

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION



ESTIMATES 2024/25

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Cap on Natural Gas Utility Emissions

Drafted/Revised: February 13, 2024

Issue: Progress to date on implementing a cap on natural gas utility emissions.

Response:

- The CleanBC Roadmap to 2030 committed to reducing emissions in buildings and industry by capping emissions from natural gas utilities at 6 megatonnes by 2030 (a 47% reduction from 2018). The proposed cap is aligned with CleanBC modelling of sectoral GHG targets.
- Reducing natural gas related emissions in the buildings and industry sector is a complex challenge and will require collaboration across many sectors, including energy utilities, governments, and regulatory agencies like the BC Utilities Commission (BCUC).
- Government is committed to working with the BCUC, public utilities and key stakeholders to map out a pathway that achieves our energy transition and emission reduction goals at the least cost to ratepayers.
- Advice from the BC Hydro Task Force, created in March 2023 to provide strategic advice to government on reliable, affordable, and emissions-free energy, is expected to inform the approach.

Background/Status:

- Under the CleanBC Roadmap to 2030, Government committed to capping emissions from natural gas utility customers in buildings and industry (excluding Liquified Natural gas and upstream oil and gas) at 6 megatonnes by 2030 (a 47 per cent reduction from the 2018 baseline).¹ The proposed emissions cap is aligned with climate modelling for BC's sectoral GHG targets.
- The Premier's mandate letter directed that the Minister of Energy, Mines and Low Carbon Innovation to "work with the British Columbia Utilities Commission (BCUC) to identify an appropriate role for the BCUC in supporting British Columbia's clean energy transition, in alignment with our province's climate goals to achieve net zero by 2050 and affordability objectives."

¹ The natural gas grid currently provides 50 per cent of the energy used by buildings and 31 per cent used by industry (excluding the upstream oil and gas sector and LNG production).

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Work is currently ongoing with the BC Utilities Commission, strategic partners including provincial government ministries, energy utilities like FortisBC and BC Hydro, and the BC Hydro Task Force to develop an effective approach to decarbonize the gas system in an orderly fashion that is affordable for British Columbians.
- The Ministry of Energy, Mines and Low Carbon Innovation is committed to mapping out an effective pathway to reduce GHG emissions from the natural gas system while ensuring reliable and affordable energy for British Columbians.

Attachments: N/A

Cross Reference: #2 RNG, GGRR, National RNG Registry
#3 Climate Aligned Energy Framework
#4 Evolving Role of the BCUC
#5 Energy Affordability

Contact:

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2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Using RNG to decarbonize BC's Natural Gas Grid

Drafted/Revised: February 13, 2024

Issue: Renewable Natural Gas the Greenhouse Reduction Regulation, and National RNG Registry

Response:

- To dramatically lower carbon emissions and drive the transition from fossil natural gas, gas utilities have been acquiring renewable natural gas (RNG) for use by their customers.
- Gas utilities are expecting to displace conventional natural gas with lower carbon alternatives, such as RNG produced from organic sources, and hydrogen.
- Increasing the supply of RNG and hydrogen could potentially create new business and job opportunities in other sectors of the provincial economy, including the agriculture and forest sectors.
- As a result, EMLI is contemplating regulatory changes to the Greenhouse Gas Reduction (Clean Energy) Regulation to increase the supply of renewable gases for use by BC consumers.
- The amendments to the GGRR are intended to transform the market to renewable gas and hydrogen alternatives and encourage alternative and flexible solutions that will complement existing opportunities in different sectors of the economy, including the forest sector.
- Business Information

Background/Status:

- Currently, the natural gas grid plays an important role in providing capacity to meet BC's demand during cold weather peaks, supplying around two-thirds of the energy needed for buildings, industry, and transportation during those periods. The other one-third is provided through BC Hydro's system, operating at its maximum existing capacity (about 11,000 megawatts [MW]).
- While enhanced electrification will be critical to meeting BC's climate targets, low carbon gases will be needed to ensure peak demand can be met in a cost-effective manner.

