top 10 include Western Australia, Quebec, Manitoba, Arizona, Northern Territory, Newfoundland and Labrador, and Ontario. Canada has the most jurisdictions (five) in this year's top 10.
- In 2023, NL's ranking decreased from 2<sup>nd</sup> to 4<sup>th</sup> nationally and from 4<sup>th</sup> to 9<sup>th</sup> globally in terms of overall investment attractiveness. This is due to decreased rankings in both PPI and MPI.
- NL's PPI decreased from 5<sup>th</sup> (out of 62) in last year's survey to 11<sup>th</sup> (out of 86) this year. Similarly, NL's MPI dropped from 9<sup>th</sup> (out of 47) in the 2022 survey to 15<sup>th</sup> (out of 58) in the 2023 survey. The number of jurisdictions differ between indices because some jurisdictions earned the same score, and therefore tied in the ranking.
- In three of the 15 policy categories, NL demonstrated increases in ranking such as: political stability (+7), socioeconomic agreements/community development (+3), and level of security (+1). NL decreased in ranking in 11 categories and remained the same in one.

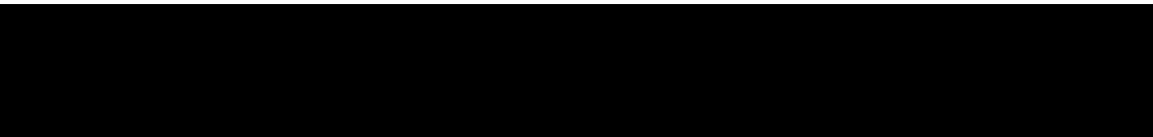
- The report cites increasing uncertainty concerning regulatory duplication, protected areas, and disputed land claims as the reasons for the decrease in NL's PPI score. One exploration company noted that mining royalties are not properly invested in community development, suggesting that these funds should benefit local municipalities and regional stakeholders.

29.(1)(a)



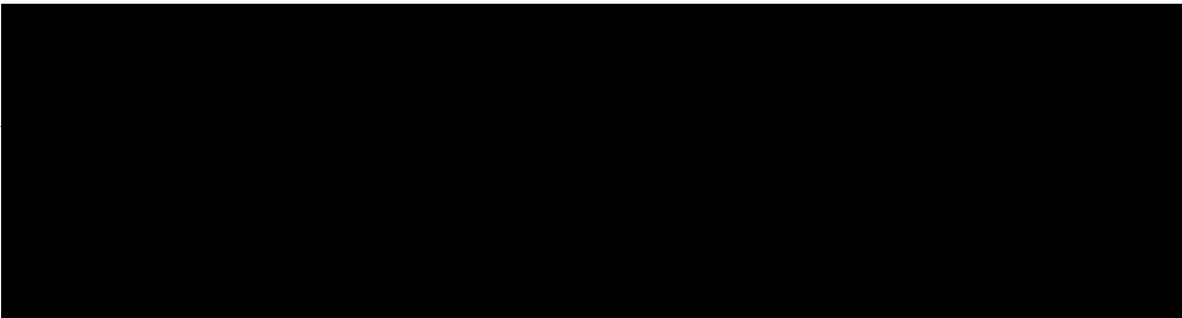
- Up to 26 jurisdictions that ranked higher than NL on various policy factors received only five to nine responses, while NL received at least 10 responses for all factors. The lower the response rate adds a larger weight to individual responses.

29.(1)(a)



- The Fraser Institute also performs a sub-survey of exploration companies to examine mining exploration permitting times. NL ranked in the following categories:
  - **Length of Time to Receive Permits** – NL ranked third in this category as 43 per cent of respondents noted they acquired permits in two months or less.
  - **Changes Over Time** – 72 per cent of respondents indicated that the time for getting permit approvals had shortened or stayed the same over the last 10 years. This category does not rank jurisdictions.
  - **Transparency** – NL ranked fourth with 86 per cent of respondents expressing that the level of transparency either encourages or is not a deterrent to exploration investment.
  - **Timeline Certainty** – NL ranked second in this category as 83 per cent of the respondents indicated that the permitting authority met its own established timelines either most or some of the time.
  - **Confidence** – NL, QC, and ON were the top performers in Canada. All respondents were highly confident or confident that they would be granted the necessary permits.

29.(1)(a)



Prepared/Approved by:  
Ministerial Approval:

J. Hart / K. Bradbury / P. Carter

May 16, 2024

Two handwritten signatures in black ink, one appearing to be 'J. Hart' and the other 'K. Bradbury'.

### **Annex A – Policy Factors in Survey**

- Respondents are asked to indicate how each of the 15 policy factors below influenced company decisions to invest in various jurisdictions:
  1. Uncertainty concerning the administration, interpretation, or enforcement of existing regulations;
  2. Uncertainty concerning environmental regulations (stability of regulations, consistency and timeliness of regulatory process, regulations not based on science);
  3. Regulatory duplication and inconsistencies (includes federal/provincial, federal/state, inter-departmental overlap, etc.);
  4. Legal system (legal processes that are fair, transparent, non-corrupt, timely, efficiently administered, etc.);
  5. Taxation regime (includes personal, corporate, payroll, capital, and other taxes, and complexity of tax compliance);
  6. Uncertainty concerning disputed land claims;
  7. Uncertainty concerning what areas will be protected as wilderness, parks, or archeological sites, etc.;
  8. Infrastructure (includes access to roads, power availability, etc.);
  9. Socioeconomic agreements/community development conditions (includes local purchasing or processing requirements, or supplying social infrastructure such as schools or hospitals, etc.);
  10. Trade barriers (tariff and non-tariff barriers, restrictions on profit repatriation, currency restrictions, etc.);
  11. Political stability;
  12. Labour regulations/employment agreements and labour militancy/work disruptions;
  13. Quality of the geological database (includes quality and scale of maps, ease of access to information, etc.);
  14. Level of security (includes physical security due to the threat of attack by terrorists, criminals, guerrilla groups, etc.); and
  15. Availability of labour/skills.
  
- For each of the 15 factors, respondents were asked to select one of the following five responses that best described each jurisdiction with which they were familiar:
  1. Encourages exploration investment,
  2. Not a deterrent to exploration investment,
  3. Is a mild deterrent to exploration investment,
  4. Is a strong deterrent to exploration investment, or
  5. Would not pursue exploration investment in this region due to this factor.

**Annex B – Investment Attractiveness Index Scores and Rankings – Canadian Provinces and Territories**

Prov.	2023			Prov.	2022			Prov.	Change		
	Score	GLBL Rank (86)	CDN Rank		Score	GLBL Rank (62)	CDN Rank		Score	GLBL Rank	CDN Rank
<b>AB</b>	63.07	36	10	<b>AB</b>	69.36	24	9	<b>AB</b>	-6.29	-12	-1
<b>BC</b>	71.91	25	9	<b>BC</b>	75.09	15	6	<b>BC</b>	-3.18	-10	-3
<b>MB</b>	84.74	6	3	<b>MB</b>	77.98	14	5	<b>MB</b>	6.76	8	2
<b>NB</b>	72.70	23	7	<b>NB</b>	72.81	21	8	<b>NB</b>	-0.11	-2	1
<b>NL</b>	80.48	9	4	<b>NL</b>	87.35	4	2	<b>NL</b>	-6.87	-5	-2
<b>NT</b>	72.38	24	8	<b>NT</b>	58.15	43	12	<b>NT</b>	14.23	19	4
<b>NS</b>	36.48	75	12	<b>NS</b>	58.21	42	11	<b>NS</b>	-21.73	-33	-1
<b>NU</b>	59.14	39	11	<b>NU</b>	58.24	41	10	<b>NU</b>	0.9	2	-1
<b>ON</b>	80.46	10	5	<b>ON</b>	80.75	12	4	<b>ON</b>	-0.29	2	-1
<b>QC</b>	85.47	5	2	<b>QC</b>	84.03	8	3	<b>QC</b>	1.44	3	1
<b>SK</b>	86.83	3	1	<b>SK</b>	88.19	3	1	<b>SK</b>	-1.36	0	0
<b>YT</b>	76.57	16	6	<b>YT</b>	73.26	20	7	<b>YT</b>	3.31	4	1

**Annex C – Newfoundland and Labrador's Results in Overall Global Ranking for 2019-2023**

<b>Year</b>	<b>Investment Attractiveness (Global Ranking)</b>	<b>Policy Perception</b>	<b>Best Practices Mineral Potential</b>	<b>Number of Jurisdictions Ranked</b>
<b>2023</b>	9	11	18	86
<b>2022</b>	4	5	9	62
<b>2021</b>	21	18	27	84
<b>2020</b>	8	8	11	77
<b>2019</b>	28	8	50	76

**Annex D – Newfoundland and Labrador's Results by Individual Factors in Survey**

<b>Factor No.</b>	<b>Factor</b>	<b>2023 Rank of 86</b>	<b>2022 Rank of 62</b>	<b>Change</b>
1	Uncertainty concerning the administration, interpretation, or enforcement of existing regulations	8	4	-4
2	Uncertainty concerning environmental regulations	21	9	-12
3	Regulatory duplication and inconsistencies	13	2	-11
4	Legal system	5	5	0
5	Taxation	18	11	-7
6	Uncertainty concerning disputed land claims	25	11	-14
7	Uncertainty concerning protected areas	49	21	-28
8	Infrastructure	27	23	-4
9	Socioeconomic agreements / community development conditions	17	20	3
10	Trade barriers	15	12	-3
11	Political stability;	7	14	7
12	Labour regulations/employment agreements and labour militancy/work disruptions;	22	19	-3
13	Quality of the geological database	8	5	-3
14	Level of security	25	26	1
15	Availability of labour/skills	20	3	-17

**Annex E – Detailed Breakdown of Individual Factors with Greatest Change Year-over-Year for Newfoundland and Labrador**

<b>Factor No.</b>	<b>Factor</b>	<b>Year</b>	<b>Encourages Investment</b>	<b>Not a Deterrent</b>	<b>Sum</b>	<b>Change in Rank</b>
2	Uncertainty concerning environmental regulations	2023	15%	59%	74%	-12
		2022	35%	47%	82%	
6	Uncertainty concerning disputed land claims	2023	12%	54%	66%	-14
		2022	29%	53%	82%	
7	Uncertainty concerning protected areas	2023	11%	37%	48%	-28
		2022	12%	59%	71%	
15	Availability of labour/skills	2023	45%	36%	81%	-17
		2022	53%	41%	94%	

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

**Title:** Newfoundland Hardwoods Limited

29.(1)(a)

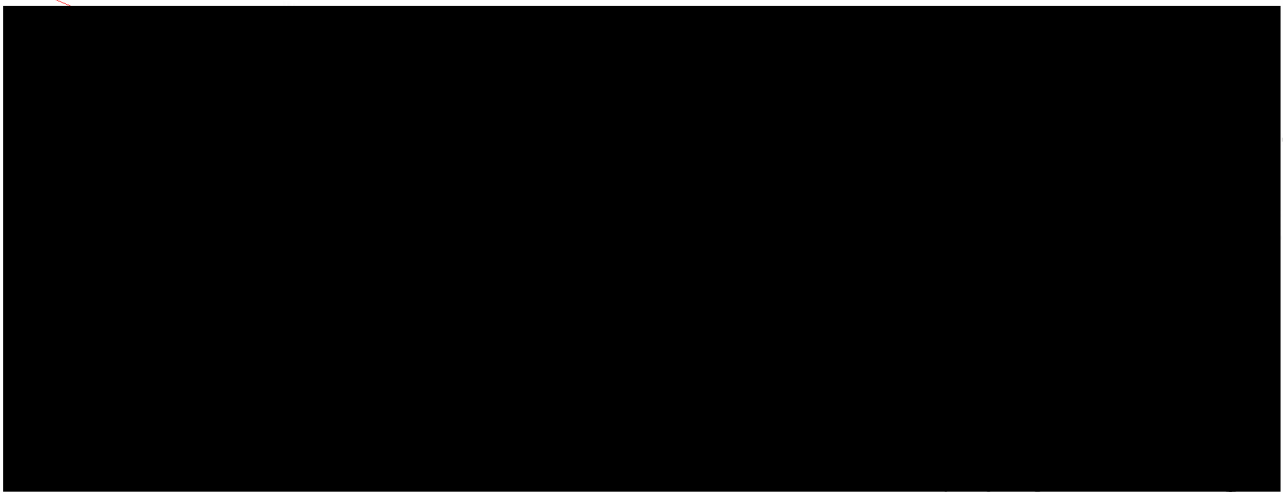
**Decision/Direction Required:**

- [Redacted]

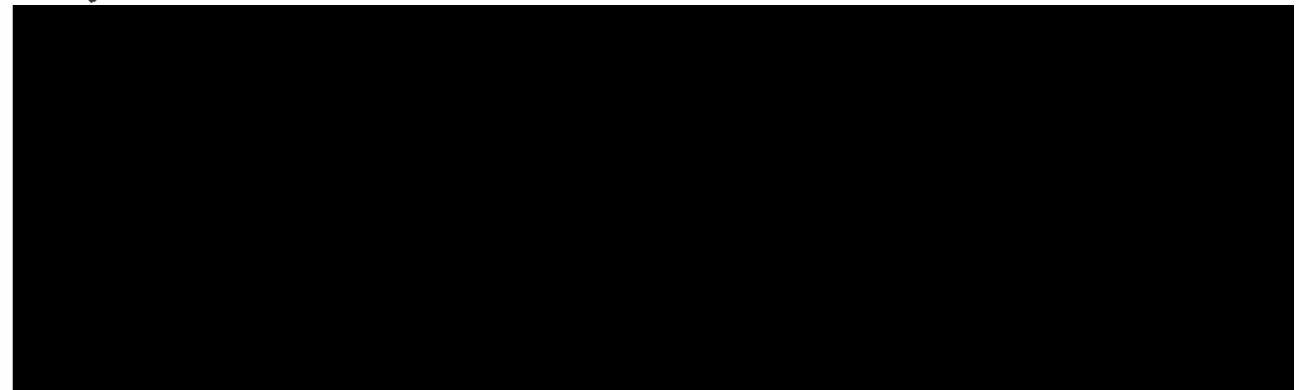
**Background and Current Status:**

- Newfoundland Hardwoods Limited (NHL) is a Crown Corporation that was established in 1950 to manufacture liquid asphalt and sell chemically treated poles and timber. The Corporation does not have its own staff and the Board of Directors consists of senior IET officials. IET provides administrative support to the Board.
- In 1995, the Province privatized NHL, selling its asphalt operations to Irving Oil Limited and its pole and timber division to Wood Preservation Industries Limited of Quebec. As a condition of the sale, the Province provided environmental indemnities to both companies and therefore remains liable for environmental contamination. All land and assets were sold with the exception of Tank 18 and the land it sits on, and NHL no longer has any operations.

29.(1)(a)

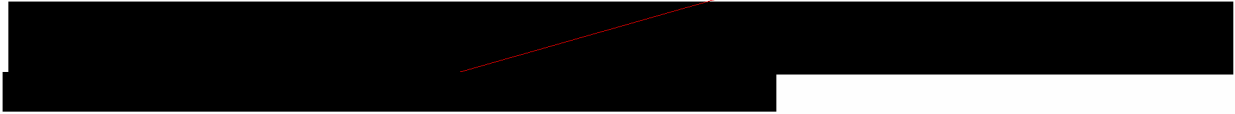


**Analysis**

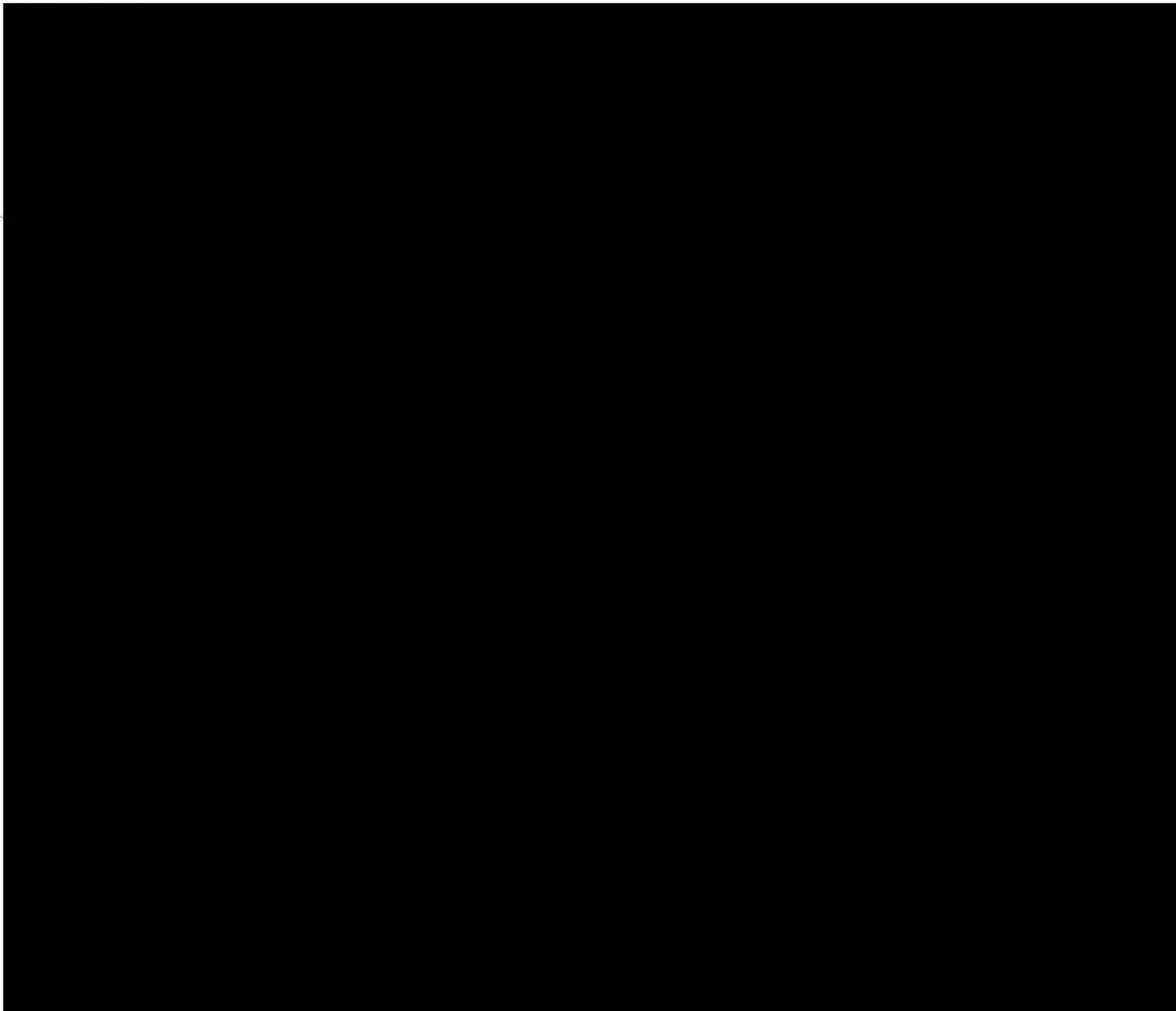


29.(1)(a), 35.(1)(f)

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



**Alternatives:**



29.(1)(a)

**Prepared/Approved by:** A. Wheeler/A. Natsheh/T. Parsons/J. Ludmer

May 1, 2024

A handwritten signature in black ink, appearing to read 'J. Ludmer'.

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Rental Housing Development Loan Program

**Issue:** Update on Selection Committee Results of Phase II Applications

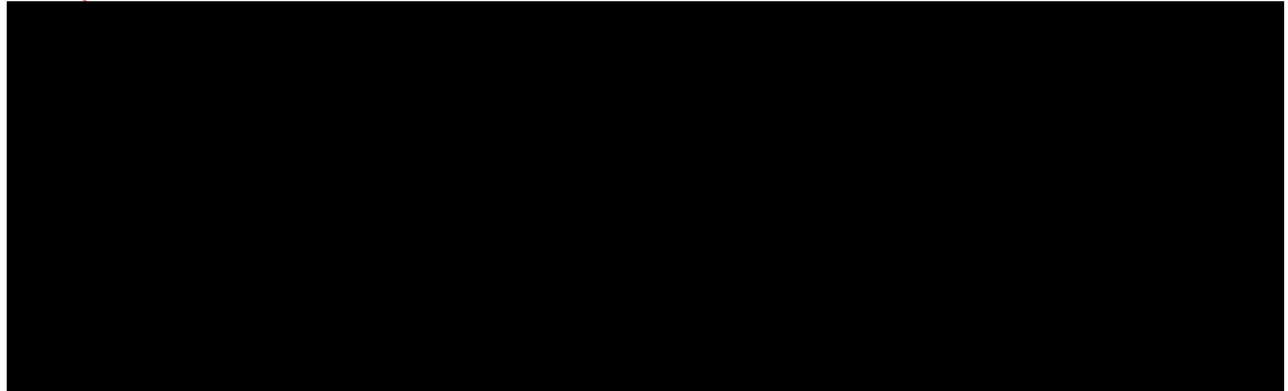
**Background and Current Status:**

- The Province launched the Rental Housing Development Loan Program (“the Program”) on January 31, 2023 as part of its five-point plan to increase the availability of housing in Newfoundland and Labrador. The Program, which will be administered under the Innovation and Business Investment Corporation (IBIC), will provide up to \$50 million in reduced cost financing to incentivize the construction of new purpose-built rental units in the province.
- Developers can avail of up to \$10 million in financing for new developments that will create a minimum of four new units. Up to \$6 million in financing can be provided at Government’s cost of borrowing (presently 4.7 per cent), with any further funding up to a total amount of \$10 million to be offered at Canada’s bank prime rate (presently 7.2 per cent). The Program will finance up to 90 per cent of the cost of new developments, with developers required to provide the remaining funding.
- A Selection Committee, comprised of officials from IET, the Department of Finance (FIN), and the Newfoundland and Labrador Housing Corporation was formed to review and make recommendations on Phase I and Phase II of a three-phase process.
- Phase I entailed an open call for Expressions of Interest (EOIs) that the Selection Committee assessed for eligibility, feasibility, and quality. Forty-five EOI’s were received representing 1,222 new rental units for an ask from the Program of over \$157 million.
- The Selection Committee assessed the EOIs in March 2024 and invited 16 applicants, representing 14 developers, to submit detailed proposals for Phase II.
- The deadline for Phase II submissions was April 26, 2024, however this was extended until May 2, 2024 to provide applicants additional time to prepare submissions.
- The Selection Committee’s assignment in Phase II is to recommend to the IBIC Board no more than \$50 million in projects for funding approval. Projects approved by the IBIC Board will continue on to the final phase of the process, in which they will negotiate and conclude financing agreements with IET to enable disbursements of funding to begin.
- Out of the 16 developers invited to provide a Phase II submission, 13 detailed proposals, representing 11 developers, were received. Three developers voluntarily withdrew from the process.
- While the only developer from Labrador to submit an EOI in Phase I was invited to participate in Phase II, this was one of the developers to voluntarily withdraw from the process, and the developer did not provide IET with a specific reason for the withdrawal. Therefore all 13 proposals received in Phase II represent projects from across the island portion of the province, and all regions of the island were represented.