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Amendments to the GGRR made in early 2017 enabled the use of RNG in transportation and established a Renewable Portfolio Allowance (RPA) to allow natural gas distribution utilities to increase the supply of RNG. An RPA allows a utility to provide a voluntary RNG program with regulated rates while the cost is borne across all utility customers, not just those receiving RNG service. By establishing an RPA, utilities and producers have market certainty, including an incentive to adopt new technology and lower the cost of production.
- Further amendments to the GGRR made in 2021 enabled utilities to further increase their acquisition of renewable gas, and created new prescribed undertakings for hydrogen, synthesis gas and lignin.
- Decarbonizing industrial processing for natural-gas intensive industries through fuel-switching to lower carbon fuels is one of the biggest opportunities for GHG reductions under the CleanBC Roadmap to 2030. These amendments to the GGRR will allow for the utility to provide capital incentives to help lower the financing costs of its customers who want to convert their industrial systems in order to produce and consume synthesis gas or lignin.
- When gas utilities acquire renewable natural gas, hydrogen, synthesis gas and lignin, they will usually acquire all the “environmental attributes” along with the gas molecules as a term in their supply contract. Commonly known attributes are associated with fair trade coffee and Forest Stewardship Council certified lumber.
- The Ministry is participating in a national working group, sponsored by the Canadian Gas Association, to investigate the feasibility of setting up or designating a low carbon gas registry. This, alongside a third-party audit component, would allow for the environmental attributes of low carbon gases to be tracked and retired so they cannot be double counted across jurisdictions or resold to other users.
- Together these requirements will mitigate carbon accounting risks for the Provincial inventory and increase the certainty that GHG emissions reductions are occurring through displacement of conventional natural gas.
- There are many mechanisms that the Province is considering under the CleanBC Roadmap to help reduce emissions from the natural gas sector, and Ministry staff are working closely with our colleagues across government to determine the best course of action. The GGRR is a good transitional measure which enables the utilities to plan for and implement emission reductions activities while limiting the ratepayer impact under the price and volumetric caps.

Attachments: N/A

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Cross Reference:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Climate Aligned Energy Framework

Drafted/Revised: April 9, 2024

Issue: Development of a Climate Aligned Energy Framework

Response:

- The Framework will articulate the Province's overall vision, principles, goals, and priority actions and ensure that our energy system will be there to support a clean, competitive, and inclusive British Columbia (B.C.).
- Our government will ensure our future prosperity will be enabled by an energy system that is powered by our world leading low carbon energy resources.
- This vision will demonstrate that we are planning for a clean future and that B.C.'s energy systems will continue to be reliable and affordable while they evolve to support our climate and economic growth objectives.
- Development of the Framework is grounded in the Province's other key priorities and initiatives, such as CleanBC and StrongerBC.
- I look forward to releasing the Climate Aligned Energy Framework later this spring. In addition to the work of the BC Hydro Task Force, this work will put the Province on the path to a clean and prosperous future for all British Columbians.
- This framework will set the stage for future work and inform a go-forward energy plan. I look forward to continued partnership with industry, stakeholders, First Nations and Indigenous groups and others moving forward.

Background/Status:

- The Climate Aligned Energy Framework mandate letter item.
- Our work is focused on the release of a public vision document by the end of spring 2024. The Framework is not intended to be a full energy plan with detailed actions and planning at this point of its development, rather it will set the stage for for engagement with the public on an energy plan in the next mandate.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- The Ministry is taking a principle-based approach to develop the Framework:
 - Aligns with CleanBC, StrongerBC, and supports B.C.'s climate targets.
 - Enables market transformation to meet B.C.'s climate targets.
 - Emphasizes the importance of energy efficiency now and into the future.
 - Maintains energy reliability and security.
 - Protects affordability and competitiveness of energy for people and businesses.
 - Is inclusive of partnership opportunities with First Nations.
 - Informs the highest value and best use of energy resources in the mid to long term.
 - Considers all energy types and embraces new technologies.
 - Supportive of clean growth economic opportunities and jobs.
- As part of the development of the Framework, the Ministry facilitated a working group for B.C.'s large gas and electric utilities and government to collaboratively discuss possible future clean energy scenarios for B.C.
- The Minister hosted five roundtable engagement sessions with over fifty stakeholders representing a broad variety of sectors including industry, municipalities, First Nations organizations and environmental non-government organizations as part of developing the Framework.
- Key themes heard at the Ministerial roundtables included:
 - The importance of taking a regional approach to the energy transition and clean energy development, where we recognize the different opportunities and needs of different regions of B.C.
 - The need for the Framework to prioritize energy affordability and reliability alongside climate objectives. The Framework should be clear that there will be costs and trade-offs.
- In collaboration with the First Nation Energy and Mining Council (FNEMC), the Ministry also conducted broad engagement with First Nations in B.C. as part of developing the Framework.
- Key themes heard from engagement with First Nations included:
 - The Framework is an opportunity to fundamentally incorporate the economic interests of First Nations in a new way of approaching development and energy systems in B.C.
 - The importance of early and meaningful inclusion of First Nations within the planning and decision-making process for the development of clean energy resources and infrastructure.

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- A common theme emerging from the Ministerial roundtables and engagement with First Nations is a desire for enhanced skills training and educational and awareness opportunities related to clean energy resources, resource development options, and jobs.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Evolving the Role of the British Columbia Utilities Commission (BCUC)

Drafted/Revised: February 12, 2024

Issue: Adapting the role of the BCUC to support BC's clean energy transition.

Response:

- In the same way we are taking active steps to align British Columbia's (BC) energy system with our climate targets and other key priorities, the Province is committed to working with the BC Utilities Commission (BCUC) in determining their role in the clean energy transition.
- As an independent agency, the BCUC serves as an economic regulator of public energy utilities, with a focus on the benefits and costs to ratepayers.
- In February 2024, we updated the energy objectives in the Clean Energy Act, providing a clear signal to the commission regarding the Province's climate and affordability goals.
- As we move forward, Government will be working closely with the BCUC and others to determine how its powers and mandate can be adapted to incorporate new responsibilities to support the energy transition.

Background/Status:

- The Minister's Mandate letter includes the priority to "Work with the BC Utilities Commission in supporting BC's clean energy transition, in alignment with our province's climate goals to achieve net zero by 2050, and affordability objectives."
- The Climate Solutions Council (CSC) supports this and recommends Government consider a fundamental transformation of the BCUC to align decision-making with decarbonizing the energy system.
- As an economic regulator, the BCUC ensures that customers have access to safe, reliable energy service rates, while allowing the utility the opportunity to earn a fair rate of return on its investment. The BCUC conducts public, open and transparent review processes of energy utility applications.
- Additionally, the BCUC was designated as the administrator of the Fuel Transparency Act to promote market competitiveness and to support public confidence in the fair and transparent functioning of the market.

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Achieving BC’s greenhouse gas (GHG) reduction targets will require a fundamental realigning of BC’s energy system, including a re-think of the roles of electricity, gas, and other public utilities. This includes opportunities to leverage utility spending, and utilities’ close relationship with their customers, to implement GHG reduction initiatives and influence customer behaviour.
- The BCUC is a critical partner in the energy transition. As such, a revaluation of their role is required to support the Province’s climate ambitions while also protecting ratepayers from rising costs and ensuring reliable access to energy.
- The Province has taken initial steps by prioritizing emission reduction and affordability among the *Clean Energy Act* energy objectives the BCUC must consider in making decision on utility resource plans, capital projects, expenditure schedules and supply contracts.
- Modernizing the BCUC will be informed by the direction set under the Climate Aligned Energy Framework (CAEF), which will articulate the Province’s overall vision and priority areas for an energy plan next mandate.

Cross Reference: #22 Decarbonizing BC’s Gas Grid (GRR)
#25 Climate Aligned Energy Framework (CAEF)

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2023/24 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Role of the Natural Gas System

Drafted: February 13, 2024

Issue: Role of the Natural Gas System to Meet Demand During Extreme Weather Conditions

Response:

- All residents benefit from the characteristics of the natural gas system, particularly the ability of the gas system to deliver a large quantity of reliable energy throughout the Province and during periods of peak demand.
- Currently, natural gas distribution utilities (FortisBC and Pacific Northern Gas) meet about two-thirds of the province's peak winter energy demand.
- Natural gas pipeline and storage infrastructure are critical in supporting the Province's overall energy resilience by reliably delivering natural gas, during short and long-term duration needs, such as extreme weather or drought conditions.
- Natural gas is transported through an extensive pipeline network, which is typically built underground. This infrastructure minimizes the risk of weather-related damage that may affect the above-ground transmission and distribution lines of other energy sources.
- Natural gas can be conveniently stored in large quantities, ensuring fuel availability during inclement weather when other energy sources may face disruptions. This storage capacity serves as a reliable backup and safeguard against sudden energy supply interruptions.
- The ability of the gas system to meet seasonal and peak day demands is a key resource that must be considered when designing future energy systems and building pathways to a low-carbon future.