**Analysis:**

- The 13 proposals reviewed in Phase II amount to 544 new units for an ask of the Program of approximately \$54.5 million and total project costs of \$170 million.
- The Selection Committee completed a robust assessment process that adhered to the assessment and scoring criteria that were provided to applicants at the start of Phase II. The Selection Committee assessed projects and proponents for their qualifications and experience in the industry, their financial capabilities including the cash flows and viability of the development, as well as scope and design features, including accessibility. During the Phase II evaluation process, proponents were provided with equal opportunities to rectify any deficiencies noted in their applications.

29.(1)(a)

**Action Being Taken:**

- A meeting of the IBIC Board of Directors is scheduled for Tuesday, June 3, 2024. IET will present the recommendations of the Selection Committee to the Board for consideration and decision.
- IET will notify all Phase II applicants no later than Wednesday, June 5, 2024 of the results of their applications.

**Prepared/Approved by:** D. Perry/A. Natsheh/T. Parsons/J. Ludmer/C. Martin  
**Ministerial Approval:**

May 29, 2024

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

**Title:** Cellular Connectivity Pilot Project for Major Roadways.

**Decision/Direction Required:**

- Seeking approval to proceed with a pilot project for connectivity hotspots along highways and roadways.

**Background and Current Status:**

- The Government of Newfoundland and Labrador is committed to working with partners through strategic investments to improve connectivity services through innovative and best-fit solutions for connectivity improvements along major roadways. Unreliable rural cellular coverage is a public health, safety, and economic development concern.
- In March 2022, the Government released a three-year Connectivity Strategy, guided by actions related to three pillars: invest, partner, and optimize. The strategy prioritizes access to affordable and scalable 50/10 Mbps broadband Internet service and improved mobile wireless coverage through strategic infrastructure investments.
- Connectivity and increased federal investment in cellular services is a topic of importance for the Council of Atlantic Premiers. In December 2023, the premiers agreed to write a joint letter to the federal government advocating for increased investment and policy and regulation changes required to increase services in rural areas.
- Investing in reliable mobile telecommunication service coverage on major roadways connecting communities will help to close connectivity gaps throughout the province. Potential cost-effective solutions to improve mobile connectivity must consider the complexities faced within the province due to geography, infrastructure, and the feasibility of available technical solutions.
- According to Canadian Radio-television and Telecommunications Commission (CRTC) data for 2022, 93.6% of the population have access to mobile services via LTE (Long Term Evolution) in Newfoundland and Labrador, with 84% of the population in rural areas having access. However, there are [REDACTED] gaps in connectivity experienced along major roadways in the province. LTE coverage of major highways (rank 2) is 31%, with over a 1,000 km coverage gap, and major roadways (rank 3) has [REDACTED] 57% connectivity, with an estimated 485 km coverage gap.

29.(1)(a)

29.(1)(a)

**Analysis:**

- As part of the Connectivity Strategy, IET is mandated to explore partnerships and opportunities to improve connectivity, including cellular coverage along major highways.

29.(1)(a)

- Over the past twelve months, IET officials have explored ways to reduce or alleviate the connectivity gaps on major highways. This included reviewing service gaps on roadways and highways in Newfoundland and Labrador and feasible options to provide residents with connectivity along major routes. Access to power and infrastructure along highways is a

limiting factor and cost-effective solutions that can operate in rural and remote areas are needed.

- In Labrador, the Department of Transportation and Infrastructure (TI) created public “hotspots” near depots where residents could access public Wi-Fi through satellite systems along the Trans Labrador Highway. This initiative was received positively and provided much needed connectivity along a rural and remote highway. Three hotspots have been installed by TI, with an additional two planned for this summer.

29.(1)(a)

- [Redacted]
- [Redacted]

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

- IET's Sector Diversification Division has responsibility for the Connectivity Strategy. It has grants and subsidy budget to research and/or implement plans to advance strategic issues related to economic development and innovation.



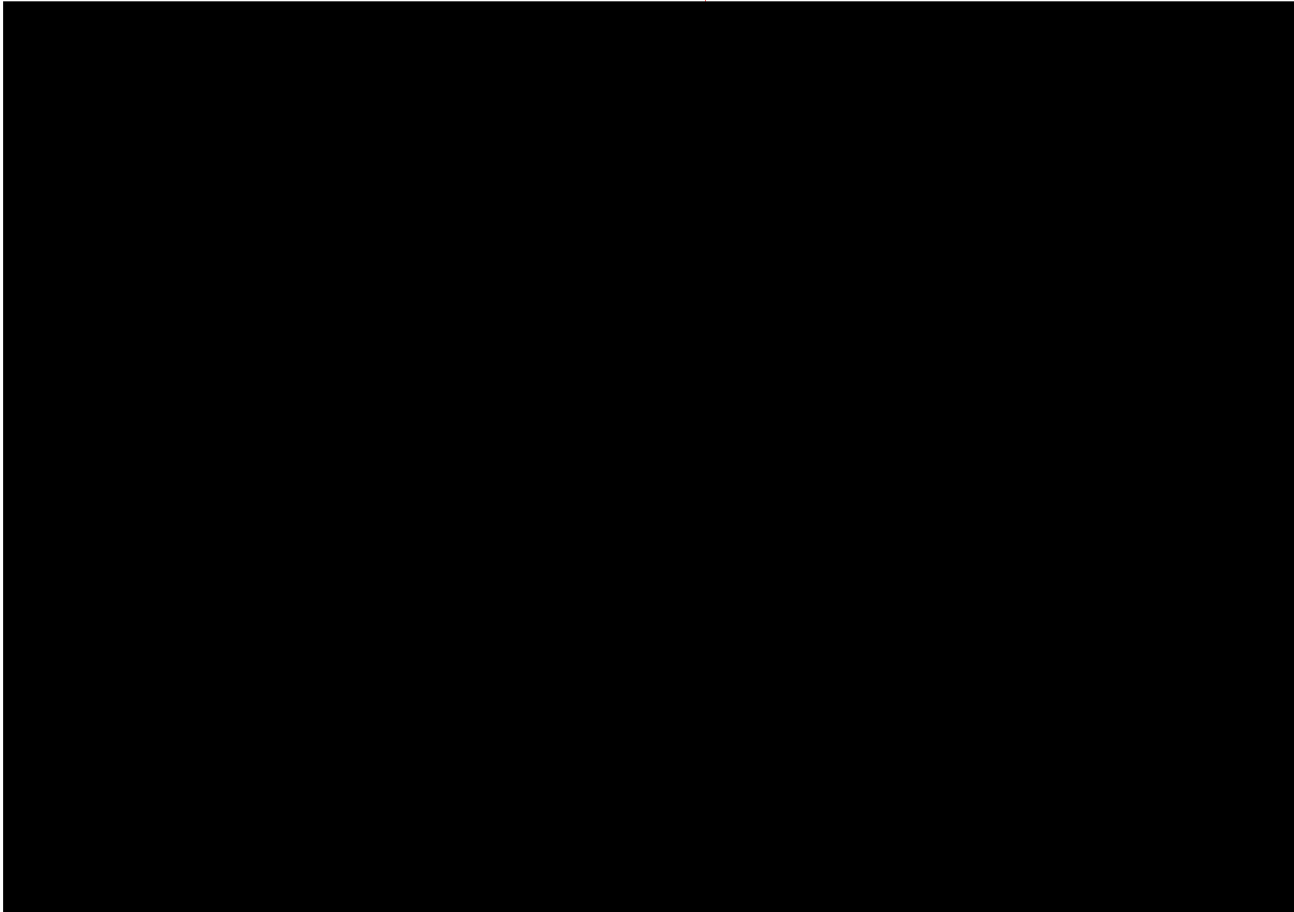
29.(1)(a)



- Improved cellular connectivity requires greater investment in infrastructure, leveraged support, and innovative and collaborative solutions. Supporting testing of hotspots would provide valuable insights to how the province can enhance connectivity along rural routes in a cost-effective way.

**Alternatives:**

29.(1)(a)



**Prepared/Approved by:** D. Sheppard / J. Penney / K. Youden/

**Ministerial Approval:**

**May 21, 2024**

A large, stylized handwritten signature in black ink, extending across the right side of the page.

**Information Note**  
**Department of Industry Energy and Technology**

**Title:** Tata Steel Minerals - Howse Project Benefits Agreement

**Issue:** To provide an overview of the updated Benefits Agreement with Tata Steel Minerals Canada with respect to the Howse Project.

**Background and Current Status:**

- In December 2010 IET entered into a benefits agreement (BA) with New Millennium Capital Corporation for the Elross Lake Area Direct Shipping Ore (DSO) Project located in western Labrador. The mine is now operated by Tata Steel Minerals Canada (TSMC).
- The DSO BA includes commitments around employment and procurement (full and fair opportunity for local contractors and provincial residents); education and training; research and development; a women's employment plan; and reporting.
- Since that time, TSMC has moved to expand the DSO Project to include development of minerals situated in the Howse Property near TSMC's existing DSO Project in western Labrador (near Schefferville, Quebec) and will be utilizing the adjacent mining infrastructure.
- A conventional open pit drill and blast operation mining method will be used for the Howse Project where extracted iron ore will be crushed and screened on-site, hauled by truck to the existing TSMC DSO Project rail loop loading area and shipped by train to Sept-Îles, Quebec.
- In March 2017, the Howse Project was released from provincial Environmental Assessment, which included conditions to update the DSO BA to include the Howse Project and to develop a Gender Equity and Diversity Plan (GEDP). Construction was originally scheduled to begin in 2017 but subsequently delayed. TSMC plans to commence construction in 2024. However, construction has not yet commenced.
- The construction phase will include construction of water management infrastructure; construction of haul roads; preparation of designated stockpiles for overburden, waste rock and ore; and construction of bypass road for the community to access Irony Mountain and areas in the vicinity for their traditional and recreational activities
- TSMC has worked with IET to prepare an updated benefits plan and GEDP (Howse BA) to incorporate the Howse Project into the DSO BA, [REDACTED] 29.(1)(a)  
 [REDACTED] A copy of the draft benefits plan and GEDP is attached as **Appendix A**.

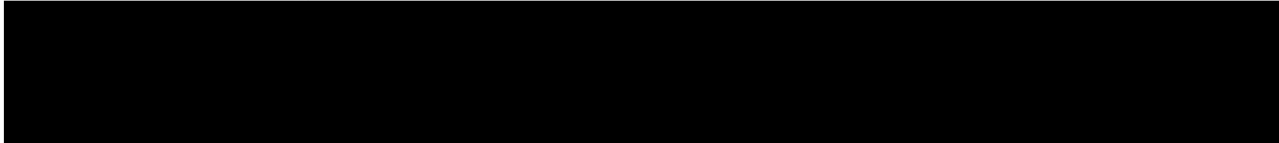
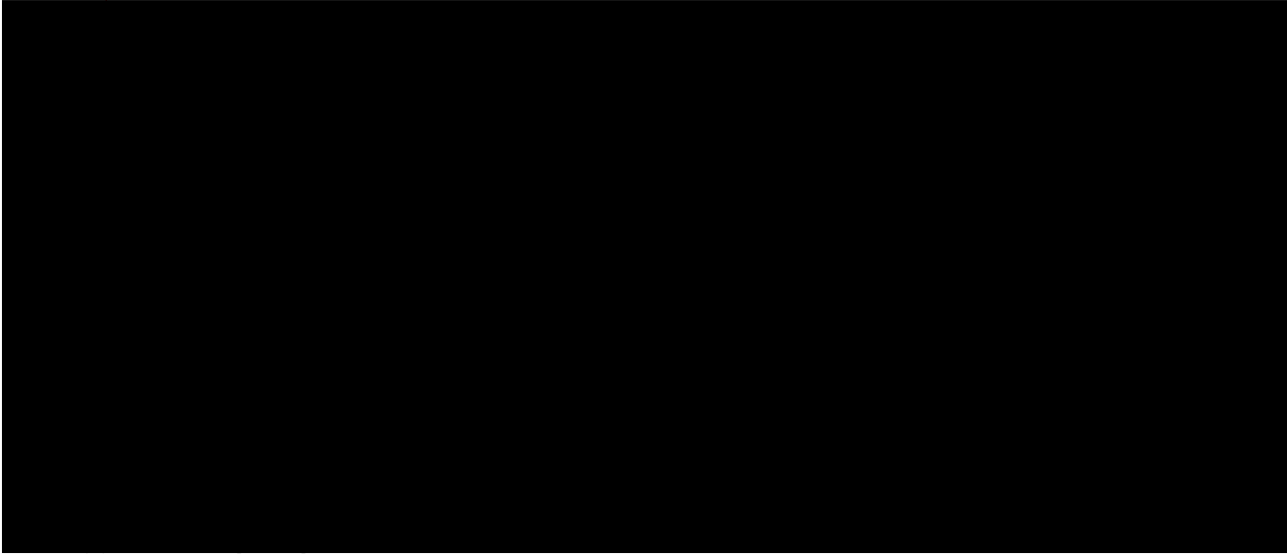
**Analysis:**

[REDACTED]

- The Howse Benefits Plan includes commitments with respect to employment and procurement (full and fair opportunity for local contractors and employment); education and

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

training; research and development; gender equity, diversity and inclusion; and reporting, among others. A summary of the benefits plan commitments is attached as **Appendix B**.

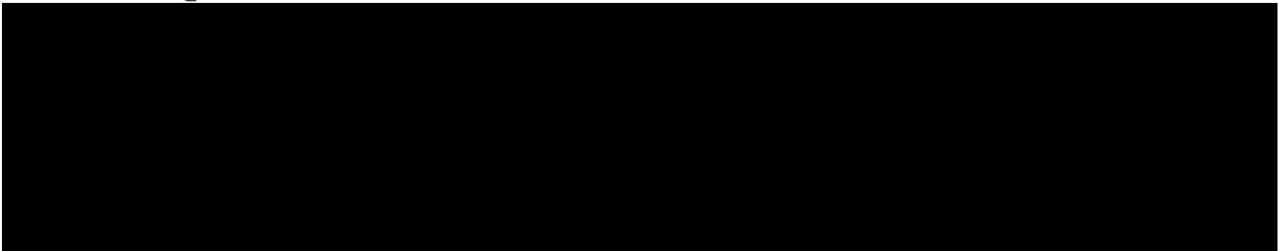


29.(1)(a),  
30.(1)(a),  
30.(1)(b)



29.(1)(a)

**Action Being Taken:**



29.(1)(a)

**Prepared/Approved by:** H. Butt/A. Philpott / N. Abundo / C. Martin  
**Deputy Minister Approval:**

May 22, 2024

A handwritten signature in black ink, appearing to read 'H. Butt', is written over the 'Deputy Minister Approval' line.

**Appendix A**  
**Draft Howse Benefits Plan**

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

**Title:** Regional Assessment of Offshore Exploratory Drilling East of Newfoundland and Labrador:  
 RA Follow-up Program Advisory Committee Appointment

29.(1)(a), 34.(1)(a)(i)

**Decision/Direction Required:**

**Background and Current Status:**

- As a result of the completion of the Regional Assessment (RA) of Offshore Exploratory Drilling East of Newfoundland and Labrador, the federal government implemented the Regulations Respecting Excluded Physical Activities - Newfoundland and Labrador Offshore Exploratory Wells. This Ministerial regulation under the Impact Assessment Act (IAA) sets out requirements for future exploratory drilling projects in the Study Area to avoid a full assessment under the IAA.
- An RA Follow-up Program (RAFUP) keeps these regulations up to date, while monitoring and evaluating the implementation and effectiveness of the various outcomes of the RA. This ensures that the information and analysis remain valid and up-to date, and that the Ministerial Regulation continues to fulfill the intended function of informing decision-making as it pertains to future exploratory drilling and associated activities in the RA Study Area.
- The RAFUP Steering Committee (Steering Committee) is responsible for oversight of the Follow-up Program. It is chaired by the Impact Assessment Agency of Canada (IAAC) and includes Natural Resources Canada (NRCan), IET, the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB), Environment and Climate Change Canada, and Fisheries and Oceans Canada (DFO).
- The Advisory Committee provides advice to the Steering Committee on the development and implementation of the RAFUP and was formed in accordance with the Terms of Reference for the RAFUP that was developed by IAAC and other members of the RA Steering Committee.
- The Advisory Committee became active in July 2021 and is comprised of eight members with a variety of interests and areas of expertise, including representatives of Indigenous groups, the fishing industry, oil and gas industry, non-government organizations, and academics. Committee member terms are two or three years with the potential for reappointment for subsequent terms. Members are selected by IAA, NRCan and IET.

**Analysis:**

- A fishing industry vacancy was created when Kris Vascotto resigned from the Committee in 2023. The Steering Committee seeks out replacement members with the same affiliations to maintain the desired committee composition. The Steering Committee conducts an evaluation of the candidates' applications.

29.(1)(a), 34.(1)(a)(i)

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Exploits Valley Renewable Energy Corporation (EVREC)

**Issue:** [REDACTED] 35.(1)(d), 35.(1)(g)

**Background and Current Status:**

- On August 30, 2023, Exploits Valley Renewable Energy Corporation (EVREC) 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 Letters (WARL), a prerequisite to a Crown Lands (CL) application for their project.

**Analysis:**

- EVREC has an approved bid area of approximately 30 thousand hectares of land and is proposing a multi-phase wind energy project to produce and export hydrogen/ammonia from facilities in central Newfoundland. [REDACTED]

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

[REDACTED]

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

[REDACTED] In addition, EVREC has held a number of public engagement sessions and are working on a mitigation plan with the various outfitters in the region.

[REDACTED]

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

**Action Being Taken:**

- For discussion.



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

**Prepared/Approved by:**  
**Ministerial Approval:**

Z. Shi/ A. Loveless/ G. Murphy/ S. Wilkins / C. Martin

May 8, 2024

**Information Note**

**Department of Industry, Energy and Technology**

**Title:** Update on World Energy GH2 Project

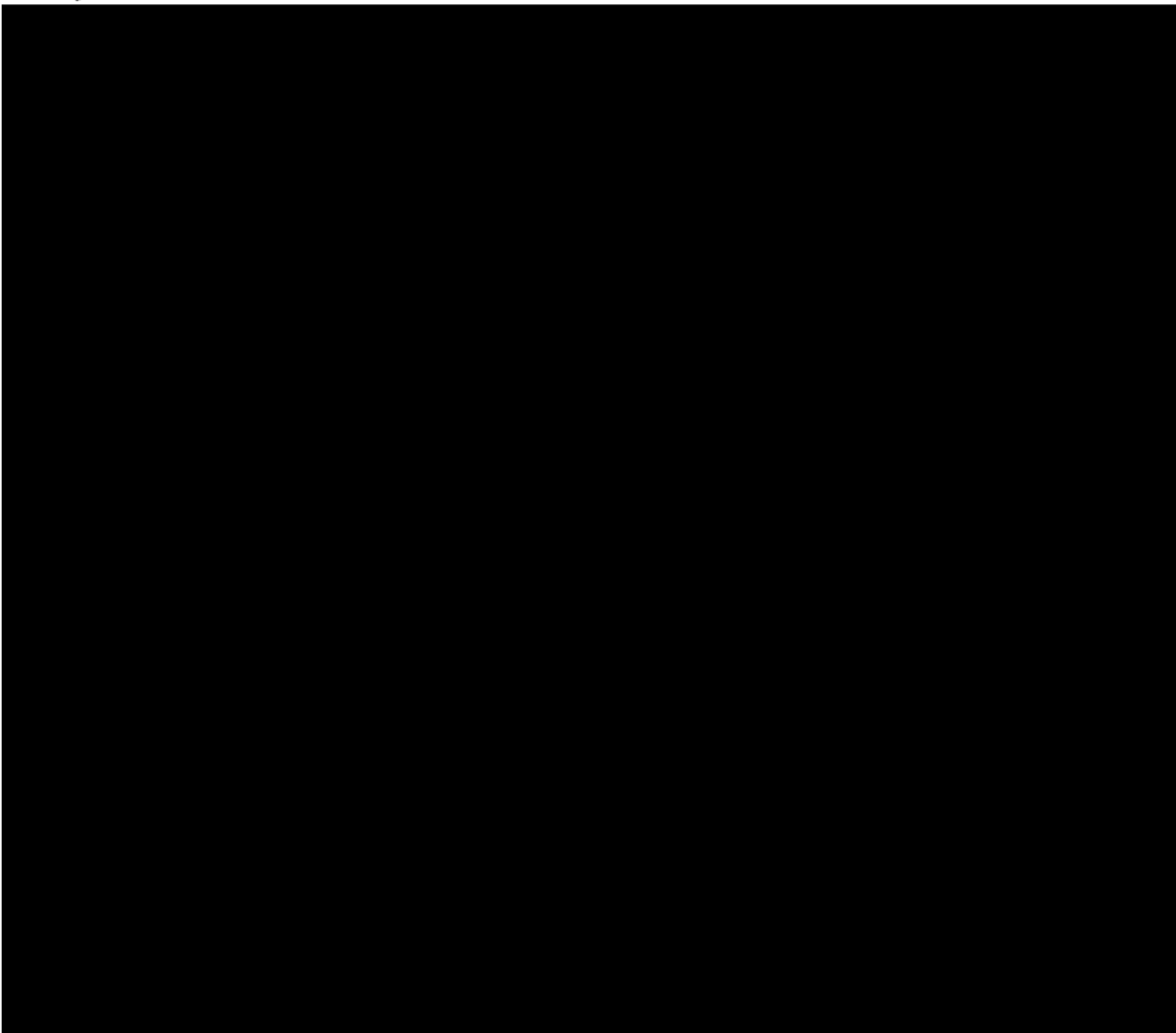
**Issue:** To advise on World Energy GH2's information request [REDACTED]

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

**Background and Current Status:**

- On August 30, 2023, World Energy GH2 (WEGH2) was one of four companies selected through the Crown Land Call for Bids for Wind Energy Projects (Call for Bids) to receive a Wind Application Recommendation Letters (WARL), a prerequisite for an application for project-related Crown lands.

**Analysis:**



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

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Background Information on Hydrogen

**Issue:** To provide general hydrogen information in advance of the 2024 World Hydrogen Summit.

**Background and Current Status:**

- Hydrogen is the most abundant element on Earth, but normally exists only as part of other compounds. At room temperature, it is an invisible, odorless, tasteless, and non-toxic gas.
- Hydrogen is also an energy carrier that can transport energy created at one location to another location for use. Hydrogen does not produce carbon dioxide (CO<sub>2</sub>) when burned. Instead, it reacts with the oxygen (O<sub>2</sub>) in the air to create water (H<sub>2</sub>O).
- The International Energy Agency (IEA) reflects various hydrogen production methods, and its associated carbon intensity (i.e. grams of CO<sub>2</sub> equivalent/megajoule or CO<sub>2</sub>-e/MJ). A summary of common pathways, and those of global interest include:

Type of Hydrogen	Production Method	Carbon intensity (grams of CO <sub>2</sub> -e/MJ)
Grey	Steam methane reformation	10-14
Blue	Steam methane reformation with carbon capture and storage	5-8
Green	Renewable electricity powering water electrolysis	0

- According to the IEA, today green hydrogen accounts for than 0.1 per cent of hydrogen produced. Hydrogen is used widely as an industrial feedstock, including in oil refining, ammonia (NH<sub>3</sub>) and fertilizer production, methanol production, and iron and steel production. Emerging applications may include transportation (particularly heavy on-road transport and marine vessels), power generation (including blending in natural gas networks), and heating.

**Analysis:**

- Hydrogen has gained significant interest globally as a potential means to decarbonize hard-to-abate sectors. This includes replacing current grey hydrogen use in existing industrial uses with blue or green hydrogen and identifying new uses for hydrogen in applications that are traditionally powered by fossil fuels.
- According to the IEA, in 2021 (latest data available), the levelized costs of hydrogen production are USD 1.00-3.0/kg H<sub>2</sub> for grey hydrogen, USD 1.50-3.60/kg H<sub>2</sub> for blue hydrogen, and USD 3.4-12.00/kg H<sub>2</sub> for green hydrogen.
- A number of challenges are preventing large-scale adoption of green or blue hydrogen:
  - The IEA and the Hydrogen Strategy for Canada note that hydrogen is suited to hard-to-abate applications.
  - According to the Hydrogen Strategy for Canada (2020), hydrogen has low energy by volume relative to other fuels, making it challenging to store and distribute. Robust transportation networks (such as pipelines) often have not been established, and technological barriers exist to transport liquid hydrogen at scale. In the near-term, distribution via chemical carrier (e.g., ammonia), is anticipated to be the preferred pathway for transcontinental trade (see Annex A for further details).

- Hydrogen regulatory frameworks and certification systems are in development worldwide. The International Renewable Energy Agency (IRENA) notes (2023) that no existing certification is suitable for cross-border trade, and that the lack of a standardized certification system will impede trade growth. Three certifications are working towards international recognition: the Green Hydrogen Standard, CertifHy, and the Zero Carbon Certification Scheme.
- As of September 2023, the IEA identified 41 governments with released hydrogen strategies. Depending on the jurisdiction, strategies focus primarily on importing hydrogen for domestic decarbonization, or on producing to meet local needs and for export. Many jurisdictions have announced hydrogen strategies with targets, including ways to enable: long-term signals to investors, transparent regulatory frameworks; financial support; and projects reaching final investment decision.
- The IEA has highlighted that measures to generate demand for hydrogen are insufficient. Government targets for low-emission hydrogen production account for 27-35 million metric tonnes (Mt), but targets for demand creation account for only 14 Mt. The IEA anticipates that achieving a global net-zero carbon emissions by 2050 pathway would necessitate more than 150 Mt of hydrogen use by 2030.
- NL has several strategic advantages that can support green hydrogen production, including:
  - abundant wind, land and, water resources;
  - strategic location as the closest North American jurisdiction to Europe;
  - deep-sea ice-free ports adjacent major shipping lanes;
  - workforce skilled in large-scale construction and energy projects in challenging and offshore environments; and,
  - Environmental, Social, and Governance (ESG) advantages (under Canada).
- To support NL as an attractive investment destination for green hydrogen, Government has undertaken activities such as (see Annex B for further details):
  - launching a Crown Lands Call for Bids for Wind Energy Projects and issuing Wind Application Recommendation Letters to four successful companies in August 2023;
  - signing a Joint Declaration of Intent with the City of Hamburg, Germany in September 2022 to encourage the establishment of hydrogen supply chains;
  - signing a Memorandum of Understanding with the Port of Rotterdam in May 2023 to cooperate and explore opportunities in the area of green hydrogen and hydrogen technologies; and,
  - hosting a delegation of representatives from hydrogen and energy companies from the City of Hamburg in October 2023.
- IET has finalized NL's Green Hydrogen Development Action Plan. It will help position NL to supply Europe and other markets with green hydrogen. [REDACTED]

29.(1)(a)

**Action Being Taken:**

- For information purposes only.

**Prepared/Approved by:** S. Mathews / M. Hunter / K. Day / S. Wilkins / C. Martin**Ministerial Approval:**May 2, 2024

**Annex A**  
**Comparison of Hydrogen Conversion Methods**

		<b>Compressed Gas</b>	<b>Liquid Hydrogen</b>	<b>Ammonia</b>
<b>Process and technology maturity</b>	Conversion	High	Small scale: high Large scale: low	High
	Tank storage	High	High	High
	Reconversion	High	High	Medium
<b>Hazards</b>		Potential for leakage High pressure gas on public routes	Flammable No smell or flame visibility	Flammable Acute toxicity Precursor to air pollution Corrosive
<b>Conversion and reconversion energy required (percentage of hydrogen lost)</b>		N/A	Current: 15-35% Potential: 18%	Conversion: 7-18% Reconversion: <20%
<b>Technology improvements/scale-up needs</b>		Compressor cost, reliability and efficiency management	Production plan efficiency Boil-off management	Integration with flexible electrolyzers Improved conversion efficiency Hydrogen purification

Source: Hatch, "Lifecycle of Green Hydrogen Production," for Government of Newfoundland and Labrador IET (April 26, 2022), p. 67.

**Annex B**

## Summary of Provincial Government's Wind-Hydrogen Activities

- On April 5, 2022, the Provincial Government lifted the 15-year moratorium on onshore wind farms, creating an opportunity for industrial customers to generate wind energy for their own consumption and wind generation export.
- On April 5, 2022, the Province and the Government of Canada jointly announced the intention to expand the mandate of the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) to include the regulation of offshore renewables.
  - On May 30, 2023, **An Act to amend the Canada-Newfoundland and Labrador Atlantic Accord Implementation Act and the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act and make consequential amendments to other Acts (Bill C-49)** was introduced in the House of Commons. Bill C-49 completed first reading on May 30, 2023, completed second reading on October 17, 2023, and is currently before the House Standing Committee on Natural Resources.
- On July 26, 2022, IET launched a call for submission of Nominations of Areas of Interest for wind energy projects in the province, open for any available Crown lands. The department received 31 land nomination submissions.
- On September 27, 2022, the Province signed a Joint Declaration of Intent with the Free and Hanseatic City of Hamburg on cooperation in the field of green hydrogen and hydrogen technologies.
- In Fall 2022, IET released the Renewable Energy Resources Data Hub, providing information to industry and the public on developed and undeveloped renewable energy resources and supporting infrastructure in the province.
- On December 14, 2022, IET launched the Crown Lands Call for Bids for Wind Energy Projects. IET received 24 bids from 19 companies, all of which went through a first initial review. On July 6, 2023, IET announced that nine bids from nine companies advanced to a more in-depth second stage.
- On February 23, 2023, IET released the Wind-Hydrogen Fiscal Framework.

- On March 23, 2023, Newfoundland and Labrador and the Government of Canada launched the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador. The assessment is being conducted by an arms-length committee which is engaging Indigenous groups, federal and provincial authorities, non-government organizations and the public. The Regional Assessment will help inform future project-specific federal impact assessments and decisions for offshore wind projects in these areas. The committee has issued its interim report. The final report is anticipated to be completed in January 2025.
- On May 9, 2023, the Province signed a Memorandum of Understanding with the Port of Rotterdam to cooperate and explore opportunities in the area of green hydrogen and hydrogen technologies.
- On August 30, 2023, IET announced four successful proponents in the Crown Lands Call for Bids for Wind-Hydrogen projects:
  - ABO Wind;
  - EverWind NL Company;
  - Exploits Valley Renewable Energy Corporation; and,
  - World Energy GH2.
- In October 2023, Government hosted a delegation from the City of Hamburg representing hydrogen companies and service providers in the energy industry.
- On December 6, 2023, the Province signed a Memorandum of Understanding with the Government of Canada on offshore wind development which establishes a framework for Government to administer land tenure and life-cycle regulation in areas in 16 provincial bays that will not be jointly regulated under the Accord Acts.
- On March 20, 2024, the Government of Canada released the Newfoundland and Labrador Regional Energy and Resource Table – Framework for Collaboration on the Path to Net-Zero was released on March 20, 2024. The Framework includes a Wind and Hydrogen stream with collaborative actions for the Province and the federal government to undertake to develop the provincial wind-hydrogen industry.
- On April 1, 2024, IET established a 2,500-hectare Wind Energy Contingency Land Reserve for Argentia Renewables LP (Pattern).

**Information Note**  
**Department of Industry, Energy and Technology**

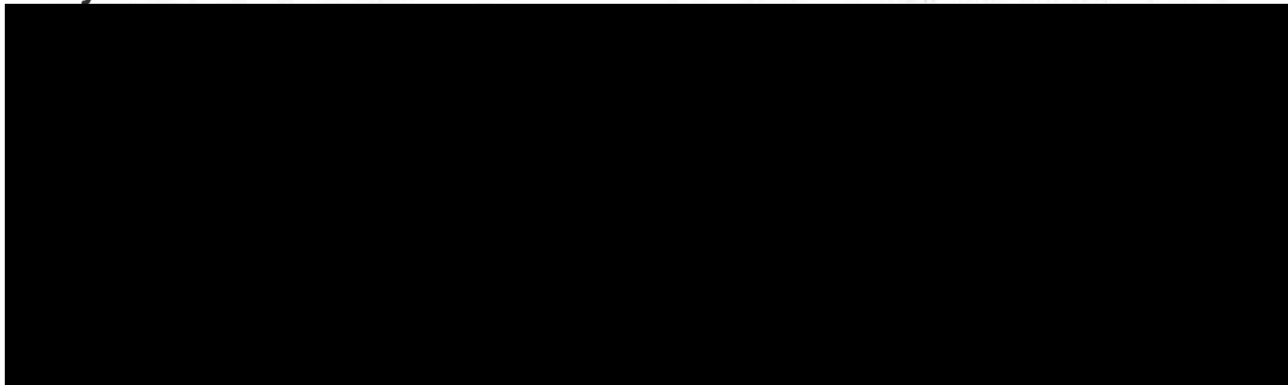
**Title:** Current Status of Crown Land Call for Bids Projects

**Issue:** To provide an update on Crown Lands Call for Bids for Wind Energy Projects.

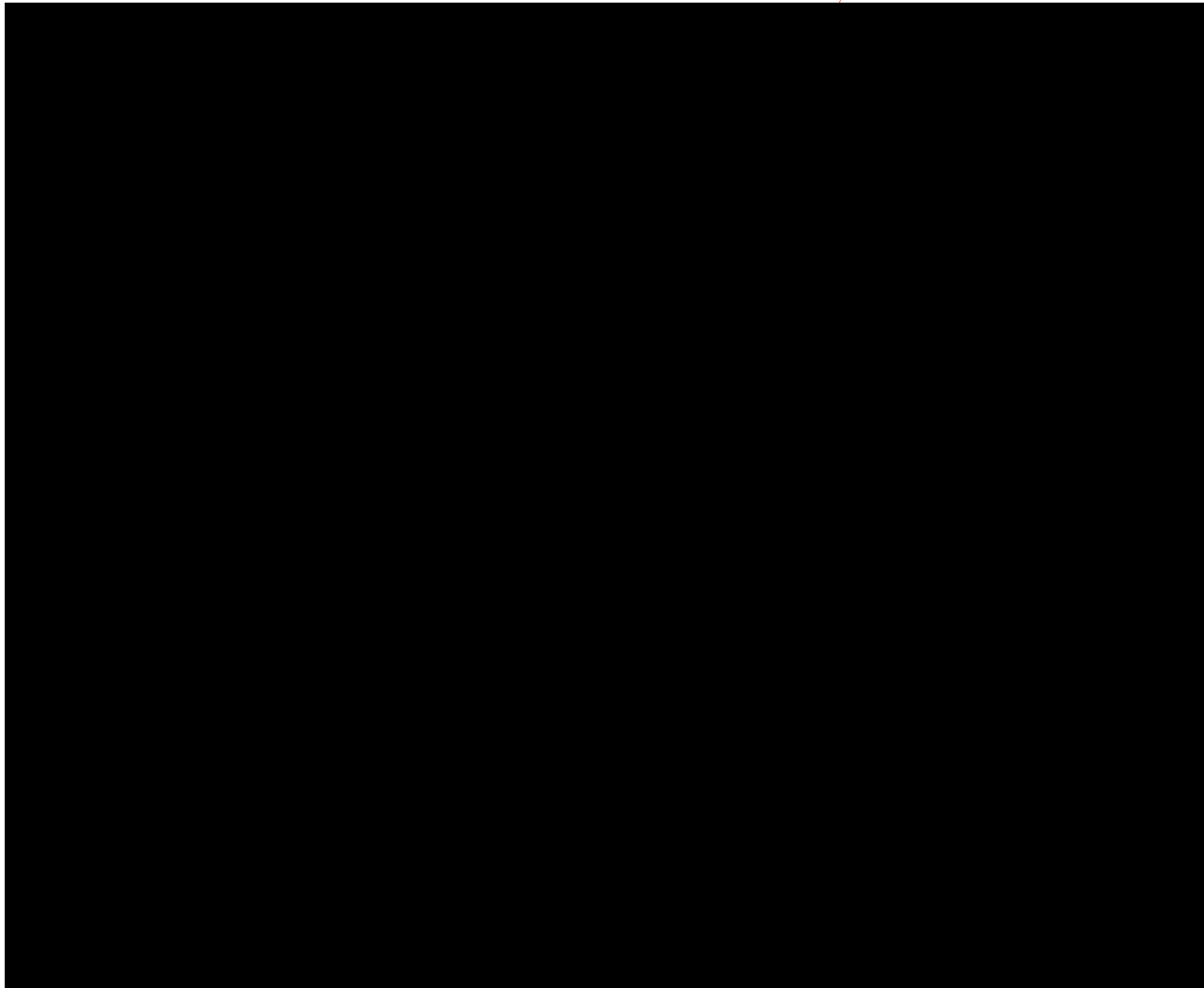
**Background and Current Status:**

- On August 30, 2023, IET announced the completion of the Crown Lands Call for Bids for Wind Energy Projects with four companies receiving Wind Application Recommendation letters: EverWind NL Company, Exploits Valley Renewable Energy Corporation (EVREC), Toqlukuti'k Wind and Hydrogen Ltd (ABO), and World Energy GH2 (WEGH2).
  - EverWind is proposing a multi-phase wind energy project to produce and export hydrogen/ammonia from facilities on the Burin Peninsula;
  - EVREC is proposing a multi-phase wind energy project in central Newfoundland and a hydrogen/ammonia production facility in Botwood to produce and export green hydrogen/ammonia;
  - ABO is proposing a three-phase wind energy project in the Isthmus region to produce hydrogen for use by Braya at the Come-by-Chance Refinery and for export; and,
  - WEGH2 is proposing a three-phase project including wind turbines and a hydrogen/ammonia production facility.
- The projects are anticipated to contribute \$206.2 billion to GDP and \$11.7 billion in Provincial revenues over their lifespan (30-40 years). Peak employment is estimated at 11,694 full-time equivalents during construction. Total capital spend is estimated at \$66.3 billion.
- Outside the Call for Bids process, Argentia Renewables LP (Pattern Energy) is developing a 300 MW wind-hydrogen project on private land at the Port of Argentia. On April 1, 2024, an approximately 2,500-hectare Wind Energy Contingency Land Reserve was approved to allow Pattern to apply for Crown lands within the reserve for the possible placement of contingent wind turbines that may be needed to maintain the company's project. Crown land applications will only be considered where it can be demonstrated to the satisfaction of IET that the request is a result of area constraints identified either by the company through its project development and site assessment, or by Government through processes such as the Environmental Assessment process.
- During the World Hydrogen Summit 2024, the Minister will meet with EVREC and EverWind on May 13, 2024 and with World Energy GH2 on May 14, 2024.

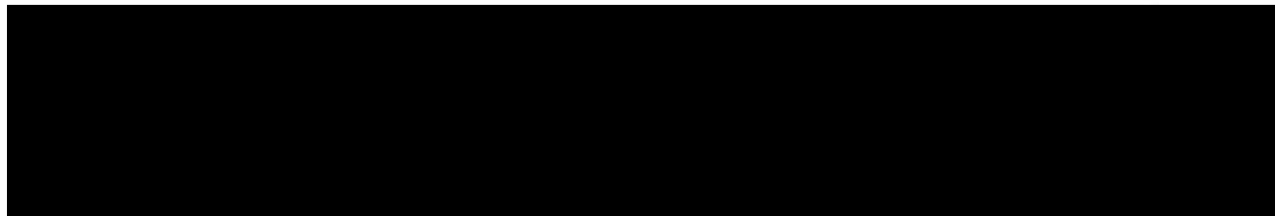
**Analysis:**



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



- On April 8, 2024, the WEGH2 Project Nujio'qonik was released from Environmental Assessment (EA) for stage one and stage two of the project, which includes 155 turbines on both the Port au Port and Anguille Mountains and hydrogen production at the Port of Stephenville. This release has several conditions attached, including additional environmental studies, conformity to their Environmental Impact Statement submissions, a decommissioning plan, the creation and submission of plans for the design of their facilities, among others.



**Action Being Taken:**

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

- IET will continue to work with proponents to advance projects that have been issued Wind Application Recommendation Letters.

**Prepared/Approved by:** S. Mathews / M. Hunter / K. Day / S. Wilkins / C. Martin  
**Ministerial Approval:**

May 2, 2024

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Belgium Green Hydrogen Opportunities

**Issue:** To provide an overview of Belgium's renewable energy resources and policies.

**Background and Current Status:**

- Belgium is in Northwestern Europe and is bordered by France, Germany, Luxembourg, and the Netherlands. In 2023, Belgium had a population of approximately 11.7 million people. Belgium has a land area of approximately 30,000 square kilometers (km<sup>2</sup>), and one of the highest population densities in the European Union at 386/km<sup>2</sup>. Belgium has approximately 65 km of coastline and an offshore Exclusive Economic Zone (EEZ) of 3,454 km<sup>2</sup>.
- As a member of the European Union (EU), Belgium has committed to reduce greenhouse gas (GHG) emissions by 47 per cent by 2030 in order to support the EU-wide goals of reducing emissions by 55 per cent by 2030 and reaching net zero emissions by 2050.
- Belgium's National Energy and Climate Plan (NECP) includes targets to reduce GHG emissions not covered by the EU Emissions Trading System (ETS) by 35 per cent by 2030, and to reach 17.5 per cent of final energy consumption from renewable energy by 2030. Belgium's three regions have also established their own energy and climate targets.
- In November 2023, Belgium submitted a draft updated NECP to the European Commission. Still under review, it would raise the target for final energy consumption from renewable energy to 21.6 per cent by 2030. Belgium is also subject to the provisional EU target set in March 2023 of which at least 42.5 per cent will be achieved by member states by 2030.
- In 2022, Belgium's electricity mix was comprised of nuclear (46.3 per cent), gas (24.6 per cent), wind (12.8 per cent), solar (7.7 per cent), bioenergy (4.7 per cent) oil (3.6 per cent), hydro (0.3 per cent), and coal (≤ 0.1 per cent).
- As of February 2023, Belgium has nine operational offshore wind farms and is the fourth largest offshore wind energy producer globally (behind the United Kingdom, Germany, and China. In 2022, Belgium had approximately 2.9 gigawatts (GW) of installed onshore wind capacity and approximately 2.3 GW of installed offshore wind capacity.
- In November 2023, Belgium released its hydrogen strategy. The strategy seeks to position Belgium as a hydrogen import and transit hub for Europe and includes a key role for the Port of Antwerp-Bruges, the second-largest seaport in Europe (after the Port of Rotterdam).
- Belgium has set an import target of 20 terawatt hours (TWh) of renewable hydrogen and derivatives in 2030 and between 200 and 350 TWh by 2050. Belgium aims to have a hydrogen transport network interconnected with at least Germany, France, and the Netherlands by 2028 to support its positioning as a renewable energy import hub for Europe.
- In pursuit of its hydrogen goals, Belgium signed Memoranda of Understanding (MoUs) with Oman and Namibia on cooperation in green hydrogen.

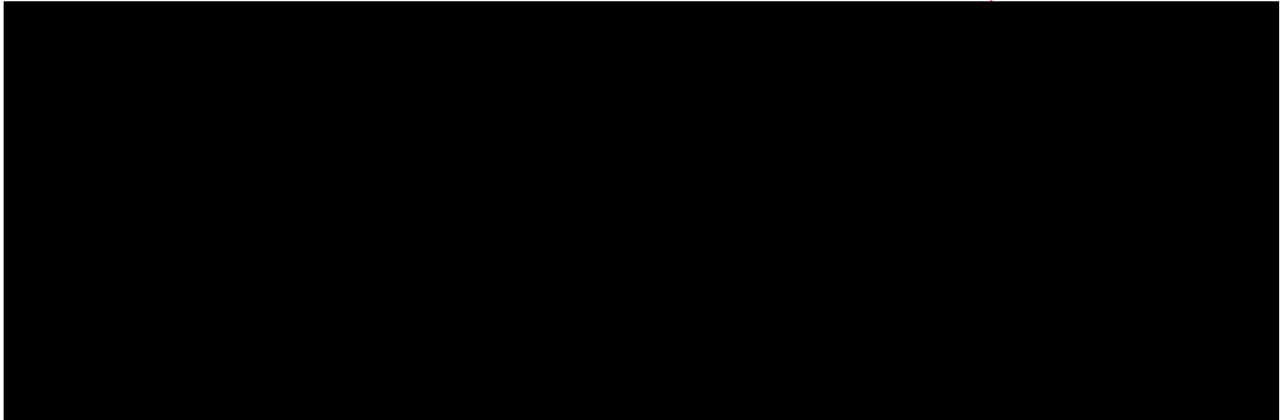
**Analysis:**

- The 2023 draft update to Belgium's NECP states that due to "high demographic and geographical constraints," national contributions to the EU's renewable energy targets will be

“extremely difficult to reach on Belgian territory,” but that the country’s location allows for the import for renewable electricity from the North Sea.

- Development of NL’s wind resources and green hydrogen production industry is a provincial priority, as demonstrated in the Minister of IET’s mandate letter, IET’s 2021 Renewable Energy Plan; the Crown Land Call for Bids for Wind Energy Projects; work with the Government of Canada to expand the mandate of the C-NLOPB to include renewable energy; and supporting the Government of Canada’s Regional Assessment of Offshore Wind Development in NL.

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



- In 2023, IET staff attended virtual and in-person events focused on NL-Belgian energy collaboration, including:
  - in February 2023, “Coffee Session with Canadian Trade Commissioner – Opportunities in Belgium,” hosted by Energy NL, followed by a meeting between the Trade Commissioner and IET;
  - in February 2023, the Belgium-Atlantic Canada Roundtable on Offshore Wind and Green Hydrogen in Halifax, NS; and
  - in September 2023, a virtual Belgium-Canada Workshop on Hydrogen and Certification.
- On February 9, 2023, CTV News reported that Belgium had identified NS as a potential major export partner for a green energy hub in Europe, citing a strong trading relationship with Canada, growing demand for green hydrogen in Europe (due to the ongoing Russia-Ukraine conflict), and Belgium’s expertise in offshore wind energy development.

**Action Being Taken:**

- For information purposes only.