Background/Status:

Advice/Recommendations

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Advice/Recommendations

- Gas distribution pipelines can continuously transport a significant amount of energy to market centres like Vancouver on a daily basis. The pipeline infrastructure is underground and has multiple redundancies, making it extremely reliable and resilient to extreme weather.
- Further, natural gas can be compressed, liquefied, or stored to provide resiliency for BC's energy system during unforeseen events such as heat domes and wildfires. Liquefied natural gas (LNG) facilities such as FortisBC's Tilbury facility in Delta or Mount Hayes in Ladysmith provide extra storage to help meet peak demand.
- To meet CleanBC targets, some sectors, such as building equipment and transportation, will need to transition away from traditional natural gas to electricity, hydrogen and RNG in the medium term. Utilizing and coordinating both the electricity and gas systems in BC will play a crucial role in meeting Provincial climate objectives while also maintaining energy reliability and affordability.

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2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: The Fuel Price Transparency Act

Drafted: February 13, 2024

Issue: An update on the Fuel Price Transparency Act in British Columbia.

Response:

- Since 2019, Government has taken a series of proactive steps to provide a greater level of transparency to how fuel prices are set around the province.
- The *Fuel Price Transparency Act* (FPTA) aims to “look behind the curtain” of the market for gasoline and diesel by collecting information and publishing from companies selling fuel in the province.
- As administrator of the FPTA, the British Columbia Utilities Commission (BCUC) has launched and maintains an open and transparent website that provides insights into the various components that make up our fuel prices (the price of crude oil, wholesale margins, retail margins and taxes).
- We believe information behind fuel pricing should be available to British Columbians. By pulling back the curtain, companies will be publicly accountable for unexplained markups and cost increases.
- If the BCUC identifies any egregious market behaviour, Government will review the evidence and take appropriate action to protect British Columbians.
 - The BCUC’s report to government in December 2023 concluded from 2019 to 2022, the unexplained retail price difference between a litre of gasoline in BC and Western Canada declined from 9.2 ¢/L to 3.5 ¢/L, a decrease of approximately 62%.

- Advice/Recommendations

Background/Status:

- Except for a national emergency, the Canadian government has no jurisdiction over the direct regulation of retail fuel prices. Under the Constitution, the provinces have that authority. The Province of BC does not regulate the retail price of gasoline or diesel. This means that prices can fluctuate as BC relies on market mechanisms to determine the price consumers pay for fuels. There are

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Minister Responsible: Josie Osborne

currently no mechanisms in place in BC through which Government could regulate the price of gasoline or diesel.

- In the spring of 2019, the price of fuel at the pump jumped by over \$0.40 per litre, costing British Columbians an extra \$62 million each day and impacting overall affordability. The rapid rise in prices and growing disconnect from prices in other areas of Canada became a subject of significant interest to British Columbians. Government responded by directing the BCUC to undertake an inquiry, exploring factors that may be influencing gasoline and diesel prices in BC.
- On August 13, 2019, the BCUC issued its Gasoline and Diesel Inquiry Final Report (Inquiry) which found that there was an unexplained price differential of approximately \$0.13 per litre between the United States Pacific Northwest and Vancouver wholesale price for gasoline as well as a BC-wide average differential of \$0.10 per litre.
- The Inquiry found that the BC fuel market was oligopolistic (i.e., a few companies exert control over the market). The BCUC estimated that BC consumers paid approximately \$490 million more per year for gasoline because of this differential.
- In response, Government enacted the Fuel Price Transparency Act (FPTA) in Fall 2019 and brought it into force on March 9, 2020. On that date the BCUC was named Administrator of the FPTA, allowing the BCUC to collect information on the market conditions involved in setting prices for gasoline and diesel. The BCUC is required to recover its costs as Administrator of the FPTA from Government.
- The BCUC's work as Administrator of the FPTA is ongoing, and it provides transparent information about BC's fuel market. To date, the BCUC has:
 - (1) launched GasPricesBC.ca as the informative and public-facing website for the FPTA;
 - (2) developed and implemented a system for data collection from fuel market wholesalers and retailers; and
 - (3) completed four special projects in response to public requests for information about fuel prices:
 - **Exploration Project #1:** Monitoring Fuel Price Behaviours in 11 cities (Kamloops, Kelowna, West Kelowna, Port Alberni, Powell River, Revelstoke, Squamish, Vernon, Langley, Nanaimo, and Metro Vancouver):
 - Fuel prices in some cities are less dependent on the cost of components such as wholesale price, crude oil price, taxation.
 - Some regions like Squamish exhibit similar fuel pricing to Vancouver despite having lower fuel taxes and levies.
 - **Exploration Project #2:** Monitoring Fuel Price Behaviours in 12 cities (Campbell River, Chetwynd, Chilliwack, Cranbrook, Duncan, Gibsons, Hope, Merritt, Penticton, Salmon Arm, Terrace, and Williams Lake)