29.(1)(a), 34.(1)(a)(i)

**Prepared/Approved by:** S. Mathews / M. Hunter / K. Day / S. Wilkins / C. Martin

**Ministerial Approval:**

May 8, 2024

**Annex A: Comparison of Belgium to NL**

	<b>Belgium</b>	<b>NL</b>
Population	11,697,557	510,500
Land area	30,278 km <sup>2</sup>	358,170.37 km <sup>2</sup>
Population density	386 people/km <sup>2</sup>	1.4 people/km <sup>2</sup>
Marine coastline	65 km	29,000 km
Offshore exclusive economic zone	3,454 km <sup>2</sup>	app. 1,000,000 km <sup>2</sup>
Permits nuclear power generation	Yes	No
Offshore wind - installed capacity	2,262 MW	0
Onshore wind - installed capacity	2,990 MW	54 MW
Renewable Electricity Mix (does not include nuclear)	25.48 per cent	Over 90 per cent
Net zero commitment	Yes	Yes

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

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Japan Green Hydrogen Opportunities

**Issue:** To provide an overview of Japan green hydrogen opportunities.

**Background and Current Status:**

- As of October 2023 (latest official data) Japan's population is estimated at 124.4 million people, making it the eleventh most populous country in the world. With a land area of 364,485 kilometers squared (km<sup>2</sup>), Japan has a population density of approximately 341/km<sup>2</sup>. The country has approximately 30,000 km of coastline. See **Annex A** for a comparison to NL.
- Japan has minimum natural energy resources and is almost totally dependent on imported energy. In 2014, dependency on imported fossil fuels represented 94 per cent of Japan's total energy supply, but this declined to 88 per cent in 2019 (latest data available) due to an expansion of renewable and nuclear resources and lower energy demand.
- In 2022, 85 per cent of Japan's primary energy consumption came from fossil fuels. Japan's 2022 electricity mix included gas (34.9 per cent), coal (33.7 per cent), solar (9.9 per cent), hydro (7.2 per cent), nuclear (5.0 per cent), oil (4.4 per cent), bioenergy (4.0 per cent), and wind (0.8 per cent).
- Japan has committed to reducing greenhouse gas (GHG) emissions by 46 per cent below 2030 (relative to 2013 levels), with an aspirational target of 50 per cent reduction by 2030. In October 2022, the Government of Japan released its Sixth Strategic Energy Plan, targeting carbon neutrality by 2050 while ensuring a stable energy supply. The plan establishes a target of 36 to 38 per cent of power supplies from renewable energy by 2030.
- In 2017, Japan became the first country to adopt a national hydrogen strategy. The strategy was updated in June 2023 to incorporate several new/revised priorities including highlighting the importance of clean hydrogen produced with minimal emissions, strengthening ties with potential hydrogen exporting countries (e.g., in North America, the Middle East, and the Asia Pacific), and further consideration of ammonia, liquid organic hydrogen carriers (LOHCs), liquefied hydrogen, and synthetic fuels or "e-fuels."
- Japan is widely recognized by organizations such as the International Energy Agency (IEA) as a global leader in hydrogen technologies, including through deploying the world's largest hydrogen refueling station network, installing 300,000 residential stationary hydrogen fuel cells, and launching the world's first liquified hydrogen vessel.
- Japan's hydrogen-related goals and targets include:
  - displacing fossil fuels with hydrogen to increase energy security and industrial competitiveness and meet GHG reduction targets;
  - expanding its hydrogen markets from two million tons per year to three million tons per year by 2030, 12 million tons per year by 2040, and 20 million tons per year by 2050;
  - increasing public and private spending, technological innovation, and collaboration with industrial stakeholders to expand a society-wide adoption of hydrogen technologies, and
  - achieving a "pathway" to low-carbon hydrogen (aiming of  $\leq 3.4$  kilograms of carbon dioxide equivalent per kilogram of hydrogen).

- In September 2021, Japan Mitsubishi Corp and Shell Canada signed a Memorandum of Understanding (MoU) to build a hydrogen production plant with carbon capture and storage (CCS) near Edmonton, Alberta in the second half of the 2020s. The plant will have the capacity to produce 165,000 tonnes per annum of hydrogen during the first phase, with plans to store captured carbon dioxide at Shell's proposed Polaris CCS site near Edmonton. The hydrogen would be exported to Asian markets, including Japan, in the form of ammonia.
- In 2021, Japan and the United Arab Emirates signed a Memorandum of Cooperation (MoC) on hydrogen to exchange hydrogen policy and standard development, and to build an international supply chain including production and transportation to Japan.
- In 2021, Japan and Australia committed to the Japan-Australia Partnership on Decarbonization through Technology. The partnership advances cooperation in a range of areas, including clean hydrogen and ammonia, and low-emission steel and iron ore. In January 2022, Australia announced the \$150 million Australia Clean Hydrogen Trade Program, the first phase of which will support Australian-based supply chain projects that target the export of clean hydrogen to Japan.
- In December 2022, the European Union (EU) and Japan signed an MoC to spur innovation, develop an international hydrogen market and work together for sustainable and affordable production, trade, transport, storage, distribution, and use of low-carbon hydrogen.

**Analysis:**

- In October and November 2023, IET staff participated in the Team Canada Trade Mission to Japan. The trade mission program focused on areas of Canadian competitive advantage, including clean technology, clean energy, and green infrastructure.
- On February 5, 2024, the Minister of IET attended meetings in Japan with companies interested in opportunities related to green hydrogen and critical minerals in NL.

**Action Being Taken:**

- For information purposes only.

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

**Prepared/Approved by:** S. Mathews / M. Hunter / K. Day / M. Cluett-Fizzard / S. Wilkins / C. Martin

**Ministerial Approval:**

May 8, 2024




### Annex A: Comparison of Japan to NL

	Japan	NL
Population	124,342,000	510,500
Land area	364,485 km <sup>2</sup>	358,170.37 km <sup>2</sup>
Population density	341 people/km <sup>2</sup>	1.4 people/km <sup>2</sup>
Marine coastline	approx 30,000 km	29,000 km
Offshore exclusive economic zone	Unknown	app. 1,000,000 km <sup>2</sup>
Permits nuclear power generation	Yes	No
Offshore wind - installed capacity	52 MW (2022)	0
Onshore wind - installed capacity	4,320 MW (2022)	54 MW
Renewable Electricity Mix (does not include nuclear)	21.96 per cent	Over 90 per cent
Net zero commitment	Yes	Yes

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

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Update on project Toqlukuti'k Wind and Hydrogen Ltd. (ABO)

**Issue:** [Redacted]

35.(1)(d)

**Background and Current Status:**

- On August 30, 2023, Toqlukuti'k Wind and Hydrogen Ltd. (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), a prerequisite to a Crown Lands application for their project.

**Analysis:**

- ABO has an approved bid area of 107,587 hectares (ha) of land and is proposing a three-phase green hydrogen and green ammonia project near Come by Chance refinery. The project will initially serve the hydrogen demand of the Come by Chance refinery and subsequently produce green ammonia for the global market.

[Redacted]

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

[Redacted]

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

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** World Hydrogen Summit 2024

**Issue:** To provide an overview of the World Hydrogen Summit 2024.

**Background and Current Status:**

- The World Hydrogen Summit (WHS) 2024 will be held from May 13-15, 2024, in Rotterdam, Netherlands. The WHS has been held annually since 2020 to convene government representatives, hydrogen and energy stakeholders, service providers, and hydrogen end-users. WHS 2024 will be attended by 11,500 participants with 130 countries represented and approximately one hundred guest speakers.
- WHS 2024 includes exhibitions, speakers, panels, receptions, and other events. It is being marketed as the global platform for hydrogen agreements to be signed and a platform for countries to come together, learn, share ideas, and collaborate on how to maximize combined global efforts toward green energy.
- WHS 2024 will be attended by senior officials from major energy companies, national and regional governments, and companies that operate throughout the hydrogen development chain, including regulators, construction companies, energy buyers, utility companies, press, and shipping companies.

**Analysis:**

- Globally, countries and industries are seeking opportunities to use green hydrogen and ammonia to assist in reducing their carbon emissions in sectors where it is technically challenging or expensive to electrify directly (e.g., industrial processing and large transport). Hydrogen is positioned to be an essential part of Europe's green energy transition and future energy sovereignty, helping Europe achieve energy independence from Russian oil and gas.
- The WHS provides opportunity to network with senior officials from major energy companies, national and regional governments, and companies which operate throughout the hydrogen development chain, including regulators, construction companies, energy buyers, utility companies, and shipping companies.
- WHS 2024 supports strong ties in the green hydrogen industry, as is evident with the Province's signing of a Memorandum of Understanding (MOU) with the Port of Rotterdam at WHS 2023. This MOU supports the establishment of hydrogen supply chains to support Newfoundland and Labrador's export of green hydrogen to the Netherlands, and onward to other parts of Europe.
- This MOU is in addition to the Province's Declaration of Intent with the City of Hamburg, Germany to cooperate in the field of hydrogen and hydrogen technologies signed in 2022.
- On March 18, 2024, Canada and Germany signed a MOU to establish a trade program to sell hydrogen produced in Canada, including proposed projects in NL and Nova Scotia. The WHS is a major European event and allows NL to position itself as an investment destination for green hydrogen, increase industry awareness of the province's strategic advantages for

producing and supplying hydrogen, and demonstrate the potential of existing export channels to supply European industrial hubs with Canadian solutions.

- Government has reserved a WHS exhibition booth to facilitate contact with other summit attendees. The booth will be staffed by IET officials and include a promotional slideshow, access to IET's online Renewable Energy Resources Hub, and promotional materials (e.g., IET's hydrogen action plan, hydrogen brochure, pins, coasters).
- The Government of Canada will also have a separate booth at the WHS, and IET is actively engaging with Canadian booth officials to advance common goals, including meetings with trade commissioners.
- Premier Andrew Furey, the Minister of IET and senior executive IET members will attend WHS 2024 and the Energy NL reception on May 12, 2024 (see Annex A for list). A large selection of industry delegates from NL are attending the WHS, representing ports, companies, and municipalities (see Annex B for list).
- While attending the WHS, the Minister of IET will meet with the Port of Rotterdam and Dutch Deputy Prime Minister and Minister of Climate Change and Energy Policy, Rob Jetten, on May 13 and 14, 2024 respectively.
- On May 14, 2024, the Minister of IET will deliver the presentation on "Green Hydrogen Opportunities in Newfoundland and Labrador" at the H2 Tech Series, giving an overview of the NL technology sector and support provided by Government for both the technology sector and the hydrogen economy.
- The presentation will focus on strategic advantages for NL in green hydrogen production, including available resources, geographic attributes, workforce characteristics, and government policies.
- Also on May 14, 2024, the Minister of IET will participate on a panel called "Hydrogen in the Americas." Other panelists sharing their regional perspectives include:
  - H.E. Elisa Facio, Minister of Industry, Energy and Mining, Government of the Republic of Uruguay;
  - H.E. Rosilena Lindo, Secretary of Energy, Government of Panama;
  - Anna Shpitsberg, Deputy Assistant Secretary, U.S. Department of State; and
  - José Miguel Benavente, Executive Vice President and CEO CORFO (Chilean Economic Development Agency)

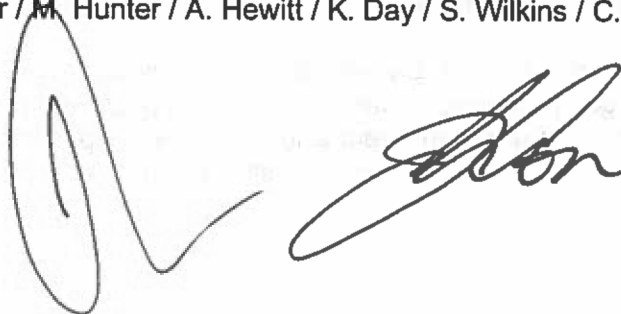
**Action Being Taken:**

- For information purposes only.

**Prepared/Approved by:** W. Skinner / M. Hunter / A. Hewitt / K. Day / S. Wilkins / C. Martin

**Ministerial Approval:**

May 5, 2024



**Annex A**  
Government of Newfoundland and Labrador WHS Attendees

<b>Department</b>	<b>Representatives</b>
Premier's Office	Premier Andrew Furey
Industry, Energy and Technology	Minister Andrew Parsons Deputy Minister, John Cowan Executive Director, Renewable Energy, Susan Wilkins Director of Renewable Energy Projects, Gordon Murphy Director, Marketing and Promotions, Michelle Power

**Annex B**  
Other NL Delegates

<b>Name</b>	<b>Position</b>	<b>Organization</b>
Dean Sullivan	VP North America	Dovre Canada Ltd.
Charlene Johnson	CEO	Energy NL
Robin Kieley	Manager of Sustainable Energy Initiatives	Energy NL
Bev Bishop	Operations Manager	Energy NL
Kieran Hanley	CEO	econext
Ian Froude	CEO	Pedal & Shift Consulting
Stephanie Granville	Project Consultant	Pedal & Shift Consulting
Darin King	Executive Director	Trades NL
Georgina Lake	Director of Operations	Trades NL
Tom Woodford	President	Trades NL
Bob Fiander	Vice-President	Trades NL
Gerry Mayo	VP Operations	PF Collins International Trade Solutions
Susan Collins	VP Business Development	PF Collins International Trade Solutions
Steve Priestley	Chief Operating Officer	Altomaxx
Ted Lomond	President	North Atlantic
Jeff Murphy	VP, Capital Projects	North Atlantic
Santosh Raikar	Managing Partner	Silverpeak
Allison Whelan	Managing Partner	Stewart McKelvey
John Samms	Partner	Stewart McKelvey
Sadira Jan	Partner	Stewart McKelvey
Kimberly MacLachlan	Practice Innovation and Business Development	Stewart McKelvey
Beth McGrath	Partner	McInnes Cooper
Chris King	Partner	McInnes Cooper
Shelby Pike	HR & Marketing Manager	Marine Contractors Inc.
Adam Buckle	CFO	Marine Contractors Inc.
Jennifer Bennett	Finance Manager	Marine Contractors Inc.
Terry French	President	Construction Labour Relations Association of Newfoundland and Labrador
Heather MacLean	Director of Operations	Construction Labour Relations Association of Newfoundland and Labrador
Chris Crotty	Board Chair	Construction Labour Relations Association of Newfoundland and Labrador
Matthew Mallam	Board Member	Construction Labour Relations Association of Newfoundland and Labrador
John Davis	CEO	Qalipu Holdings LP

<b>Name</b>	<b>Position</b>	<b>Organization</b>
Jonathan Strickland	Director of Business Development	Qalipu Holdings LP
Louis MacDonald	Chairperson	Qalipu Holdings LP
Jennifer Brake	Chief	Qalipu First Nation
Charles Pender	Band Manager	Qalipu First Nation
Jim Slade	Vice President - NL	Strum Consulting
Shawn Duncan	Executive Director	Strum Consulting
Julie Lemieux	CEO	Triple Point Resources
Don Lacey	VP	Triple Point Resources
Darryl Downey	Head of Regulatory & HSE	Triple Point Resources
Julie Desruisseaux	Manager, Business Development	Triple Point Resources
Jackie Chow	CEO	Port of Corner Brook
Jennifer Crane	Business Development Manager	Port of Corner Brook
Lisa Lovelady	Vice President & COO	Academy Canada
David Mitchell	Chief Executive Officer	Pennecon Limited
Brandon MacDonald	Vice President, Strategy & Growth	Pennecon Limited
Jonathon Bruce	Senior Project Engineer/Project Manager	C-CORE
Chad Fowlow	Founder & Principal Consultant	Angler Solutions Inc.
Todd Stanley	Partner	Cox & Palmer
Denis Fleming	Partner	Cox & Palmer
Peter Zed	Partner	Cox & Palmer
Matthew Dorreen	Partner	Cox & Palmer
Scott Penney	CEO	Port of Argentia
Caron Hawco	President and Principal Consultant	Caron Hawco Group Inc.
Michelle Lethbridge	Senior Project Manager	ABO Wind Canada
Stephen Kelly	Director, Advisory	KPMG LLP
Scott Sceviour	Chairman	Exploits Valley Port Corporation
James Sceviour	Vice-Chair	Exploits Valley Port Corporation
Jeffrey Saunders	Board Member	Exploits Valley Port Corporation
Kirk McDonald	Board Members	Exploits Valley Port Corporation

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** German Hydrogen Opportunities

**Issue:** To provide an overview of German hydrogen opportunities.

**Background and Current Status:**

- Germany is in Central Europe and is the most populous country in the European Union (EU), with approximately 84 million people. Its land area is 357,592 km<sup>2</sup>, with a population density of 234/km<sup>2</sup>. See Annex A for Germany and Newfoundland and Labrador comparison.
- In 2022 (latest data available), Germany's electricity mix was 49.2 per cent non-renewable (32.8 per cent coal, 15.6 per cent natural gas, and 0.8 per cent oil), and 50.7 per cent renewable, including nuclear and waste (21.3 per cent wind, 10.3 per cent solar, 7.1 per cent biofuels, 5.9 per cent nuclear, 4.0 per cent hydroelectric, and, 2.1 per cent waste).
- According to the International Renewable Energy Agency (IRENA), as of 2023, Germany had 8.4 GW of installed offshore wind capacity and 61.1 GW of installed onshore wind capacity. Germany has the highest installed wind capacity in Europe.
- Germany has set legal targets to achieve: 40-45 per cent of electricity demand with renewable sources by 2025; 80 per cent of electricity demand with clean sources by 2030; power generation "virtually free" of greenhouse gases by 2035; and climate neutrality by 2045.
- In 2020, Germany released a National Hydrogen Strategy with 9 billion Euros in funding for six focus areas: hydrogen production; hydrogen use; infrastructure and supply; research, education, and innovation; European activities; and international hydrogen economy.
- In January 2023, a series of amendments to various pieces of German energy legislation came into force, known collectively as the "Easter Package." Some changes include:
  - increasing auction quantities for new wind and solar capacity;
  - funding for co-location of renewable energy and chemical storage (including hydrogen);
  - raising offshore wind capacity targets to 30 GW by 2030, 40 GW by 2045, and 70 GW by 2045; and
  - measures to increase profitability and streamline approvals for offshore wind.
- With Germany's updated hydrogen strategy released in 2023, it is anticipated that Germany will need to import up to 70 per cent of its hydrogen to be climate neutral by 2045.

**Analysis:**

- 29.(1)(a) [REDACTED] Given Germany's limited ability to expand renewable energy development due to land and seabed constraints, its hydrogen strategy is focused on green hydrogen imports instead of domestic production.
- In August 2022, Germany and Canada established the Canada-Germany Hydrogen Alliance in Stephenville. Germany also has international hydrogen agreements with a number of other countries, including Australia, Chile, Japan, Morocco, and Saudi Arabia.

- In September 2022, the Province signed a Joint Declaration of Intent with the City of Hamburg on cooperation in the field of green hydrogen and hydrogen technologies. In October 2023, IET hosted over 30 hydrogen industry and government delegates from the City of Hamburg. The delegation met with provincial wind-hydrogen developers and econext and Energy NL.
- Also in 2022, Fernleitungsnetzbetreiber Gas, the association of supra-regional gas transmission companies in Germany, released two plans to convert natural gas pipelines to hydrogen transmission networks, by 2030 and 2050, respectively. Germany has also established agreements with Belgium and Denmark to link hydrogen infrastructure.
- The proposed "Hydrogen Network 2030" will be 5,100 kms long with about 3,700 kms from converting existing natural gas pipelines. It has been simulated to meet a peak demand of 10 gigawatt hours per hour (GWh/h). In 2023, Germany reached agreements with neighboring countries, including Belgium and the Netherlands, to link hydrogen networks. See Annex A.
- Several German ports, including Hamburg, Wilhelmshaven, and Rostock, are expected to play key roles in Germany's green hydrogen import plans. These ports are also strategically positioned to support a German hydrogen distribution network as well as European networks.
- In March 2023, officials from IET attended the first meeting of the Canada-Germany Atlantic Energy Roundtable. Representatives from the German government, Natural Resources Canada, Nova Scotia, New Brunswick, Prince Edward Island, and support staff for the Canada-Germany Energy Partnership were present.
- In June 2023, two IET Executive representatives attended an offshore wind delegation in Germany, facilitated by the Canadian German Chamber of Industry and Commerce. On May 6-18, 2024, the Executive Director, Renewable Energy, will be part of the Transatlantic Knowledge Exchange on Hydrogen in Canada and Germany, held in Berlin, Hamburg, and Bremen, and will include discussions on national hydrogen strategies, electrolyzer technology, green hydrogen and ammonia import infrastructure, and green steel production.
- On March 18, 2024, at the Canada-Germany Hydrogen and Ammonia Producer Offtaker Conference in Hamburg, Germany, Jonathan Wilkinson, Canadian Minister of Energy and Natural Resources, and Robert Habeck, German-Chancellor and Minister of Economic Affairs and climate change signed a MOU to establish a bilateral program to support hydrogen trade and secure early access for clean hydrogen producers in the German Market.
- On May 2-4, 2024, a delegation of five German parliamentarians visited Newfoundland and Labrador, accompanied by German Embassy in Canada officials, [REDACTED]

**29.(1)(a), 34.(1)(a)(iii)**

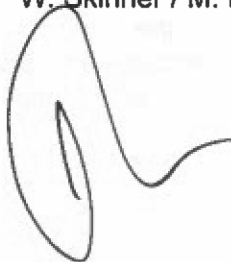
**Action Being Taken:**

- For information purposes only.

**Prepared/Approved by:** W. Skinner / M. Hunter / K. Day / S. Wilkins / C. Martin

**Ministerial Approval:**

May 5, 2024



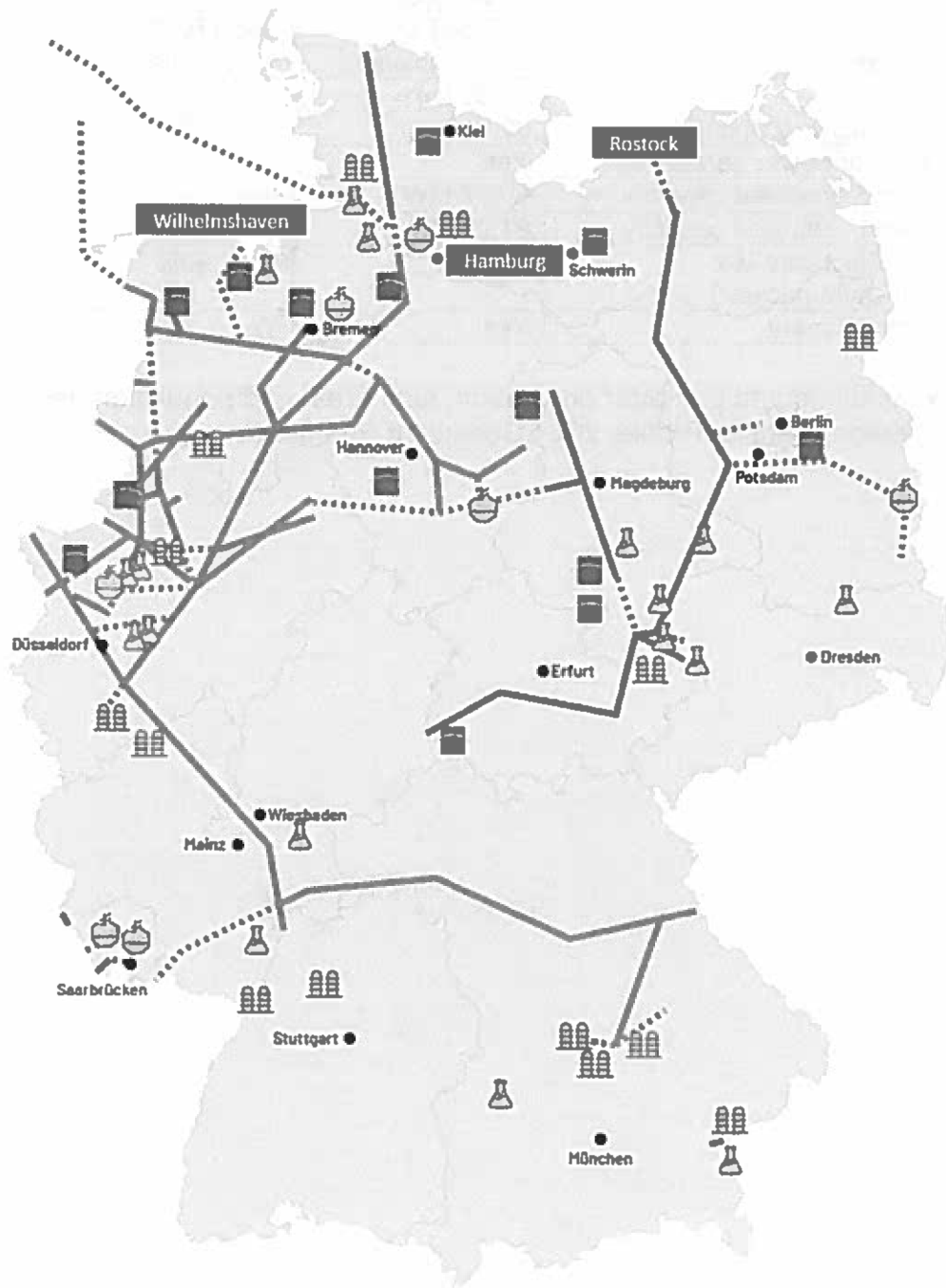

**Annex A**  
**Comparison Germany and Newfoundland and Labrador**

	<b>Germany</b>	<b>NL</b>
Population	83,200,000	510,500
Land area	357,588 km <sup>2</sup>	358,170.37 km <sup>2</sup>
Population density	234 people/km <sup>2</sup>	1.4 people/km <sup>2</sup>
Marine coastline	2,389 km	29,000 km
Offshore exclusive economic zone	32,982 km <sup>2</sup>	app. 1,000,000 km <sup>2</sup>
Permits nuclear power generation	Yes	No
Offshore wind - installed capacity	8,407 MW	0
Onshore wind - installed capacity	61,052 MW	54 MW
Renewable Electricity Mix (does not include nuclear)	43%	Over 90%
Net zero commitment	Yes	Yes

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

### Annex B

#### Illustrative Map of Germany's Planned Hydrogen Distribution Network 2030



**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Financing Hydrogen Projects

**Issue:** To provide an overview of the financing of hydrogen projects globally and in Canada.

**Background and Current Status:**

- Major organizations including the International Energy Agency (IEA) and the International Renewable Energy Agency (IRENA) have recommended that policymakers accelerate financial support for clean hydrogen.
- A number of hydrogen support schemes have been announced around the world, including:
  - Investment Tax Credits (ITCs) in the United States of up to 30 per cent of total eligible project costs, depending on emissions intensity and labour standards, through the **Inflation Reduction Act (IRA)**;
  - the European Hydrogen Bank, a financing instrument to accelerate the establishment of a full hydrogen value chain in Europe including funding for hydrogen production in the European Union (EU) and internationally; and,
  - H2Global, a German auction-based mechanism supporting green hydrogen procurement through a contract for differences (CfD) approach.
- Canada announced \$60 billion in clean energy tax credits and \$20 billion in sustainable infrastructure investments as part of its 2023 budget. These investments are a response to the IRA, which committed nearly \$370 billion to clean energy. Canada's announcement includes:
  - \$25 billion through 2035 for the Clean Energy Investment Tax Credit for non-emitting electricity generation and abated natural gas-fired electricity, subject to emissions intensity requirements;
  - \$18 billion for clean hydrogen production; and,
  - \$11 billion for clean manufacturing technology.
- Canada's announced Clean Hydrogen Investment Tax Credit (ITC) provides direct subsidies for capital costs associated with the purchase of equipment to produce clean hydrogen, as determined by a project's carbon intensity. The ITC provides subsidies for equipment purchased between 2023 and 2034. Support varies from between 15 to 40 per cent of eligible project costs, depending on the carbon intensity of the hydrogen produced.
- Canada's announced Clean Technology ITC would provide a 30 per cent refundable tax credit for investments in eligible property acquired and available for use on or after March 28, 2023 until December 31, 2033. Property that is acquired and available for use in 2034 would be eligible for a 15 per cent refundable tax credit.
- Other federal programs include:
  - the Clean Fuels Fund, which provides funding to de-risk the capital investment required to build new or expand existing clean fuel production facilities;
  - the Strategic Innovation Fund Net Zero Accelerator, which focuses on emerging clean technologies, including hydrogen; and,
  - the Advanced Clean Energy Program, which supports the development of clean, renewable fuels and energy storage materials/devices, including hydrogen.

- See Annex A for a list of federal funding programs for renewable energy.
- Newfoundland and Labrador offers a number of programs supporting emissions reductions and renewable energy, including:
  - the Green Transition Fund, a \$100 million dollar fund supporting businesses, organizations, and post-secondary institutions to assist with the province's transition to a green economy; and,
  - the Green Technology Tax Credit, a tax credit of up to 20 per cent on the capital cost of equipment purchased by Canadian-controlled private corporations investing in green activities such as energy conservation, clean electricity generation, and efficient use of fossil fuels.
- See Annex B for a list of provincial funding programs for renewable energy.
- Invest in Canada (ICC) is Canada's foreign direct investment attraction and promotion agency. It works with partners across the country and worldwide to attract global companies and support their expansion plans in Canada. Priority industries for IIC include clean tech and natural resources (mining and hydrogen).
- In November 2023, Mr. Harold Dremin (Chief, Investor Services, IIC) visited Newfoundland and Labrador and met with the Deputy Minister of IET, World Energy GH2, Growler Energy (on behalf of Pattern), North Atlantic Refining Limited, and the City of St. John's.
- During the World Hydrogen Summit 2024, the Minister will meet with Laurel Brotin, CEO of IIC on May 13, 2024 (see Annex C for biography).

**29.(1)(a)****Analysis:**

- The IEA has highlighted high inflation rates in particular as increasing the cost of equipment and the interest rates on loans, significantly impacting project economics as hydrogen and electrolysis projects are capital-intensive with high upfront costs and low operational costs.
- World Energy GH2 has secured \$95 million USD in funding from Export Development Canada to support front-end engineering and design (FEED) activities and the time sensitive processes for the acquisition of electrolyzers and turbines for Project Nujio'qonik.
- During the Crown Lands Call for Bids (CFB) for Wind Energy Projects, the Canada Infrastructure Bank (CIB) provided language for inclusion in the published CIB guidelines, highlighting that their priority areas for investment included green infrastructure and clean power, including hydrogen and wind development.

**35.(1)(d)**

**Action Being Taken:**

- For information purposes only.

**Prepared/Approved by:** S. Mathews / M. Hunter / A. Hewitt / S. Wilkins / C. Martin

**Ministerial Approval:**

May 3, 2024

A large, stylized handwritten signature in black ink, appearing to be 'M. Hunter'.A handwritten signature in black ink, appearing to be 'S. Mathews'.

**Annex A**  
**Federal Funding Programs for Renewable Energy**

<b>Government of Canada</b>		
<b>Program/Incentive</b>	<b>Department(s)</b>	<b>Details of Funding Program/Incentive</b>
Low Carbon Economy Fund	Environment and Climate Change Canada (ECCC)	Supporting projects to reduce greenhouse gas emissions (GHGs), generate clean growth, build resilient communities, and create jobs. The Fund has four streams: Low Carbon Economy Challenge (provides between \$1 million to \$25 million per project); Low Carbon Economy Leadership Fund (provides an annual allocation to each province with new allocation to NL not yet clear but \$44.7 million previous allocation for 2018-2022), Indigenous Leadership Fund (provides up to \$6 million per project), and Implementation Readiness Fund (funding amounts not clear). Renewed funding was announced as part of Canada's 2030 Emissions Reduction Plan and Budget 2022, investing an additional \$2.2 billion over seven years, starting in 2022-23. Funding under the various streams is offered based on a yearly call for applications or by invitation. Allocations to each province are determined using a base-level plus per capita funding formula.
Clean Energy for Rural and Remote Communities	Natural Resources Canada (NRCan)	Funding for renewable energy and capacity building projects and related energy efficiency measures in Indigenous, rural and remote communities across Canada (e.g., bioheat, innovation and capital projects). There is no minimum or maximum amount of funding. The total program budget through NRCan is \$300 million until 2027. Applications are accepted on a continuous intake. It is unclear how the funding is allocated to each province (e.g., per capita).
Clean Fuels Fund	NRCan	Clean fuels are produced from a variety of feedstocks, such as agricultural and forest biomass, waste materials, electricity, and fossil fuels with carbon capture and storage  Funding is provided for production projects (up to a maximum of \$150 million per project) and for feasibility projects (up to \$5 million per project). The Fund was re-committed in Budget 2021 with an investment of \$1.5 billion over five years. Applications are accepted through a call for proposals. It is unclear how the funding is allocated to each province (e.g., per capita).
Emissions Reduction Fund	NRCan	Funding for oil and gas companies (ranging from \$100,000 to \$50 million) to invest in green solutions to reduce GHGs and retain jobs. The Fund's budget totals \$750 million with \$675 million allocated for onshore projects (intake closed on March 31, 2022) and \$75 million for offshore projects (intake closed May 11, 2023). It is unclear how the funding is allocated to each province (e.g., per capita).

<b>Government of Canada</b>		
<b>Program/Incentive</b>	<b>Department(s)</b>	<b>Details of Funding Program/Incentive</b>
Northern REACHE Program	NRCan, Indigenous Services Canada and ECCC.	Supporting northern and Indigenous communities in the transition to renewable, sustainable and affordable sources of energy. The Program was funded in 2018 with \$53.5 million to be provided over ten years. Budget 2021 also announced \$40.4 million to be provided over three years to support feasibility and planning stages of hydroelectricity and grid interconnection projects in the North. Exact funding amounts and application deadlines are not clear but since 2016 the program has funded 140 projects and invested over \$29 million. It is unclear how the funding is allocated to each province (e.g., per capita).
Advanced Clean Energy Program	National Research Council (NRC)	Supporting development of clean, renewable fuels and energy storage materials/devices to facilitate the electrification of energy supply, including hydrogen, battery energy storage and low-carbon fuels. Funding amounts and the total program budget are not clear. Applications are accepted on a continuous intake. It is unclear how the funding is allocated to each province (e.g., per capita).
Canada Infrastructure Bank Credit Facilities	Canada Infrastructure Bank (CIB)	Strategic investments in clean power (e.g., renewables, district energy, storage, interties and transmission) and green infrastructure (e.g., building energy retrofits, water and wastewater). Investments are typically in the multi-million dollar range with minimum or maximum amounts not clear. Budget 2023 called on the CIB to invest at least \$20 billion through its clean power and green infrastructure sectors. Applications are accepted on a continuous intake. There are no regional allocations for CIB investments, opportunities are assessed based on their own merits.
Canada Growth Fund	Canada Growth Fund Inc.	Strategic investments to encourage private investment in low carbon projects, technologies, businesses and supply chains. Investments are provided in the form of equity, debt or derivative contracts. Budget 2022 announced the creation of the Fund to be capitalized with \$15 billion. Minimum and maximum funding amounts are not clear; however, the first investment announced on October 25, 2023 was for \$90 million. Applications are accepted on a continuous intake. It is unclear how/if the funding is allocated to each province (e.g., per capita).
Smart Renewables and Electrification Pathways	NRCan	Provides \$4.5 billion for smart renewable energy and electrical grid modernization projects, including \$3 billion for the program announced in Budget 2023. Project application timelines and maximum and minimum funding amounts are not yet available. During previous years, applications were accepted based on a yearly call. Details for the renewed

Government of Canada		
Program/Incentive	Department(s)	Details of Funding Program/Incentive
		program are to be determined. It is unclear how the funding is allocated to each province (e.g., per capita).
Green Shipping Corridor Program	Transport Canada	Announced in Budget 2023, support for clean ships, shore power technology, and low-emission vessels. The budget for the program totals \$165.4 million to be provided over seven years starting in 2023-24. Project application process, timelines and maximum and minimum funding amounts are not yet available. It is unclear how the funding will be allocated to each province (e.g., per capita).
Strategic Innovation Fund Net Zero Accelerator	Innovation, Science and Economic Development Canada	Investments aimed at capitalizing on emerging clean technologies such as hydrogen, carbon capture, utilization and storage, and made-in-Canada battery ecosystems. Starting in 2021, the Strategic Innovation Fund had an incremental budget of \$7.2 billion over seven years with \$5 billion dedicated to the Net Zero Accelerator. Minimum and maximum funding amounts are not clear. Applications are accepted on a continuous intake. It is unclear how the funding is allocated to each province (e.g., per capita).
Green Freight Program	NRCan	Funding to help fleets reduce fuel consumption and GHG emissions through energy assessments (up to \$40,000 provided), retrofits (up to \$250,000 provided), engine repowers (up to \$5 million provided). Budget 2022 provided \$200 million over 5 years for the program. Applications for assessments and retrofits are considered on a continuous intake. Applications for repower and replacement are time constrained and must be submitted by Nov. 16, 2023. It is unclear how the funding is allocated to each province (e.g., per capita).
Canada's Global Innovation Clusters	Innovation, Science and Economic Development Canada (ISED)	As part of Budget 2022, \$750 million over five years was earmarked for Canada's Global Innovation Clusters. The clusters will be allocated the following funding amounts: <ul style="list-style-type: none"> <li>• <u>Advanced Manufacturing Cluster</u> – up to \$177 million to support the commercialization of transformative projects that develop, scale up and apply advanced technology solutions in manufacturing, attracting talent and investments from within Canada and around the world;</li> <li>• <u>Protein Industries Cluster</u> – up to \$150 million to facilitate investment in Canada's plant-based food and feed ecosystem and in the creation of new products and services, while reducing the greenhouse gas emissions associated with agricultural production and food processing;</li> <li>• <u>Digital Technology Cluster</u> – up to \$125 million to mobilize Canadian industry to build world-leading digital technologies that will make Canada a global leader in</li> </ul>

Government of Canada		
Program/Incentive	Department(s)	Details of Funding Program/Incentive
		<p>clean, healthy economic growth and see Canadian companies become digital anchor enterprises;</p> <ul style="list-style-type: none"> <li>• <u>Scale AI Cluster</u> – up to \$125 million to establish Canada as a global hub for artificial intelligence dedicated to business productivity and intelligent supply chains, with Canadian technology setting the world standard and providing a competitive advantage for Canadian businesses; and,</li> <li>• <u>Ocean Cluster</u> – up to \$125 million to accelerate solutions to address global ocean opportunities, building a stronger Canadian economy and a healthier planet.</li> </ul>
Clean Hydrogen Investment Tax Credit	Department of Finance	A refundable 15 to 40 per cent tax credit for eligible project costs, with those producing the cleanest hydrogen receiving the highest credit (and a 15 per cent credit for equipment to convert clean hydrogen into ammonia).
Clean Electricity Investment Tax Credit	Department of Finance	A refundable 15 per cent tax credit for eligible investments in non-emitting electricity generation systems, stationary electricity storage systems and equipment for electricity transmission between provinces and territories.
Clean Technology Investment Tax Credit	Department of Finance	A refundable investment tax credit of up to 30 per cent of the capital cost of "clean technology property" acquired by Canadian taxable corporations.
Carbon Capture, Utilization and Storage Investment Tax Credit	Department of Finance	A refundable tax credit of up to 60 per cent for carbon capture equipment using direct ambient air, 50 per cent on other capture equipment and 37.5 per cent on qualified carbon transportation, storage or usage equipment.
Flow-through shares and Critical Mineral Exploration Tax Credit for lithium from brines	Department of Finance	Allows for certain expenses relating to mining lithium from brines to be treated as Canadian exploration expenses (CEE) and Canadian development expenses (CDE) eligible for flow-through treatment and to expand eligibility for the Critical Mineral Exploration Tax Credit.
Critical Mineral Exploration Tax Credit	Department of Finance	<p>On December 15, 2022, Bill C-32, providing for a federal new non-refundable "30% Critical Mineral Exploration Tax Credit" (30 per cent CMETC) received Royal Assent.</p> <p>The 30 per cent CMETC is a new tax credit aimed at increasing investment for certain mining companies exploring specifically for one or more of 15 critical minerals.</p>
Temporary Rate Reduction for Zero-emission technology manufacturers	Department of Finance	The 2021 federal budget proposed a temporary reduction in the corporate income tax rate for qualifying zero-emission technology manufacturers, applicable for taxation years beginning after 2021.

Government of Canada		
Program/Incentive	Department(s)	Details of Funding Program/Incentive
		<p>Specifically, a reduced tax rate of 7.5 per cent will apply to eligible zero-emission technology manufacturing and processing (M&amp;P) income that would otherwise be subject to the 15 per cent general corporate income tax rate, and a reduced tax rate of 4.5 per cent will apply to eligible zero-emission technology M&amp;P income that would otherwise be subject to the nine per cent small-business corporate income tax rate. The reduced tax rates will be gradually phased out for taxation years beginning in 2029 and fully phased out for taxation years beginning after 2031.</p> <p>The 2023 Federal Budget announced two changes to the temporary 50 per cent rate reduction for zero-emission technology manufacturers that was first introduced in the 2021 Federal Budget. First, the rate reduction will be expanded, for taxation years beginning after 2023, to include manufacturers of nuclear energy equipment, processing or recycling of nuclear fuels and heavy water, and manufacturing of nuclear fuel rods. Second, the rate reduction, originally planned to be fully phased out in 2032, will now be fully phased out three years later in 2035. The newly released draft legislation implements these two changes.</p>

**Annex B**  
**Provincial Funding Programs for Renewable Energy**

<b>Government of Newfoundland and Labrador</b>		
<b>Program/Incentive</b>	<b>Department(s)</b>	<b>Details of Funding Program/Incentive</b>
Green Transition Fund	Industry, Energy and Technology (IET)	Provides non-repayable financial support (\$75,000 to \$3 million per project) to businesses, organizations and post-secondary institutions to assist with the province's transition to a green economy (e.g., greening operations or R&D). Funding committed totals \$100 million over at least ten years, allocated as part of restructuring the agreement with the Provincial Government to restart the West White Rose project. Annual funding for 2023-2024 and 2024-2025 was \$6 million with additional yearly allocations to increase thereafter. Expressions of Interest for the fund were due August 31, 2023. Short listed candidates were invited to submit full proposals in Fall 2023. Eight projects have been approved to as of May 2024, with another 21 being assessed for funding decision. The next intake of the program is scheduled for Q2-3 of 2024.
Climate Change Challenge Fund <sup>1</sup>	Environment and Climate Change (ECC)	Provides non-repayable financial support (\$50,000 or more per project) to enable organizations and public sector entities to undertake GHG reduction projects in NL. Established from \$38 million in funding received from the Low Carbon Economy Leadership Fund. The fund was implemented over five fiscal years (2019-20 to 2023-24) on a call for applications basis. All funds are now committed.
Carbon Capture, Storage and Utilization Innovation Challenge	IET	Provides financial support (\$1.5 million to \$3 million per project) to businesses, organizations and post-secondary institutions to complete R&D projects into the feasibility of carbon capture, storage and utilization in NL's offshore. The first stream contains a total of up to \$3 million to study the potential for employing CCUS in active production and reservoirs to decarbonize ongoing oil production. The second stream contains a total of up to \$3 million to study the potential of NL's offshore to serve as a regional CCUS hub for the storage of provincial and imported CO <sub>2</sub> . The competition is closed for the second stream and IET is now in the process of reviewing proposals under that stream of funding. IET has delayed the close of the first stream and we will be reissuing the RFP.
Oil to Electric Incentive Program <sup>1</sup>	ECC, NRCan and ECCC	Provides up to \$17,000 to help transition qualified home owners from oil to electricity-based heat.  Incentives are determined by the technology installed, income, and the number of people living in the household. In June 2023, a \$157 million investment in the program was announced to cover the next four fiscal years. Rebates in NL

<b>Government of Newfoundland and Labrador</b>		
<b>Program/Incentive</b>	<b>Department(s)</b>	<b>Details of Funding Program/Incentive</b>
		are administered through TakeCharge NL and are retroactive to April 1, 2023.
Isolated System Business Efficiency Program	NL Hydro	Provides support and financial incentives for energy saving projects targeted at NL Hydro commercial customers in isolated systems. Exact incentives provided are not clear but incentives paid typically cover up to 80 per cent of eligible project costs. Funding is provided as part of \$60 million announced in Budget 2023 for reducing greenhouse gas emissions while addressing energy affordability.
Electric Vehicle Rebate Program	ECC/ NL Hydro	Provides incentives for purchasing or leasing electric vehicles. Incentives range from \$1,500 for a plug-in hybrid to \$2,500 for an all-electric vehicle. Funding was announced in Budget 2022 to invest \$900,000 in electric vehicle incentives.
Innovation and Business Development Fund	IET	Provides non-repayable investments (ranging from \$25,000 to over \$750,000) to grow and diversify NL's oil and gas supply and service capabilities. The Fund was established in 2018 through \$60 million provided over 10 years as part of a collaborative approach to working with Husky and partners to advance the West White Rose Project. The program has an annual budget of \$6 million. Applications are accepted on a continuous intake.
Research and Development Fund	IET	Provides non-repayable funding (normally ranging from \$15,000 up to \$750,000 or more) for research and development projects for commercial and non-commercial applicants, including research related to pre-commercial clean technologies. Funding is provided through the Innovation and Business Investment Corporation's revolving fund. Applications are accepted on a continuous intake.
Business Development Support Program	IET	Non-repayable funding (ranging from \$1,500 to \$100,000 per fiscal year) to assist NL businesses in increasing productivity and improving competitiveness, including support for strategic sectors focused on export markets. Exact budget allocations for the program each year are not clear. Applications are accepted on a continuous intake.
Business Investment Program	IET	Provides term loans (ranging from \$15,000 to \$750,000 or more) in strategic growth sectors to support businesses with export potential or who require assistance to enter or expand in external markets. Funding is provided through the Innovation and Business Investment Corporation's revolving fund. Applications accepted on a continuous intake.
Green Technology Tax Credit	Finance	Provides up to a 20 per cent tax credit on the capital cost of equipment purchased by Canadian-controlled private

<b>Government of Newfoundland and Labrador</b>		
<b>Program/Incentive</b>	<b>Department(s)</b>	<b>Details of Funding Program/Incentive</b>
		corporations investing in green activities such as energy conservation, clean energy generation, and efficient use of fossil fuels.

<sup>1</sup> Supported by federal and provincial governments.

**Annex C**  
**Laurel Broten**  
**Chief Executive Officer**  
**Invest in Canada**

Laurel Broten is an award-winning CEO, former Ontario Cabinet Minister, lawyer, legislator, advocate and community builder. Laurel served as President and CEO of Nova Scotia Business Inc., the agency responsible for investment attraction and export development for the Province of Nova Scotia, from 2015 to 2022. During this time, she led the agency's transformation, delivering significant gains in both the quality and quantity of jobs created in the province. She also spurred material export growth in traditional and emerging sectors and industries.

From 2013 to 2015, as President and CEO of Broten Public Policy International Inc., Laurel provided strategic advice on complex public policy challenges, change management and government transformation to clients in Canada and abroad. This work included conducting a comprehensive review of Nova Scotia's taxes and regulations.

From 2003 until 2013, Laurel served in a number of senior roles in the Government of Ontario, including Minister of Education, Minister of Children and Youth Services, Minister of the Environment, Minister of Intergovernmental Affairs, Minister Responsible for Women's Issues, Vice-chair of Treasury Board/Management Board, and Parliamentary Assistant to the Premier, to the Minister of Health and Long-term Care and to the Minister of Energy.