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: ICE Fund & Partnerships

Drafted/Revised: February 13, 2024

Issue: Innovative Clean Energy (ICE) Fund is a Special Account supporting the B.C. clean energy sector through partnerships

Response:

- Established in 2007, the Innovative Clean Energy (ICE) Fund is a legislated Special Account designed to support Government's energy and environmental priorities and advance British Columbia (BC)'s clean energy sector.
- Funding for the Special Account comes via a 0.4% levy applied to the final sale of specified "energy products" (primarily natural gas). The levy is forecast to generate approximately \$9 million (M) in 2024/25.
- Through Partnerships, the ICE Fund is well positioned to advance the CleanBC Roadmap to 2030 by supporting clean energy technologies that reduce greenhouse gas emissions.
- Partnerships with private, academic, and federal agencies are an effective way to secure investments in B.C.'s energy innovation ecosystem. The ICE Fund continues to seek projects and build partnerships to support the development of pre-commercial clean-energy projects and technologies.
- From Budget 2023, \$2.0M funding for Partnerships is allocated to various initiatives that are scheduled to be announced in 2024. These initiatives include existing partnerships with Sustainable Development Technology Canada and PacifiCan.

Background/Status:

Current Status:

- Since 2008, approximately \$112M has been allocated to support pre-commercial clean energy and technology projects and various programs and initiatives.
- Over the last 15 years, ICE Fund investments have leveraged projects worth \$508M, creating or sustaining more than 950 direct jobs and more than 650 jobs in project construction.
- The ICE Fund publishes performance reports on the Ministry's website. The most recent report (2017/18 to 2022/23) outlines the 67 different projects funded and \$62M administered through the ICE Fund, contributing to a project value of over \$386M.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- From Budget 2023, multiple initiatives have been approved and will be announced in 2024.

Partnerships:

- Partnerships are developed and managed to support the following objectives: leveraging other funding sources (e.g., federal); accessing resources, expertise, and project referrals; supporting efficient program administration such as conducting due diligence and expert reviews during the project evaluation process while maintaining independent decision-making authority and governance requirements; developing B.C.'s clean technology ecosystem; and providing an improved program funding experience.
- In March 2017, Canada and BC signed a memorandum of understanding (MOU) effective to March 2022 and executed a three-year, \$40M Joint-Call Partnership for the development of pre-commercial clean energy projects and technologies. Each party committed \$20M and are represented by Sustainable Development Technology Canada (SDTC) and the ICE Fund, respectively. In March 2022, BC met its \$20M commitment with 16 approved projects to date. BC and SDTC continue to collaborate to jointly fund projects. The partnership with SDTC has demonstrated the value of leveraging significant federal and private investments into BC's clean energy technology innovation sector. SDTC's operations are currently paused temporarily as a result of a review by the Honourable François-Philippe Champagne, Minister of Innovation, Science and Industry's department Innovation, Science and Economic Development Canada (ISED). Operations are anticipated to resume in the coming months once this matter is resolved.
- In 2022/23, one-time contingency funding of \$23.6M supported five initiatives. These initiatives included partnerships with SDTC and PacifiCan. One of these initiatives recently announced was:
 - On November 16, 2023, Josie Osborne, Minister of Energy, Mines and Low Carbon Innovation was joined by George Heyman, Minister of Environment and Climate Change Strategy to announce \$16.5 million in provincial funding for a pilot project for B.C.-based hydrogen-energy company HTEC to procure six different heavy-duty fuel-cell trucks to begin the use of hydrogen in the commercial transportation sector.
- The Province is interested in developing further partnerships to undertake investments in clean energy and GHG reduction projects that advance CleanBC goals, including fostering existing and new partnerships with organizations such as SDTC, PacifiCan, Natural Resources Canada (NRCan), the Innovation, Science and Economic Development (ISED) Strategic Innovation Fund (SIF), Centre for Innovation and Clean Energy (CICE), and academic institutions.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Cross Reference: 08_ICE Fund 3-year Spending Plan (EURD)

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity Utility Regulation Division	778 698-7183
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2024/2025 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: ICE Fund 3-year Spending Plan

Revised: February 13, 2024

Issue: Innovative Clean Energy (ICE) Fund plans to support the development of pre-commercial clean-energy projects and technologies

Response:

- Funding for the Special Account comes via a 0.4% levy applied to the final sale of specified “energy products” (primarily natural gas). The levy is forecast to generate approximately \$9 million (M) in 2024/25.

s.12; s.13

- In Budget 2023, the ICE Fund had \$11.128M in operating expenses allocated for 2023/24.

s.12; s.13

Background/Status:

- The ICE Fund is a Special Account designed to accelerate the development and commercialization of emerging clean energy technologies with funds collected and disbursed in accordance with statutory funding authority.
- The ICE Fund must meet the requirements set out in Section 9.5(3) (a)(ii) of the *Special Accounts Appropriation and Control Act*. It currently receives funds through a 0.4% levy on the final sale of specified energy products: natural gas; fuel oil; and grid-delivered propane. ICE Fund revenue fluctuates based on energy sales revenue which is affected by natural gas commodity prices, sales volumes and utility service costs influenced by infrastructure maintenance and upgrades.
- In Budget 2023 (Attachment 1), the ICE Fund allocated funding to:
 - Project partnerships in pre commercial clean-energy technologies (\$2M),
 - Implementation of actions in support of BC’s Hydrogen Strategy (\$1M),
 - CleanBC Go Electric - Hydrogen Fuelling (\$5.2M), and;
 - CleanBC Go Electric – Advanced Research and Commercialization (\$2M) programs.

2024/2025 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Cross Reference: 07 – ICE Fund & Partnerships (EURD)
07 – BC Hydrogen Strategy (ERD)
03 – CleanBC Go Electric Vehicle Industry (EDD)
04 – CleanBC Go Electric Infrastructure Training (EDD)

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity Utility Regulation Division	778 698-7183
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2024/2025 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

ATTACHMENT 1:

Budget 2023 Approved Spending

ICE Projected Annual Spending Outflows	Approved in Budget 2022
Hydrogen Strategy	\$ 1,000,000.00
CleanBC Go Electric Hydrogen Fueling	\$ 5,200,000.00
CleanBC Go Electric Advanced Research and Commercialization	\$ 2,500,000.00
Partnership	\$ 2,000,000.00

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: Centre for Innovation and Clean Energy (CICE)

Drafted/Revised: February 12, 2024

Issue: Government established the CICE to support innovation and commercialization of clean energy technologies to meet CleanBC targets.

Response:

- In September 2021, as part of StrongerBC, the British Columbia (B.C) Centre for Innovation and Clean Energy (CICE) was announced and became operational on October 25, 2021.
- CICE establishment and operations were funded by \$35 million from B.C., \$35 million from Natural Resources Canada, and \$35 million from Shell Canada, for a total of \$105 million.
- CICE's focus is on initiating new technology to accelerate the path to net-zero emissions by 2050.
- CICE's mandate is aligned with the B.C. Hydrogen Strategy and the CleanBC Roadmap to 2030 objectives to build B.C.'s low carbon economy.
- As of January 2024, CICE reports:
 - Over \$22 million invested into 34 BC-based projects, with a combined valuation exceeding \$141 million.
 - Investments are on track to have a projected annual reduction of 1.74 million metric tons in greenhouse gas emissions.
 - Indigenous participation was 28% for 2023 funded companies.
 - 64% of funded 2023 projects were led by BC-based startups.

Background:

Centre for Innovation and Clean Energy Activities - 2021/22:

- In February 2022, the CICE and the Ministry of Energy, Mines and Low Carbon Innovation (EMLI) established a five-year Trusted Partnership and Shared Cost Arrangement to collaborate on the implementation of the B.C. Hydrogen Strategy.
- As part of the Hydrogen Strategy implementation, EMLI transferred \$998,000 during the fiscal year 2021/22 to CICE to complete studies on EMLI's behalf.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Centre for Innovation and Clean Energy Activities - 2022/23:

- CICE committed over \$4.83M for 10 Clean Energy Innovation projects valued at \$22.05M, supporting sectors such as mining, forestry, marine, oil and gas, aviation, transportation, and industrial manufacturing.
- The following studies were published on EMLI's behalf:
 - Northeast B.C. Carbon Capture and Storage (CCS) Atlas (Released January 2023)
 - Carbon Intensity of Hydrogen Production Methods Study (Released March 2023)
 - BC Hydrogen Regulatory Mapping Study (Released June 2023)
- In March 2023, CICE released a B.C. Carbon Management Blueprint that provides an understanding of existing carbon management approaches, the value chain, and the market participants that drive the supply and demand of these solutions.