After graduating with distinction with her Juris Doctor from the University of Western Ontario, Laurel clerked at the Supreme Court of Canada for Madam Justice Claire L'Heureux-Dubé. Laurel then practised as a commercial and civil litigation lawyer with three leading Canadian law firms until her election to government in 2003.

Laurel lives in Halifax with her husband and twin teenaged sons.

Source: Invest in Canada, "Invest in Canada CEO," <https://www.investcanada.ca/about> .



**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Qalipu Holdings

**Issue:** To provide an overview Qalipu Holdings and its involvement in renewable energy and hydrogen projects.

**Background and Current Status:**

- The Qalipu First Nation (QFN) is a Mi'kmaq First Nation which was recognized by the Government of Canada in 2011. The current Chief is Chief Jennifer (Jenny) Brake.
- The QFN is a landless band, rather, its membership is primarily spread over 67 communities in Western and Central Newfoundland. QFN has a central administrative office in Corner Brook and a number of satellite offices.
- As of June 2023 (latest data available), the QFN had approximately 25,000 members approved by Indigenous Services Canada, making it the second-largest First Nation by population in Canada. Over 70,000 applicants have been denied founding membership by Indigenous Services Canada.
- QFN describes the Qalipu Holding Limited Partnership ("Qalipu Holdings") as an arms-length corporate business entity that leads economic and corporate development for the QFN. Its primary mandate is to manage the Band's portfolio of business operations and seek new investment and joint venture opportunities to support the Band's long-term economic growth and sustainability.
- Qalipu Holdings is made up of several Limited Partnerships, including:
  - Qalipu Commercial Properties LP, which manages five real estate properties;
  - Mi'kmaq Commercial Fisheries LP, which manages all fishing-related projects; and
  - Eastern Door Logistics LP, a joint venture company with Sam-Son Distribution to provide inventory management and distribution services.
- During World Hydrogen Summit 2024, the Minister will meet on May 14, 2024, with John Davis, CEO, Qalipu Holdings, who advises that QFN Chief Brake may also join the meeting. See **Annex A** for biographies.

**Analysis:**

- The QFN have publicly indicated that they are associated with a number of wind-hydrogen projects in the province, including through signing a Memorandum of Understanding (MoU) with World Energy GH2 (WEGH2) in 2022. The QFN advises that Qalipu Holdings has also signed agreements Exploits Valley Renewable Energy Corporation [REDACTED]

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

- On April 28, 2023, Jonathan Strickland (Director of Business Development, Qalipu Holdings) attended a trilateral engagement session with Natural Resources Canada and GNL on the Regional Energy Resource Table (RERT) initiative. [REDACTED]

**29.(1)(a)**

29.(1)(a)



- At the World Hydrogen Summit 2023, Qalipu Holdings and DOB Academy signed a partnership agreement to develop first-of-its kind green energy training in Newfoundland and Labrador. DOB Academy is a renewable energy education center based in Delft, Netherlands. The DOB Academy offers offshore energy training in offshore wind; oil and gas; wind farm design; and related subjects.
- World Energy GH2 has also indicated in the Environmental Impact Statement (EIS) for WEGH2's Project Nujio'qonik that training courses will be provided in Stephenville and Corner Brook.



**Action Being Taken:**

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

- For information purposes only.

**Prepared/Approved by:** S. Mathews / M. Hunter / K. Day / S. Wilkins / C. Martin

**Ministerial Approval:**

May 3, 2024

**Annex A**  
**Biography of Qalipu First Nation Chief Jennifer (Jenny) Brake**



Jenny Brake was elected to Council as Western Vice Chief in 2021 and on December 3, 2023 became the Bands Acting Chief. Acting Chief Brake brings with her a diverse background and experience as a welder, artist and community advocate. She strives to foster meaningful relationships throughout the community and promote a strong sense of pride in the people she represents.

Acting Chief Brake enjoys a high level of engagement with the community as a volunteer and advocate for diversity and inclusion. She is the past Vice Chair of the Qalipu Cultural Foundation and the current Chair of Empowering Indigenous Women for Stronger Communities. She also sits on the Provincial Indigenous Women's Steering Committee and supports Flat Bay Chief Joanne Miles as a proxy at the Assembly of First Nations Women's Council.

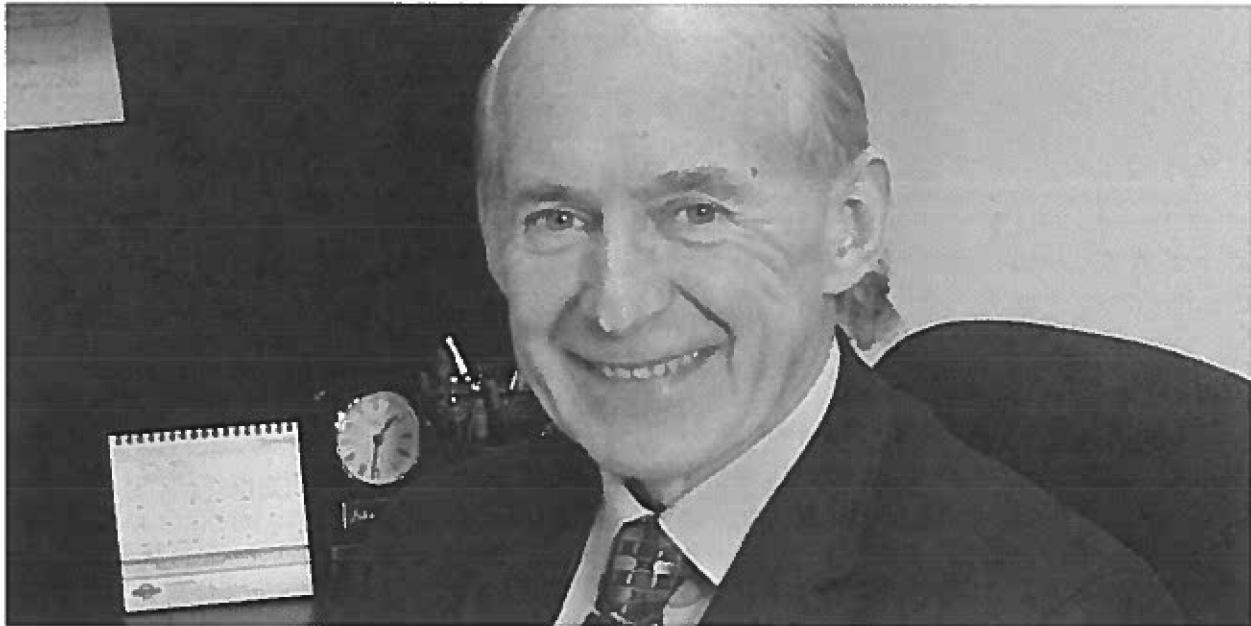
Acting Chief Brake is committed to increasing Mi'kmaw visual representation in our [Qalipu First Nation] communities and uplifting and promoting other artists.

She is well known for her contribution to the Mikwite'km Garden with her centrepiece image "Don't Forget Me, Mukk-aqanta'sualiq".

With the support of her three children, her son Jhoni, and daughters Mya and Ivy, Jenny is committed to the growth of Qalipu First Nation and the preservation of Mi'kmaq values and traditions.

Source: <https://qalipu.ca/about/meet-the-chief-council/>

## Biography of John Davis, CEO Qalipu Holdings



John Davis is from Corner Brook and he proudly embraces his Mi'kmaq heritage and connection to the indigenous community. John brings a variety of experience to the table including thirteen years experience supporting industry, business, and entrepreneurs as the Director of Regional Operations with the provincial department of Tourism, Culture, Industry and Innovation.

John also spent six years working as a senior Regional Planner with the Enterprise Newfoundland and Labrador Corporation, a provincial crown corporation responsible for business development and financing, and served as Director of the Marble Mountain Development Corporation from 1991-2017.

He has worked with several other government agencies at the federal level.

John holds a Bachelor of Arts Degree from Memorial University and has completed professional practitioner programs in Project Management, Memorial University, and Economic Development, University of Waterloo.

Source: <https://qalipu.ca/john-davis-new-general-manager-of-qalipu-development-corporation/>

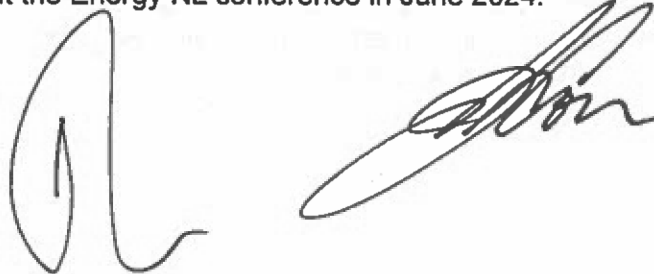
**Backgrounder**  
**Department of Industry, Energy and Technology**

**Title:** Denmark

- The Kingdom of Denmark consists of metropolitan Denmark and two autonomous regions: Greenland and the Faroe Islands. Denmark is in Northern Europe and shares a land border with Germany. It has a total land area of 42,943 kilometers squared (km<sup>2</sup>), consisting of the Jutland peninsula of mainland Europe and the Danish Archipelago. Denmark has a population of 5.9 million people and a population density of 147/km<sup>2</sup>.
  - Greenland is an island in North America, east of the Canadian Arctic Archipelago with a land area of 2,166,086 km<sup>2</sup>, and a population of 56,583 people. It has a population density of 0.028/km<sup>2</sup>, making it the least densely populated region (country or dependency) in the world.
  - The Faroe Islands are in the North Atlantic Ocean, roughly halfway between Norway and Iceland. The islands have a total land area of 1,399 km<sup>2</sup>, a population of 54,000, and a population density of 38.6/km<sup>2</sup>.
- Annex A offers a comparison of Denmark and Greenland to Newfoundland and Labrador.
- In 2022 (latest data available), Denmark's 2022 electricity mix was composed of wind (54.0 per cent), bioenergy (17.9 per cent), coal (12.7 per cent), solar (6.3 per cent), natural gas (2.9 per cent), waste (5.3 per cent) and oil (.09 per cent). Denmark is a net importer of electricity; in 2022, approximately 17 per cent of its electricity was imported. In 2021 (latest data available), Greenland's electricity mix was composed exclusively of hydropower (83.3 per cent) and oil (16.7 per cent). The Faroe Island's electricity mix for 2021 was composed of oil (61.9 per cent), hydropower (26.2 per cent), and wind (11.9 per cent).
- Denmark has set 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 from renewables by 2030. National screening of areas suited for onshore wind turbines, solar PV and Power-to-X (PtX) are proposed to achieve the goal of quadrupling onshore renewable energy by 2030.
- In 2021, the Danish Ministry of Climate, Energy and Utilities released its PtX strategy. The strategy established a target of four to six gigawatts (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.
- At the end of 2021, Denmark had 4.6 GW of onshore wind capacity and 2.3 GW of 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 120 GW and green hydrogen production.
  - In February 2023, Denmark paused its offshore wind development scheme due to possible infringement of European Union (EU) law.
  - Denmark has agreements in place with Belgium and Germany to connect offshore wind networks via subsea cables.

- In 2022, the new coalition government proposed to bring forward the climate neutrality target to 2045 and target a 110 per cent emissions reduction by 2050. The goals have not yet been adopted in the **Climate Act**, but the Act is expected to be revised.
- 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. Progress is underway with bilateral agreements. Denmark and Germany will build a hydrogen pipeline by 2028 and agreed to co-operate on wind offshore and Carbon Capture, Utilization and Storage (CCUS) collaboration projects at the Ostend Summit in May 2023.
- In January 2023, the company 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 desalinator and electrolyzer. The use of a mobile production platform is intended to minimize environmental impacts and decrease costs.
- In February 2023, the European Commission approved Denmark's EUR 170 million scheme on PtX technologies to support renewable hydrogen production. With the scheme, 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 includes 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, but at a reduced rate (undisclosed). The funding support will be paid out to the companies 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 are not available publicly.
- A market assessment conducted by Copenhagen Infrastructure Partners (CIP) Fonden in 2023 reported that the Danish Energy Agency has stated Denmark will be "more than self-sufficient" in green hydrogen by 2030.
- Greenland will be inviting investors to bid on two hydropower projects on the island's south coast, anticipating a combined installed capacity of 750-800 megawatts (MW), with green hydrogen or ammonia production considered as one possible offtake arrangement. The status of this process is not known from publicly available documentation.
- 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.
- IET is currently collaborating with Denmark officials in preparation for their Ministry of Foreign Affairs Trade Council attendance at the Energy NL conference in June 2024.

May 3, 2024

Two handwritten signatures in black ink. The signature on the left is a large, stylized letter 'A' with a vertical line through it. The signature on the right is a more complex, cursive signature that appears to be 'J. B. B.' or similar.

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** The Netherlands

**Issue:** To provide overview of hydrogen opportunities with the Netherlands and Port of Rotterdam.

**Background and Current Status:**

- The Netherlands is in Northwestern Europe and is bordered by Germany and Belgium. The Netherlands has a population of 17.48 million, a land area of approximately 33,500 km<sup>2</sup>, and one of the highest population densities in Europe (522 people/km<sup>2</sup>). The Netherlands has 451 km of coastline and an offshore Exclusive Economic Zone of 58,000 km<sup>2</sup>. See **Annex A** for a comparison of the Netherlands and Newfoundland and Labrador.
- The Netherlands derives approximately 87 per cent of its total energy supply from fossil fuels. Its electricity mix is 37 per cent non-emitting (15 per cent wind, 10 per cent biofuels and waste, nine per cent solar, three per cent nuclear), with 62 per cent coming from fossil fuels (47 per cent natural gas, 14 per cent coal, and one per cent oil).
- The Port of Rotterdam is the largest port in Europe. The port area is approximately 12,500 hectares (ha), including 6,000 ha of industrial sites. The port sees approximately 28,000 seagoing vessels and 90,000 inland vessels annually. Port revenue is approximately €840 million annually, consisting mainly of contract revenue from land lease, and port dues. In 2023, its total cargo throughput was 438.8 million metric tonnes, importing a variety of dry and liquid bulk goods (e.g., iron ore, coal, crude oil, liquid natural gas, and general cargo).
- The first Dutch offshore wind farms were established in 2007-08, and by 2021 it had the fifth highest offshore wind capacity globally at 2,460 MW, producing nearly six terawatt hours per year. As of 2021 (latest data available), the Netherlands had established nearly 3,000 km<sup>2</sup> in offshore wind energy areas. According to the International Renewable Energy Agency (IRENA), at the end of 2022 (latest data available), the Netherlands had installed 6 GW of onshore wind capacity and 3.2 GW of offshore wind capacity.
- The Netherlands seeks to reduce greenhouse gas emissions by 49 per cent by 2030, compared to 1990 levels, and by 95 per cent by 2050. In 2019, these targets were enshrined in legislation, with supporting Dutch climate change plans and the National Climate Agreement facilitating their implementation. The National Climate Agreement focusses on the following sectors: electricity, industry, built environment, traffic and transport, and agriculture. A key objective of the agreement is to ensure that reducing carbon emissions are feasible and affordable and the energy transition limits the financial impact on households, while the financial burden is fairly distributed between citizens and businesses.
- In April 2020, the Netherlands released its hydrogen strategy. It has four pillars: 1) hydrogen market legislation and regulation; 2) cost reduction and scaling up green hydrogen; 3) sustainability of consumption; and 4) supporting policy (e.g., codes/standards on hydrogen sustainability and safety, developing local infrastructure, supporting research and innovation).
- In December 2021, the Government of Canada and the Government of the Netherlands signed a non-binding Hydrogen Memorandum of Understanding (MOU), which outlined plans for increased cooperation between the two countries in developing green hydrogen.

- On May 9, 2023, Newfoundland and Labrador signed a MOU with the Port of Rotterdam to support the establishment of hydrogen supply chains to support Newfoundland and Labrador's export of green hydrogen to the Netherlands, and onward to other parts of Europe.
- On March 19-20, 2024, Jaap Jan Speelman, Deputy Chief of Mission, Netherlands Embassy in Canada, and Wouter Frencken, First Secretary, Trade and Economy, Netherlands Embassy in Canada, visited NL. During their visit, the embassy officials met with Energy NL, econext, World Energy GH2, officials from Global Affairs Canada, ACOA, the Port of Argientia, and North Atlantic Refining Limited. The officials met with Provincial Government officials (IET) and discussed Netherlands and provincial green hydrogen developments.
- During the World Hydrogen Summit 2024, the Minister will meet with Port of Rotterdam officials and Dutch Deputy Prime Minister and Minister of Climate Change and Energy Policy, Rob Jetten, on May 13, and 14, 2024 respectively. A meeting with Dr. Michel Heijdra, Dutch Vice Minister for Climate and Energy may also occur (see **Annex B** for Biographies).

#### **Analysis:**

- The Netherlands has an electrolyzer capacity target of 500 MW by 2025 and 3-4 GW by 2030. The Netherlands does not have a hydrogen import target. In 2022, Dutch consulting firm CEDelft estimated that Dutch hydrogen imports could range from 13 to 33 terawatt hours (TWh) by 2030 given a mandate of 50 per cent industry green hydrogen use by 2030.
- The Netherlands hydrogen strategy acknowledges that hydrogen imports will play a key role in achieving national clean energy and hydrogen targets and highlights the importance of the Port of Rotterdam to the development of European hydrogen markets.
- The Port of Rotterdam is developing the Port as an international hydrogen import, production and transportation hub. The Port notes that hydrogen demand in the Netherlands is anticipated to increase to approximately 14 million metric tonnes (Mt) by 2050, with approximately 50 per cent flowing through Rotterdam. Due to projected European demand, it anticipates the total amount of hydrogen to flow through Rotterdam to be up to 20 Mt by 2050.
- The Port notes that local production of hydrogen will fill some of this demand but import of hydrogen will be essential to position the Port as a Northwestern Europe hydrogen hub. By 2030, the Port anticipates 4 Mt of hydrogen imports.
- In August 2023, Government announced the results of the Crown Lands Call for Bids for Wind Energy Projects. Four developers were awarded with the exclusive rights to pursue their projects through the Crown lands applications process: Toqlukuti'k Wind and Hydrogen (ABO) in the Avalon Isthmus region; EverWind NL Company on the Burin Peninsula; Exploits Valley Renewable Energy Corporation (EVREC) in Central Newfoundland; and World Energy GH2 Inc. in Western Newfoundland. Based on project plans submitted during the Call for Bids, once fully operational, these projects are anticipated to produce over 900,000 metric tonnes of hydrogen annually and over 4.5 million metric tonnes of ammonia annually.
- The province's MOU with the Port of Rotterdam is a high-level agreement to collaborate and share information on green hydrogen issues, opportunities, and potential projects. The MOU focusses on the following specific areas of cooperation:
  - Exploring the commercial opportunity and scale of future green hydrogen import markets via the Port into the Netherlands and other areas of northwestern Europe, to support the development of Newfoundland and Labrador's green hydrogen export market.

- Assessing the potential for international supply chains between the province and the Port for green hydrogen, including identifying and assessing existing barriers (e.g., legal, regulatory gaps, costs) and sharing information that could help mitigate such barriers.
  - Working collaboratively to unlock private sector and federal government investment in joint projects/initiatives related to international green hydrogen supply chains; and,
  - Identifying opportunities to collaborate and share knowledge and best practices in key areas (e.g., port development, infrastructure, and management; engaging stakeholders, post-secondary institutions, and other commercial and governmental parties).
- In the Netherlands, the gas grid operator, Gasunie, intends to have an open access hydrogen grid available by 2030, to connect all major industrial clusters. The grid will consist of existing gas pipelines, constructing new pipelines, and using salt caverns for hydrogen storage. The hydrogen grid will be connected to neighbouring countries of Belgium and Germany, with the Dutch government focussed in particular on the German market. See **Annex C**.
  - The Port of Rotterdam anticipates the hydrogen backbone to support green ammonia imports to start being available in 2024, the ability to import Liquid Organic Hydrogen Carriers (LOHC) to start at the industrial scale in 2025, and a liquid hydrogen terminal to be ready in 2027.
  - In March 2021, Canada and Germany entered the Canada-Germany Energy Partnership. This partnership established a formal collaboration on a broad range of shared energy priorities aimed at facilitating private sector engagement, trade, and investment opportunities.
  - In August 2022, Canada and Germany agreed to establish a transatlantic supply corridor while coordinating policies to attract investments in hydrogen projects. The deal envisaged Canadian exports to Germany starting in 2025.
  - A German proposed hydrogen network will be 5,100 kms long (approximately 3,700 kms of which would be converted from existing natural gas pipelines) and has been simulated to transport a peak demand of 10 gigawatt hours per hour (GWh/h). See **Annex D** for illustrative map. In 2023, Germany reached agreements with neighbouring countries, including Belgium and the Netherlands, to link their respective hydrogen networks.
  - On March 18, 2024, at the "Canada-Germany Hydrogen and Ammonia Producer-Offtaker Conference", Canada and Germany signed a MOU to speed up commercial-scale hydrogen trade between the two countries in a first-of-its-kind bilateral program. The MOU seeks to establish a bilateral program to support hydrogen trade and aims to bolster the two countries efforts to fight climate change and enhance energy security.
  - The Netherlands is planning a delegation to the province to coincide with the Energy NL conference in June 2024. The Dutch embassy has advised that the delegation is expected to include the Vice Minister for Climate Change and representatives from the Port of Rotterdam.

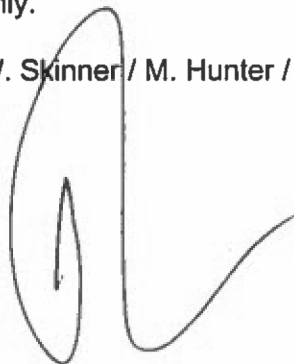
**Action Being Taken:**

- For information purposes only.

**Prepared/Approved by:** W. Skinner / M. Hunter / K. Day / S. Wilkins / C. Martin

**Ministerial Approval:**

May 3, 2024




**Annex A**  
**Comparison of the Netherlands to Newfoundland and Labrador**

	<b>Netherlands</b>	<b>Newfoundland and Labrador</b>
Population	17,480,000	510,500
Land area	33,481 km <sup>2</sup>	358,170.37 km <sup>2</sup>
Population density	522 people/km <sup>2</sup>	1.4 people/km <sup>2</sup>
Marine coastline	451 km	29,000 km
Offshore exclusive economic zone	58,000 km <sup>2</sup>	approx. 1,000,000 km <sup>2</sup>
Permits nuclear power generation	Yes	No
Offshore wind - installed capacity	3,200 MW	0
Onshore wind - installed capacity	6,000 MW	54 MW
Renewable Electricity Mix (does not include nuclear)	34%	Over 90%
Net zero commitment	Yes	Yes

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

**Annex B**  
**Biography for Rob Jetten**  
 Deputy Prime Minister and Minister of Climate Change and Energy Policy



**Education**

- **1999-2005:** Secondary education, Udens College, Uden.
- **2005-2010:** B.A. in public administration, Nijmegen School of Management, Radboud University Nijmegen.
- **2010-2011:** M.A. in public administration (specialising in good governance), Nijmegen School of Management, Radboud University Nijmegen.

**Career**

- 2011-2013: Management trainee, ProRail (Dutch rail network manager).
- 2013-2014: Strategic adviser, ProRail.
- 2014-2017: Regional construction manager, ProRail.
- 23 March 2017 – 10 January 2022: Member of the House of Representatives and D66 parliamentary party leader.
- 10 January 2022: Appointed Minister for Climate and Energy Policy in the fourth Rutte government.
- 8 January 2024 - 12 January 2024: Appointed Minister of Finance and Deputy Prime Minister in the fourth Rutte Government.

**Party political positions and outside activities**

- 2007 - 2008: Policy officer for the D66 parliamentary party in the Senate.
- 2007-2008: Branch chair, Jonge Democraten (Young Democrats), Arnhem-Nijmegen.
- 2008-2009: National chair, Jonge Democraten.
- 2010-2017: Member and leader of the D66 group on Nijmegen municipal council.
- 2011-2016: Member of the Advisory Council of the Dutch National Student Association (ISO).
- 2019 – January 2022: Member of the Committee of Recommendation, Indisch Herinneringscentrum (Indian Herinnering Center).
- 2019 – January 2022  
 Ambassador for All4Small (organisation supporting care and research for newborns).

**Biography for Dr. Michel Heijdra  
Vice Minister for Climate and Energy  
Ministry of Economic Affairs and Climate Policy  
Government of The Netherlands**



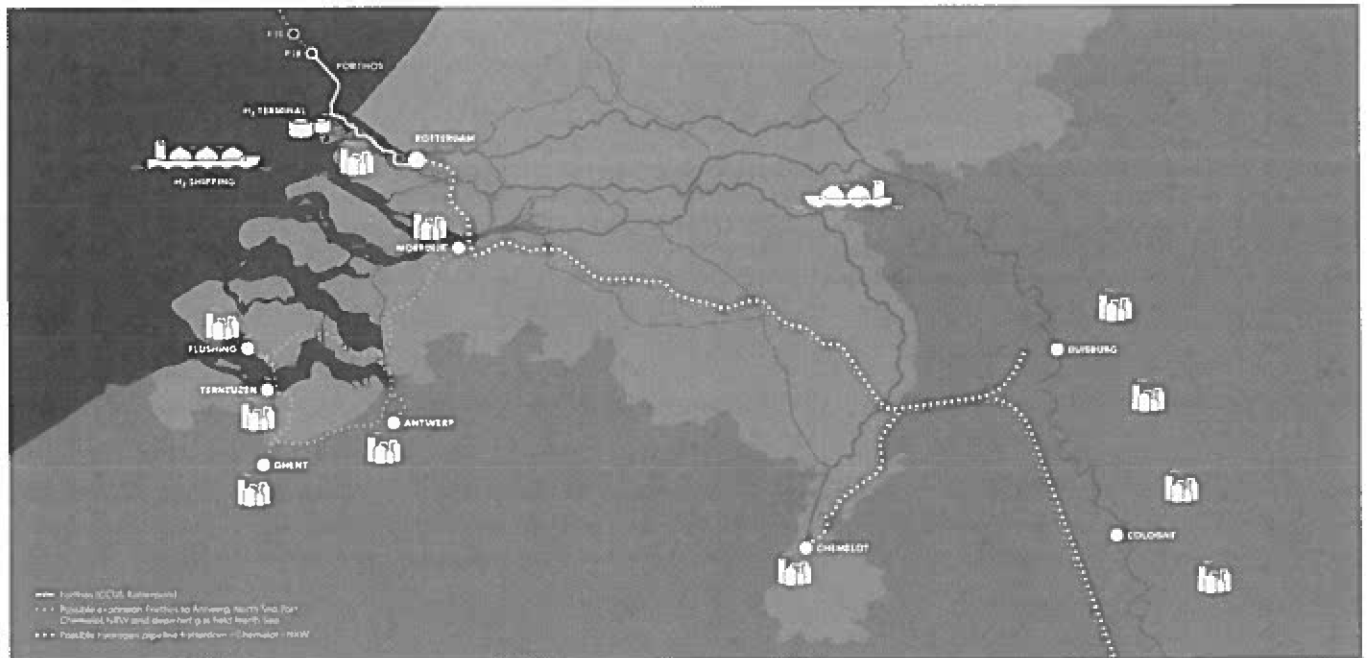
**Dr. M.G. (Michel) Heijdra serves as the Vice Minister for Climate & Energy at the Netherlands' Ministry of Economic Affairs and Climate Policy. Throughout his time in the public sector, Michel has been instrumental in shaping policies and initiatives that promote sustainable development and energy security.**

**At the beginning of 2022 he joined the Ministry of Economic Affairs & Climate from the Treasury, where he worked as deputy Treasurer General and director of foreign financial affairs. In that capacity, he was responsible for the European economic and financial negotiations in the Eurogroup and EcoFin Council including on the European budget. Prior, Michel was the Deputy Director of the Financial Markets Directorate of the Netherlands Ministry of Finance, responsible for the regulation of the financial sector, and Head of Financial Risk Management of Banks at the Dutch Central Bank.**

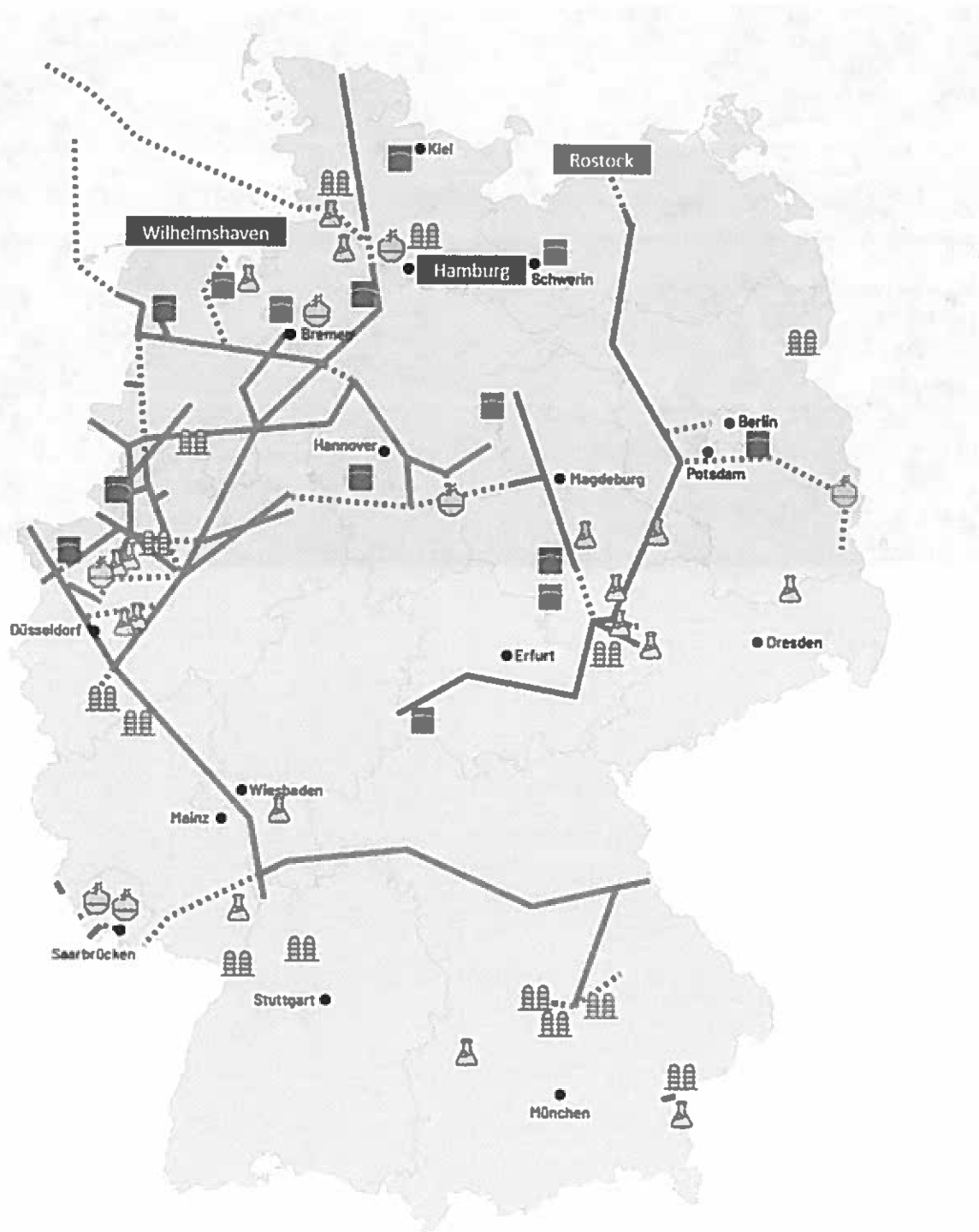
**He started his career as a consultant at McKinsey & Co, after having studied physics and philosophy in Amsterdam, Berlin, Utrecht and Leiden.**

**He holds a PhD degree having written his dissertation on Darwin and the evolution of language.**

## Annex C Port of Rotterdam – Europe Hydrogen Corridor



**Annex D**  
**Illustrative Map of Germany's Planned Hydrogen Distribution Network 2030**



**Information Note**  
**Department of Industry, Energy and Technology**

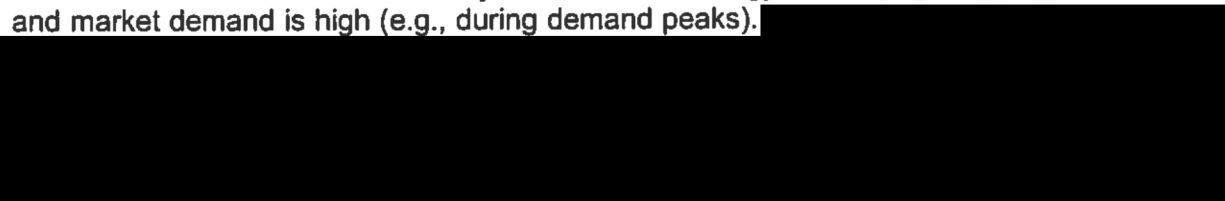
**Title:** Triple Point Resources and Salt Dome Hydrogen Storage

**Issue:** To provide an overview of salt dome hydrogen storage and Triple Point Resources.

**Background and Current Status:**

- Hydrogen can be stored as a compressed or liquefied gas in tanks or compressed and stored in underground salt caverns or in depleted gas wells. Salt caverns are formed in geological salt deposits typically between 500 to 1,500 metres underground. Salt caverns are created by injecting water into the salt to create brine. The brine is removed leaving a void. The cavern's geology results in a tight seal that allows pressurized hydrogen storage.
- Historically, hydrogen storage in salt cavern voids has existed since the 1970s in the US and UK, but as a limited strategic reserve in conjunction with the use of hydrogen in oil and gas refineries and chemical production. There are four existing underground hydrogen storage facilities: three on the Texas coast and one in Teesside, UK.
- In June 2022, the US Department of Energy (DOE) provided a \$504.4 million loan guarantee to finance Advanced Clean Energy Storage located in Delta, Utah. It will consist of a 220 MW alkaline electrolyzer, powered by renewable energy, and have the capacity to store 5,500 metric tonnes of hydrogen in each of two salt caverns. The project is a joint venture between Mitsubishi Power and Magnum Development. Phase one is expected to be online in 2025 and will provide 150,000 MWh of renewable power storage capacity. This is enough capacity to power 150,000 homes for one year.
- A hydrogen storage salt cavern facility is being planned for Saxony-Anhalt, Germany. It will hold up to 4,500 metric tonnes of hydrogen, enough to supply 64,000 two-person households with electricity for a year. Hydrogen will be produced by a 40 MW wind farm and 30 MW electrolysis plant. The hydrogen cavern is expected online by 2026. The project is intended as a pilot and received €34 million support from the German government in 2021.
- During the World Hydrogen Summit 2024, the Minister will meet with representatives from Triple Point Resources.

**Analysis:**

- The International Energy Agency (IEA) (2019) concludes that large and long-term storage solutions are needed to address the intermittency of renewable energy supply, seasonality of heating needs, and achieve economies of scale for hydrogen storage. The IEA notes that geological storage is the best option to meet these criteria.
  - Underground hydrogen storage in salt caverns enables hydrogen produced with renewable electricity, at times of oversupply relative to market demand, to be injected into a salt cavern for later withdrawal when availability of renewable energy is low (e.g., low winds, at night) and market demand is high (e.g., during demand peaks).
- 

- There are two proposed salt projects in development near Stephenville, NL:
  - Great Atlantic Salt Project being developed by Atlas Salt – 88.1 million metric tonnes and projected mine life of 34 years to produce road salt for the eastern North American market. CBC News (October 26, 2023) reported the project will cost approximately \$500 million and employ 300-600 persons during construction and 170 during operations; and,
  - Fischell's Brook Salt Dome, spun out by Atlas Salt in 2022 as Triple Point Resources Ltd. – The company plans to remove the salt (no use determined) and use the void to store hydrogen. Triple Point indicates a 50-year project lifespan employing 800 persons during construction and 70 persons during operations. The capital construction cost is approximately US \$380 million based on data in a company presentation (August 2023).
- On June 8, 2023, Triple Point announced confirmation of the potential of its dome to store approximately 180,000 metric tonnes of hydrogen. Triple Point also notes the potential of underground storage for compressed air energy storage (e.g., compression powered by renewable electricity, then the air released to generate electricity when there is demand). Triple Point has received an exploration permit under the **Mineral Act** from IET and applied for a Licence to Occupy under the **Lands Act** from Fisheries, Forestry and Agriculture.

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



- NRCan and the Standards Council of Canada (SCC), through a Hydrogen Codes and Standards Working Group (H2CSWG), are conducting a hydrogen codes and standards gap analysis. IET and DGSNL sit on the H2CSWG. [REDACTED]
- On December 12, 2023, the Canadian Standards Association (CSA), which is represented on the H2CSWG, advised IET that in September 2023, CSA published a hydrogen supplement to its standard for the underground storage of hydrocarbons. This supplement introduced the first set of requirements for storing hydrogen or hydrogen blends in salt caverns and reservoirs. The standard has been adopted through regulation by jurisdictions in Canada that currently regulate underground storage.

29.(1)(a),  
34.(1)(a)(i)

**Action Being Taken:**

- For information purposes only.

**Prepared/Approved by:** M. Hunter / A. Hewitt / S. Wilkins / C. Martin  
**Ministerial Approval:**

May 3, 2024

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Netherlands Energy Delegation Visit June 3-5, 2024

**Issue:** To inform of the upcoming Netherlands Energy Delegation Visit from June 3-5, 2024.

**Background and Current Status:**

- In April 2020, the Netherlands released its hydrogen strategy. The strategy has four pillars: (1) legislation and regulation of the future hydrogen market; (2) cost reduction and scaling up green hydrogen; (3) sustainability of final consumption; and, (4) supporting and flanking policy.
- In October 2021, the Governments of Canada and the Netherlands signed a Memorandum of Understanding (MOU) on cooperation in the field of hydrogen energy.
- On May 9, 2023, during the World Hydrogen Summit (WHS) in Rotterdam, Netherlands, the Government of Newfoundland and Labrador (GNL) signed an MOU with the Port of Rotterdam (PoR). This partnership encourages the establishment of hydrogen supply chains to support Newfoundland and Labrador's export of green hydrogen to the Netherlands, and onward to other parts of Europe.
- The Netherlands is actively supporting the hydrogen industry and believes hydrogen will play an essential role in meeting global energy needs in the context of energy security and the low/no carbon energy transition.

**Analysis:**

- On March 19-20, 2024, the Department of Industry, Energy and Technology (IET) welcomed a visit from the Embassy of the Netherlands in Ottawa, consisting of Mr. Jaap Jan Speelman, Deputy Ambassador and Head of Economic Affairs and Mr. Wouter Frencken, Senior Policy Officer, Economic Affairs.
- The purpose of the visit was to learn about renewable energy projects in the province; discuss the latest hydrogen developments in the Netherlands; and further strengthen cooperation between the province and Netherlands. The visit was in preparation for a follow-up visit to NL with a larger delegation to attend the Energy NL Conference from June 3-5, 2024.
- The June 2024 delegation will be led by the Dutch Vice-Minister for Climate and Energy, Dr. Michel Heijdra, and accompanied by the Dutch Ambassador to Canada, Ines Coppoolse. Dr. Heijdra is a speaker at the Energy NL Conference for a session called: "Regulatory (Un)Certainty: Overcoming Challenges to be Competitive." Mr. Frencken will attend as well and is the lead contact for the delegation. See **Annex A** for biographies.
- The Embassy has advised that a strong Dutch delegation is expected to attend the Energy NL Conference, including representatives from the Port of Rotterdam (PoR). See **Annex B** for list of potential delegates. Participating delegates will be confirmed in the days to come.
- IET will work with Netherlands officials on the June incoming delegation to facilitate additional meetings, sessions, and site-visits that could bookend the Energy NL Conference events.

- Newfoundland and Labrador is of global interest for its potential as a renewable energy hub to meet world demand for green energy. The Governments of Newfoundland and Labrador and the Netherlands are forging strong ties to foster successful renewable energy projects.
- The delegation visit provides an opportunity to inform the Embassy of the Netherlands of Newfoundland and Labrador's priorities for the renewable energy sector and showcase the strategic advantages the province holds in green hydrogen/ammonia production.
- This visit will also provide valuable opportunities for Netherlands officials to make direct connections with the four successful wind-hydrogen proponents as well as other stakeholders in the wind-hydrogen industry in the province.
- The June 2024 Netherlands delegation draft agenda includes meetings/sessions with the departments of IET and Environment and Climate Change (ECC), the Atlantic Canada Opportunities Agency (ACOA) and Natural Resources Canada (NRCan), wind-hydrogen developers, and Energy NL. See **Annex C** for a full draft agenda.

**Action Being Taken:**

- IET is continuing to work with GNL departments, industry stakeholders, and Netherlands officials to finalize details of the upcoming visit.

**Prepared/Approved by:** W. Skinner / K. Day / S. Wilkins / C. Martin  
**Ministerial Approval**

May 23, 2024

A handwritten signature in black ink, consisting of a large, stylized letter 'N' followed by a smaller, cursive flourish.

**Annex A  
Biographies of Delegates**



**Dr. Michel Heijdra, Vice-Minister for Climate & Energy  
Ministry of Economic Affairs and Climate Policy,  
Government of The Netherlands**

Dr. Michel Heijdra serves as the Vice Minister for Climate & Energy at the Netherlands' Ministry of Economic Affairs and Climate Policy. Throughout his time in the public sector, Michel has been instrumental in shaping policies and initiatives that promote sustainable development and energy security. At the beginning of 2022 he joined the Ministry of Economic Affairs & Climate from the Treasury, where he worked as deputy Treasurer General and director of foreign financial affairs. In that role, he handled the European economic and financial negotiations in the Eurogroup and EcoFin Council including on the European budget. Prior, Michel was the Deputy Director of the Financial Markets Directorate of the Netherlands Ministry of Finance, responsible for the regulation of the financial sector, and Head of Financial Risk Management of Banks at the Dutch Central Bank. He started his career as a consultant at McKinsey & Co, after having studied physics and philosophy in Amsterdam, Berlin, Utrecht and Leiden. He holds a PhD degree having written his dissertation on Darwin and the evolution of language.

**Dutch Ambassador of the Netherlands to Canada**

**Name:** Ines Coppoolse



**Education**

1981 Pre-university education  
1992 University of Amsterdam: International Relations

**Work Experience**

- 1992–2001 Ministry of Foreign Affairs, The Hague / positions within the MFA both in London and the Hague (Sub-Saharan Africa Department & Consular Affairs and Asylum Department)
- 2001–2004 Head, Recruitment and Selection Section, Human Resources Department
- 2005–2009 Deputy Permanent Representative, Permanent Mission to the UN in Vienna
- 2009-2012 Deputy Director, Asia and Oceania Department
- 2012-2015 Director, Human Resources Department
- 2015-2020 Ambassador to Sweden
- 2020 Present Ambassador to Canada

**Senior Policy Officer, Economic Affairs Embassy of the Netherlands in Ottawa/Canada**



**Name:** Frencken, Wouter 40.(1)

**Date of birth:** [REDACTED]

**Education:**

2011-2018 Master European Law, Leiden University

2019 Diplomatic course, MFA the Hague

**Working Experience at MFA:**

- 2023 – present First Secretary Trade and Economy, Embassy of the Netherlands in Ottawa/Canada
- 2021 – 2023 Second Secretary Political Affairs, Embassy of the Netherlands in Brussels/Belgium
- 2019 – 2021 Policy officer for Japan and South-Korea at the Dutch Ministry of Foreign Affairs in The Hague
- 2018 – 2019 Local economic employee at the Consulate-General of the Netherlands in Guangzhou/China

## **Annex B**

### **Netherlands Delegates / Companies**

#### **Tata Steel**

Tata Steel Germany GmbH produces steel products. The Company markets their products in construction, automobile, transportation, shipbuilding, railway construction, mechanical engineering, and packaging industries. Tata Steel Germany serves customers worldwide.

#### **Essent**

Essent N.V. is a Dutch energy company based in Hertogenbosch, Netherlands. It is a subsidiary of E.ON. It is a public limited liability corporation. Essent is the largest energy company in the country. Belgium is their second home market. Essent provides customers with gas, electricity, heat and energy services. Essent (including its predecessors) has over 90 years of experience with generating, trading, transmitting and supplying electricity. Essent has 2.3 million customers for electricity and about 2 million for gas.

#### **Vattenfall AB**

Vattenfall AB operates as a power generation company. The Company generates electricity and heat through solar, hydro, and wind power plants. Vattenfall serves customers in Europe.

#### **SkyNRG BV**

SkyNRG supplies fuel products to aviation industry. The Company offers services to create and accelerate development of a market for sustainable jet fuel. SkyNRG serves customers worldwide.

#### **OCI Global**

OCI N.V. operates as a producer and distributor of natural gas-based fertilizers and industrial chemicals. The Company produces nitrogen fertilizers, methanol, and other natural gas based chemical products. OCI serves agricultural and industrial clients worldwide.

#### **Gasunie**

Nederlandse Gasunie operates as a gas infrastructure company. The Company manages and maintains gas, hydrogen, and heat energy transportation network. Nederlandse Gasunie serves clients in the Netherlands and Germany.

#### **Port of Rotterdam**

The **Port of Rotterdam** is the largest seaport in Europe, and the world's largest seaport outside of East Asia, found in and near the city of Rotterdam, in the province of South Holland in the Netherlands. From 1962 until 2004, it was the world's busiest port by annual cargo tonnage. It was overtaken first in 2004 by the port of Singapore, and since then by Shanghai and other very large Chinese seaports. In 2020, Rotterdam was the world's tenth-largest container port in terms of twenty-foot equivalent units (TEU) handled. In 2017, Rotterdam was also the world's tenth-largest cargo port in terms of annual cargo tonnage.

#### **Worley**

Worley Limited provides consulting and advisory services. The Company offers project and asset services in the energy, chemicals, and resources sectors. Worley serves customers worldwide.

### **Vopak**

Vopak is a Dutch independent multinational company that stores and handles products ranging from chemicals, oil, gases and LNG to biofuels and vegoils. Its purpose is to "Store vital products with care", which derives from the products Vopak stores and how they are being stored. The company was created by the merger of Van Ommeren and Pakhoed in 1999. In 2002, the distribution of oil and natural gas related products was split off ; a new company Univar was created for that purpose. The head office is located in Rotterdam.

### **Evos**

Evos offers tank storage services and specializes in storage and handling of liquid chemicals, gases, and oil products. Vopak operates worldwide.

### **Koole**

Koole offers large storage facilities at strategic locations across the Netherlands, France, the United Kingdom, Spain, Portugal, Poland, and Italy. With a total capacity of over 5,387,000 cubic metres (CBM), their facilities handle a highly diversified base of liquid bulk products and offer integrated and innovative service solutions.