Centre for Innovation and Clean Energy Activities - 2023/24:

- In 2023 overall, CICE allocated \$19.7 million in non-dilutive funding to 23 BC-based innovators supporting focus areas such as: battery and energy storage; carbon management; low carbon fuels; and low carbon intensity hydrogen.
- In April of 2023, CICE was chosen as the Ecosystem Supporter of the Year at Foresight Canada's 2023 BC Cleantech Awards.
- In June of 2023, CICE and FortisBC announced an Innovation Call for Forestry Residue Management to provide up to \$6 million in non-dilutive funding to be awarded for innovation that increases resilience in British Columbia's forests.
- EMLI and CICE will continue to collaborate on joint priorities identified in the Trusted Partnership Agreement in support of achieving objectives in the B.C. Hydrogen Strategy and the CleanBC Roadmap to 2030.

Cross Reference: 07 - ICE Fund & Partnerships (EURD)

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: FortisBC/Enbridge Hydrogen Blending Study

Drafted/Revised: February 13, 2024

Issue: The Province committed \$5 million to Enbridge and FortisBC to support a \$15M feasibility study for blending hydrogen into their current natural gas infrastructure.

Response:

- On March 18, 2022, the Province committed \$5 million to Enbridge and FortisBC to each conduct a hydrogen blending assessment study of their natural gas infrastructure.
- On January 17, 2024, the project was announced at the Natural Resources Forum in Prince George.
- Originally Pacific Northern Gas was included in the study but had to back out due to financial constraints.
- The study will assess the hydrogen compatibility and blending limits of the existing infrastructure and customers' end use capabilities.
- Enbridge and FortisBC will aim to identify specific upgrades and other activities required for the system to continue to operate safely and reliably to provide a hydrogen blending service.
- The study is expected to cost \$15 million and be completed by Q3 2025 with the complete reports sent to the Province from Enbridge and FortisBC.
- Final reports can be used to inform the development of codes and standards to regulate the hydrogen injection into natural gas pipelines.

Background/Status:

Hydrogen Blending Study Focus Areas:

- **Grid integrity:** The durability of steel pipes can degrade when they are exposed to hydrogen over long periods, particularly with hydrogen in high concentrations and at high pressures. Hydrogen is more mobile than natural gas in polymer materials, meaning that leakage could occur at the seals, gaskets, valves, and in polyethylene pipes. Concerns around leaking and venting gas (both hydrogen and methane) to the atmosphere require consideration.
- **Public safety:** Because hydrogen has a broader range of ignition, a main concern is the potential for an increased probability of explosion. The volume of

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

hydrogen acceptable for high pressure transmission pipelines may differ from what is acceptable in lower pressure distribution lines due to ignition concerns close to populated areas.

- **Volume of hydrogen:** The maximum hydrogen blend level can vary significantly depending on the age of the pipeline network, the point of injection, and the type of end-use appliances/applications.
- **Cost:** During the early years of market transformation, blending hydrogen into natural gas will result in higher costs for downstream users. Furthermore, certain appliances, equipment, and infrastructure may not tolerate increasing volumes of hydrogen.
- **Cross-border impacts:** Hydrogen injected into the Westcoast System will traverse international boundaries when delivered downstream. Ensuring aligned regulatory approval between Canada and the United States requires engagement with transmission pipeline operators, gas distribution utilities in Washington State and Oregon and regulators such as the Federal Energy Regulatory Commission.

CleanBC

- CleanBC committed the Province to develop a B.C. Hydrogen Strategy. CleanBC also commits to accelerating the development of the hydrogen economy in British Columbia (B.C.) with financial supports for the deployment of fuel cell electric vehicles and infrastructure support for centralized hydrogen production, and the injection of hydrogen into the natural gas grid.
- *B.C. Hydrogen Strategy*
- In 2022/23, B.C. acted on five initial priorities that were identified as key to growing B.C.'s hydrogen sector. One of which included committing \$5 million to the hydrogen blending study.
- The B.C. Hydrogen Strategy has outlined eight policy actions to support blending hydrogen with natural gas.
- Two of these policy actions for 2020-2025 include:
 - The Province to partner with a utility to review the infrastructure requirements to accommodate up to 100% hydrogen in the distribution system.
 - Support hydrogen injection trials into natural gas and/or propane distribution systems.

Cross Reference: 7 BC Hydrogen Strategy (ERD Division)

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: Affordability and BC Hydro Rates

Drafted: February 14, 2024 – updated April 9, 2024

Issue: Working with BC Hydro to maintain affordability of electricity.