**Annex C**  
**Netherlands Incoming Hydrogen Delegation – June 3-5, 2024**  
**DRAFT AGENDA**

Day 1	Time	Program	Comments
June 3 <sup>rd</sup>	21:15	Arrival delegation at St. John's airport	Delegation is arranging their own transportation (taxis)
Day 2	Time	Program	Comments
June 4 <sup>th</sup>	08:25	Register Energy NL conference	
	08:30	Opening conference	
	10:30	Vice-Minister Speaker Session 2 Regulatory (Un)Certainty: Overcoming Challenges to be Competitive	
	12:00	Lunch Meeting	Bilateral meeting with Minister of ECC and ECC officials (Location to be confirmed)
	14:30	Alternate time for bilateral meetings with wind-hydrogen developers	
	16:00	Netherlands Day at Energy NL conference	Roundtable event with developers and other energy stakeholders
	17:30 – 19:00	Dinner Meeting	Bilateral meeting with IET officials (Note: Minister of IET is unable to attend) (Location to be confirmed)
Day 3	Time	Program	Comments
June 5 <sup>th</sup>	08:30	Breakfast Meeting	Bilateral meeting with NRCan (Location to be confirmed)
	09:30	Bilateral meetings / Matchmaking with wind-hydrogen developers	(Location to be confirmed)
	12:30	Travel to airport	
	14:00	Flight to Halifax	

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Denmark's Energy Delegation Visit June 4-7, 2024

**Issue:** To inform on Denmark's Energy Delegation visit from July 4-7, 2024.

**Background and Current Status:**

- In 2021, the Danish Ministry of Climate, Energy and Utilities released its Power to- X (PtX)-strategy. The strategy established a target of four to six gigawatts (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.
- 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.
- A market assessment conducted by Copenhagen Infrastructure Partners (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 import need of these countries, with an increasing import potential over time.
- Denmark is actively supporting the hydrogen industry and believes hydrogen will play an essential role in meeting global energy needs in the context of energy security and the low/no carbon energy transition.

**Analysis:**

- The Ministry of Foreign Affairs of Denmark, in partnership with two Danish interest organizations (Danish Industry, Energy Export Denmark), is bringing a business delegation to St. John's, Newfoundland & Labrador from June 4 to 7, 2024.
- Denmark is home to some of the world's top innovators in wind energy and aims to leverage these capacities to become a global green hydrogen frontrunner. Meanwhile, Newfoundland & Labrador has great ambitions to develop its outstanding wind resource to become a major hydrogen exporter to European markets. This makes Denmark and Danish companies a natural partner for the province.
- The delegation includes eight Danish energy companies spanning the full wind and hydrogen value chains, along with Copenhagen Infrastructure Partners (See Annex A). Over the course of three days, the group aims to meet with key government officials, build partnerships aimed at supporting the development of Newfoundland and Labrador's clean energy supply chain, and engage with the developers of up-and-coming wind-to-hydrogen projects in the area. The group will also take part in the Energy NL conference in St. John's on Wednesday, June 5th.

- In addition to the companies, the following individuals will be travelling with the group:
  - Morten Siem Lyngge, Head of Energy North America, Ministry of Foreign Affairs of Denmark (see Annex B for a biography)
  - Jakob Louis Pedersen, Senior Commercial Advisor – Offshore Wind, Ministry of Foreign Affairs of Denmark
  - Kelly Tai, Commercial Advisor – Energy Transition, Ministry of Foreign Affairs of Denmark
  - Henrik Skou, Senior Advisor, Danish Industry
  - Emilie Mørup, Consultant, Global Market Development, Danish Industry
  - Dorota Knudsen, Project Manager, Danish Energy Export
- Newfoundland and Labrador is of global interest for its potential as a renewable energy hub to meet world demand for green energy. The Governments of Newfoundland and Labrador and Denmark are forging strong ties to foster successful renewable energy projects.
- The delegation visit provides an opportunity to inform Denmark of Newfoundland and Labrador's priorities for the renewable energy sector and highlight the strategic advantages the province holds in green hydrogen/ammonia production.
- The visit will also provide valuable opportunities for Danish companies to make direct connections with stakeholders in wind and hydrogen industry in the province and likewise for the province.
- The June 2024 Denmark delegation draft agenda includes: a series of meetings with wind-hydrogen developers, the Port of Argentia and provincial government officials; and a networking reception. See **Annex C** for a full draft agenda.

**Action Being Taken:**

- IET is continuing to work with GNL departments and Denmark officials to complete details of the upcoming visit.

**Prepared/Approved by:** W. Skinner / K. Day / S. Wilkins / C. Martin  
**Ministerial Approval**

May 30, 2024

A large, stylized handwritten signature in black ink, appearing to be a cursive 'A' or similar character.

## Annex A Danish Energy Companies

### ***Copenhagen Infrastructure Partners***

Established in 2012, CIP is the world's largest dedicated fund manager within greenfield renewable energy investments with over EUR 30 billion in assets under management.

### ***CS Electric***

CS Electric is a leading Danish service company that develops, designs, serves and optimizes sustainable technology solutions. The company assists the energy sector with sustainable solutions within electrical and automatic technology.

### ***Danfoss***

A global leader in energy efficiency, Danfoss offers a range of solutions in the Power-to-X space including pumps, pressure and temperature sensors, motor drives, and power converters.

### ***DEIF***

DEIF is a global supplier of power control solutions for decentralized power generation on land and sea. The company's products support design control solutions that handle any power source, fuel cells, solar PV & storage, as well as hybrid power plants.

### ***Export and Investment Fund of Denmark***

EIFO is Denmark's national promotional bank and export credit agency. As a state owned financial institution, EIFO acts as an enabler for new projects throughout most of the globe.

### ***FORCE Technology***

FORCE Technology is a leading technology consultancy company offering services and products to the energy industry. In the wind industry, FORCE works with all the leading OEMs and developers and has 30 years of experience in the offshore wind business.

### ***Grundfos***

Grundfos is the world's largest pump manufacturer and a trendsetter in water technology. The company offers water treatment solutions covering a range of raw water conditions and electrolyzer technologies.

### ***PolyTech***

PolyTech is a wind energy company specialized in the development, design, and production of systems dedicated to improving wind turbine performance.

### ***Stiesdal***

Stiesdal is a technology company developing and commercializing technologies with a high impact on climate change mitigation. The company has activities in hydrogen production, floating offshore wind, CCUS paired with green fuel production, and energy storage.



MINISTRY OF FOREIGN AFFAIRS  
OF DENMARK

## **Annex B Bios**



The Consulate General of Denmark in Houston, Texas, first opened its doors back in 2018 with a particular trade focus on energy, water, biogas, and life science. Morten Siem Lynge became the second Consul General in Houston when he was appointed Head of Mission in September 2020. As Consul General, Morten promotes Danish interests in Texas and holds the consular responsibility for Alabama, Arkansas, Arizona, Louisiana, Mississippi, New Mexico, and Oklahoma.

Based in Houston, he also leads the Trade Council's efforts in energy in North America. The North American Energy team comprises 20 dedicated wind, biogas, and energy transition specialists who share knowledge and promote trade out of Danish representations in Houston, Silicon Valley, Chicago, New York, and Washington, D.C.

Before being appointed Consul General, Morten worked as a Special Advisor at the Danish Ministry of Finance, as a Consultant at Boston Consulting Group in Copenhagen, and as Director at Monitor Deloitte in the Middle East. Within the Danish Foreign Service, Morten has been Consul General and Head of Mission in Toronto, Canada, and Dubai, United Arab Emirates.

**Annex C  
Agenda  
Danish Incoming Energy Delegation**

**June 4-7, 2024**

**Tuesday, June 4, 2024**

**individually**

**Flight XXX-YYT (St. John's International Airport)**

**Arrival in St. John's / Transfer to hotel / Check in  
Alt Hotel – St. John's, NL**

**Wednesday, June 5, 2024**

**8:00 - 8:20 am**

**Welcome by Executive Director of Renewable Energy with the  
Department of Industry, Energy, and Technology  
Overview on Hydrogen Industry in Newfoundland and Labrador**

**Location: Wishingwell Room at the Conference Centre for Energy NL**

***Note: Business Meetings during the day will also take place in this room.***

**8:30 am**

**Energy NL Conference**

**9:00 – 10:00 am**

**Meeting with Successful Wind-Hydrogen Crown Lands Bidders:**

- **ABO Energy**

**Location: Wishingwell Room at the Conference Centre for Energy NL**

**10:00 – 11:00 am**

**Meeting with Successful Wind-Hydrogen Crown Lands Bidders:**

- **Exploits Valley Renewable Energy Corporation (EVERC)**

**Location: Wishingwell Room at the Conference Centre for Energy NL**

**3:00 – 4:00 pm**

**Danish Session**

**Location: Pippy 1&2 Room at the Conference Centre for Energy NL**

**Evening**

**Private Time (optional)**

**Christians Pub: [Christian's Pub \(christianspub.com\)](http://christianspub.com)**

**Screech-in:**

**For groups of 20 or more, please contact Christian's directly at either [screech-in@christianspub.com](mailto:screech-in@christianspub.com) or [709-753-9100](tel:709-753-9100) to make special arrangements.**

Thursday, June 6, 2024

- 10:00 am** Depart hotel for NARL Logistics (TBC)
- 11:30 am** Site Tour of the North Atlantic Refining Limited (NARL)  
Delegates will be given a tour of the facilities via buses  
Exchange and questions
- 12:30 pm** Depart to the Port of Argentia with lunch boxes
- 02:00 pm** **Meeting at the Port of Argentia**  
Port of Argentia has partnered with Pattern Energy in creating Argentia Renewables, a proposed multi-phase wind energy-to-green fuels production facility to be constructed on Port lands. The project is slated to begin with a 300-Megawatt wind energy facility powering a green ammonia project (including hydrogen electrolyzers) for export to global markets.
- 03:30 pm** Depart for St. John's and return to hotel
- 06:30 pm** **Newfoundland and Labrador – Denmark Networking Reception**  
**Denmark delegation, Minister Parsons, Federal representatives, energy companies, and other industry stakeholders. (60 max)**
- Location:** The Rooms Café  
The Rooms Café has a maximum standing capacity (reception) of 100 people.
- Note: Invitations will be sent on Wednesday, May 29, 2024.*
- Additional Notes:** K. Tai has the bus transportation arranged for the Thursday meetings and IET will accompany the delegation on the bus.

Friday, June 7, 2024

- 08:30 am** **Breakfast Meeting/Provincial Overview with Senior Level Executives:**  
**Department of Industry, Energy and Technology (IET)**  
**Environment and Climate Change (ECC)**  
**Intergovernmental Affairs Secretariat (IGAS)**  
**Location:** Indigo Room, ALT Hotel
- 11:00 am – 12:00** **Meeting with Successful Wind-Hydrogen Crown Lands Bidders:**
- **World Energy GH2 Inc. at St. John's Office**  
**Contact:** Cathy Dornan E: [cdornan@worldenergygh2.com](mailto:cdornan@worldenergygh2.com)  
**Location:** St. John's Office  
235 Water Street, Suite 600  
St. John's, NL A1C 1B6  
T: [REDACTED] — 40.(1)
- 12:00 noon** individually departing flights to Ontario and Denmark

**Annex C**  
**List of Delegates from Denmark**

1. Helge Vandel Jensen, Business Development Director, Danfoss
2. Ray Eyestone, Business Development Manager, Danfoss
3. Jean S. Felber, Sales Director, Wind & Renewables US, DEIF
4. Søren Dahl Christensen, Global Business Development Manager, DEIF
5. Christian Dahl Winthe, Chief Energy Economist, EIFO
6. Stephan Schmidt, VP Sales - Industry OEM/KA, Country Director Canada, Grundfos
7. Shawn Chong, VP Sales - Industry Distribution North America, Grundfos
8. Jordan Farber, Strategic Market Manager, Grundfos
9. Thomas Nielsen, Aftermarket Sales Manager, Americas , Polytech
10. Bo Birkemose, COO, Stiesdal Storage Technology
11. Lars Vesth, Executive Vice President, FORCE Technology
12. Sophus Rossen, Vice President, Copenhagen Infrastructure Partners
13. Ronnie Bonnar, Advisor, Copenhagen Infrastructure Partners
14. Dorota Knudsen, Project Manager, Danish Energy Export
15. Henrik Skou, Senior Adviser, Hydrogen and Green Fuels, Danish Industry
16. Emilie Mørup, Global Market Development Adviser, Danish Industry
17. Morten Siem Lyngge, Consul General & Head of Energy, Ministry of Foreign Affairs of Denmark
18. Kelly Tai, Commercial Advisor, Ministry of Foreign Affairs of Denmark
19. Christian Bendrup Faurholt, Energy Political Advisor, Ministry of Foreign Affairs of Denmark
20. Jakob Louis Pedersen, Senior Commercial Advisor, Ministry of Foreign Affairs of Denmark

## **Annex D**

### **Draft Guest List for Reception**

Guests listed are in addition to the Danish delegation.

1. Baktash Nasiri, Senior Business Developer, Hydrogen, ABO Wind
2. Rasmus Jakobsen, Head of Commercial Activities – North Atlantic and Canada, Blue Water Shipping St. John's
3. Paul Burton, Refinery Manager, Braya
4. Patricia Hearn, Deputy Minister, Cabinet Secretariat
5. Scott Tessier, CEO, C-NLOPB
6. Elizabeth Kidd, President, College of the North Atlantic
7. Kieran Hanley, CEO, econext
8. Judy Sparkes-Giannou, Chair, Employer's Council of NL
9. Charlene Johnson, CEO, Energy NL
10. Matthew Borys, Vice President, Corporate Development, EverWind
11. James Colter Eadie, CEO, EVREC
12. The Honourable John Abbott, Minister of Transportation and Infrastructure
13. The Honourable Gerry Byrne, Minister of Immigration, Population Growth and Skills
14. The Honourable Siobhan Coady, Deputy Premier and Minister of Finance
15. The Honourable Steve Crocker, Minister of Tourism, Culture, Arts and Recreation
16. The Honourable Lisa Dempster, Minister of Indigenous Affairs and Reconciliation; Minister of Labrador Affairs
17. The Honourable Andrew Furey, Premier of Newfoundland and Labrador
18. The Honourable John Haggie, Minister of Municipal and Provincial Affairs
19. The Honourable John Hogan, Minister of Justice and Public Safety
20. The Honourable, Elvis Loveless, Minister of Fisheries, Forestry and Agriculture
21. The Honourable Krista Lynn Howell, Minister of Education
22. The Honourable Fred Hutton, Minister of Housing
23. The Honourable Tom Osborne, Minister of Health and Community Services
24. The Honourable Pam Parsons, Minister of Women and Gender Equality
25. The Honourable Paul Pike, Minister of Children, Seniors and Social Development
26. The Honourable Sarah Stoodley, Minister of Digital Government and ServiceNL
27. The Honourable Andrew Parsons, Minister of Industry, Energy and Technology
28. The Honourable Bernard Davis, Minister of Environment and Climate Change
29. John Cowan, Deputy Minister, Department of Industry, Energy and Technology
30. Craig Martin, ADM for Energy, Department of Industry, Energy and Technology
31. Nena Abundo, Executive Director for Oil and Gas, Department of Industry, Energy and Technology
32. Michael King, Executive Assistant to the Minister, Department of Industry, Energy and Technology
33. Simon Pokue, Grand Chief, Innu Nation
34. Doriann Macmillan, ADM, Intergovernmental Affairs Secretariat
35. Brad Benoit, Chief, Miawpukek First Nation
36. Neil Bose, President, Memorial University
37. Jamie Beach, CEO, NARL Logistics
38. Ted Lomond, CEO, NARL
39. Jessica McCormick, President, NL Federation of Labour

40. Jennifer Williams, CEO, NL Hydro
41. Johannes Lampe, President, Nunatsiavut Government
42. Todd Russell, President, NunatuKavut Community Council
43. Greg Connors, Partner, McInnes Cooper
44. Frank Davis, Managing Director – Green Fuels, Pattern
45. Shanna O’Keefe, Executive Assistant, Pennecon
46. David Mitchell, CEO, Pennecon
47. Scott Penney, CEO, Port of Argentia
48. Dan Villeneuve, Consultant, Port of Belledune,
49. Sabine Wilkie, Project Manager and Structural Engineer, COWI
50. Jenny Brake, Interim Chief, Qalipu First Nation
51. Simon Jarding, Honorary Consul of Denmark in St. John’s, Royal Greenland
52. Jette Jarding, Assisting Consular Officer in St. John’s, Royal Greenland
53. Anna Cook, Second Vice Chair, St. John’s Board of Trade
54. AnnMarie Boudrea, CEO, St. John’s Board of Trade
55. Darin King, Executive Director, TradesNL
56. Brandon MacDonald, Vice President of Strategy and Growth, Pennecon
57. Bob McCarthy, Vice President, Development, Port of St. John’s
58. Cathy Dornan, Public Affairs Specialist, World Energy GH2

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Newfoundland and Labrador Hydro Q1 2024 Financial Results

**Issue:** To summarize Newfoundland and Labrador Hydro's (NLH) First Quarter (Q1) 2024 Financial Statements and Management's Discussion and Analysis (MD&A)

**Background and Current Status:**

- The Q1 2024 report includes results for the NLH group of companies, subsidiaries and investments in joint arrangements. The following table provides key financial highlights:

<b>Q1 (three months ended March 31, 2024) Nalcor Consolidated Highlights</b>		
<b>For the period from Jan 1 - Mar 31</b>	<b>2024</b>	<b>2023</b>
Revenue (million \$)	429	582
<b>Profit (million \$)</b>	<b>294</b>	<b>159</b>
Capital Expenditures (million \$)	47	89
Electricity Sales (GWh)		
Regulated	2,502	2,513
Export Sales - Hydro Quebec- Churchill Falls	10,137	9,893
Export - Emera NS Block	538	331
Export - Other Markets	538	457
Other Domestic	536	523
Oil Sales Volume (thousands of bbls)	495	607
Realized Oil Price (CAD/bbl)	107	109
Realized Electricity Price - Other export Markets (CAD/MWh)	55	41
<b>Assets</b>	<b>March 31, 2024</b>	<b>December 31, 2023</b>
Total Assets (million\$)	20,866	20,795
Total Liabilities (million \$)	14,230	14,183
Total Equity (million \$)	7,753	7,458
Debt to Capital	60%	61%

- In Q1 2024 Nalcor recorded a \$294 million profit compared to \$159 million for the same period in 2023 driven by commissioning of the Lower Churchill Project (LCP) in Q2 2023 and by an increase in electricity export price and volumes.
- Q1 capital expenditures were \$47 million, down \$42 million from the same 2023 period. The decrease for the quarter was primarily due to substantial completion of construction of the LCP assets. NLH's 2024 Capital Budget Application (CBA) of \$96.5 million was fully approved by the PUB.
- In Q1, total operating costs for the three months ended March 31, 2024 were \$76 million, an increase of \$9 million compared to the same period in 2023. The increase for the quarter is primarily due to Labrador Island Link (LIL) commissioning resulting in certain LIL costs no longer being capitalized.
- Assets totaled \$20.9 billion as of March 31, 2024, up from \$20.8 billion as of December 31, 2023. The majority of assets as of March 31, 2024 include property, plant and equipment of \$17.9 billion (December 31, 2023 - \$17.9 billion). Total liabilities and

equity of \$14.2 billion and \$7.8 billion, respectively, as of March 31, 2024, were comparable to \$14.2 billion and \$7.5 billion as of December 31, 2023.

- Depreciation, depletion, amortization and impairment charges for the first quarter was \$98 million, an increase of \$42 million from the same period in 2023. The increase was due to commencement of depreciation of the LCP assets which began in Q2 2023 partially offset by a decrease in oil and gas depletion.
- On March 1, 2024 NLH implemented its PUB approved non-firm rate on the Labrador Interconnected System (LIS), enabling NLH to serve LIS customers without additional system investments. NLH must file an application for new non-firm rates by June 1, 2026. BlockLab Corporation has filed an appeal of the PUB's decision.
- The final software version for the LIL passed testing in March 2024 but installation and commissioning of the software version and a 900 MW pole overload test will occur in Fall 2024. The Muskrat Falls plant is performing well with a 0.08% unavailability compared to a Canadian average of 5.7%. On April 19, 2024 a fire damaged inventory and capital spares related to LCP assets. The extent of the impact is currently under investigation.
- In March 2024, the company entered into a new short-term energy purchase agreement where Muskrat Falls and Churchill Falls will be selling their respective banked energy to Hydro-Quebec. An estimated 2 TWh of banked energy is expected to be sold in 2024.
- NLH notes it is continuing to support Phase III of the review of the Province's current offshore oil and gas interests (announced by Government on January 9, 2024), which are held by Oil and Gas. NLH's MD&A states "Although the Province is presenting its portfolio of oil and gas assets to potential buyers, it is not bound to any subsequent actions. The process will enable an informed decision on whether to proceed to detailed negotiations to sell those assets. No decisions with regard to these assets have been made at this time. Future decisions regarding Oil and Gas could materially impact Hydro's future profit and cash generated from operations."
- NLH is working with the Province on the remaining analyses required to finalize the Province's rate mitigation plan, which will inform NLH's next General Rate Application (GRA) filing, anticipated in 2025. Hydro Regulated states it will continue to provide regular quarterly updates to the PUB.

**Analysis:**

- This note is for information purposes only.

**Action Being Taken:**

- IET officials continue to monitor quarterly and annual results of Nalcor/Hydro

**Prepared/Approved by:** R. Bates / C. Snook / C. Martin

**Deputy Minister Approval:**

May 14, 2024



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

**Information Note**  
**Department of Industry, Energy and Technology**

**Title:** Buchans Generating Station

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

**Issue:** [REDACTED] Buchans Generating Station [REDACTED]

**Background and Current Status:**

- The American Mining and Smelting Company (ASARCo) developed the Buchans hydro station in the 1930's and Abitibi took over after ASARCo closed the Buchans mine. The unit was rebuilt in 1988 with a new turbine and generator. Power was transmitted from Buchans to Grand Falls for use at the paper mill.
- In 2008, Government expropriated the Exploits Generation Assets (EG Assets) under the Abitibi-Consolidated Rights and Assets Act. The assets included dams and generation stations at Star Lake (18 MW), Buchans (2 MW), Grand Falls (70 MW), and Bishops Falls (18 MW) as well as other related infrastructure, Government paid \$54 million in compensation to Enel and Fortis and assumed \$104 million in existing loans.
- Government assigned the assets to Nalcor Energy, which assigned them to Newfoundland and Labrador Hydro (NLH) to operate and purchase the output under a Power Purchase Agreement (PPA) at 4 cents/kWh.
- The Buchans unit has not operated since it shut down in February 2014 for mechanical issues. NLH retained AMEC Americas Limited (AMEC) in 2014 to develop cost estimates for refurbishing and decommissioning the facilities totaling [REDACTED] respectively.
- The Buchans reservoir is the water supply for the Town of Buchans. Since power generating ceased, Hydro has supported the management of the reservoir levels to ensure sufficient water was available for the town. Sandy Lake (also referred to as Buchans Lake) has 7 metres (23 feet) of storage for hydro generation. NLH advises that since shutting down generation, it has not filled the reservoir to its full supply capacity. NLH retains the seasonal history of the reservoir levels and discharge data.

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

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

**Analysis:**