Response:

- BC Hydro applied for a 2.3% rate increase that was approved and took effect on April 1, 2024, marking the sixth year in a row it has requested a rate increase below the rate of inflation.
- To help BC Hydro customers with their bills, Government and BC Hydro have taken a number of actions, including:
 - providing a one-time cost-of-living bill credit in Fall 2022 to residential and commercial utility customers throughout B.C.;
 - providing a second affordability credit to B.C. residential, commercial and industrial customers that will start appearing on their bills after April 15 and continues throughout fiscal 2025; and
 - Under the new affordability bill credit, an average BC Hydro residential customer will receive \$100 in credits on their bills, and other eligible customers will receive a 4.6 percent credit over the year, based on 2023/24 consumption.
- Over the last 6 years BC Hydro's Customer Crisis Fund has provided grants to customers facing disconnection who have experienced a life event and are in financial crisis.
- Government is committed to providing continued support for low-income customers and is considering implementing a means-tested bill assistance program modelled after the Customer Crisis Fund.
- In February 2024 we announced changes to the energy objectives in the Clean Energy Act that will help ensure BC Hydro rate changes do not exceed cumulative inflation, and that BC Hydro rate changes are predictable and stable from year to year.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Background/Status:

BC Hydro Rate Increases

- BC Hydro's rates are currently among the lowest in North America; depending on their consumption, the vast majority of its residential customers pay the second or third lowest rate among major utilities surveyed by Hydro Quebec.
- Over the last five years, BC Hydro applied for rates below the rate of inflation, and the request for 2024/25 is the sixth consecutive year.
- Over the last seven years, BC Hydro's rate increases have been nearly 16 percent below inflation on a cumulative basis.
- In its Fiscal 2023-2025 Revenue Requirements Application, BC Hydro requested rate increases of: 0.62 percent for Fiscal 2023; 0.97 percent for Fiscal 2024; and 2.18 percent for Fiscal 2025.
- Offsetting these increases, BC Hydro proposed to return favourable regulatory account balances to ratepayers with a -2 percent rate rider in Fiscal 2023; a -1 percent rate rider in Fiscal 2024; and a -0.5 percent rate rider in Fiscal 2025.
- The BCUC granted these rate increases, as well as the rate rider amounts for fiscal 2023 and fiscal 2024.
- However, the BCUC adjusted BC Hydro's treatment of trade income for fiscal 2025 and beyond.
- As the BCUC's proposed methodology for trade income would increase volatility in rates, BC Hydro requested, and the BCUC approved, adjustments to rate riders to achieve a 2.3 percent rate increase (again below the rate of inflation), effective April 1, 2024.

Cost-of-Living Bill Credits

- In Fiscal 2021/2022, BC Hydro's revenues exceeded expectations, resulting in a higher credit balance in BC Hydro's Deferral Accounts.
- Government worked with BC Hydro to use \$320 million of this balance on a "cost-of-living bill credit" to eligible utility customers, beginning in December 2022.
- Following concerns expressed by the Auditor General, government chose to take the \$320M from BC Hydro operations (i.e., reduced net income).
- Residential customers received a one-time bill credit of \$100, while the average bill credit for commercial customers was approximately \$450.
- Approximately 1.9 million residential and 0.3 million commercial customers received the cost-of-living bill credits.

2024/25 Estimates Note Advice to the Minister

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Minister Responsible: Honourable Josie Osborne

- The Province and BC Hydro have also provided a second affordability credit to people and businesses on their bills for fiscal 2025. As with the previous bill credit, this is also available to FortisBC and municipal utility customers.

BC Hydro's Net Income

- BC Hydro's allowable net income, or "profit" is established by its economic regulator, the BCUC, and is subsequently recovered from ratepayers as part of its BC Hydro rates.
- Starting in 2013, Government took on BCUC's role in setting net income as part of a "10 Year Rates Plan", which smoothed significant rate increases required to recoup BC Hydro investments in its aging infrastructure over a multi-year period to lower annual rate increases that would otherwise have been required in 2011 and 2012.
- As an outcome of the 2018 Phase 1 of the Comprehensive Review of BC Hydro (Phase 1), legislative/regulatory changes returned authority to the BCUC to set:
 - BC Hydro's rates beginning in Fiscal 2020; and
 - BC Hydro's allowed net income (profit), which is recovered from its customers through rates, in Fiscal 2021 after a transition period.
- This transitional measure was subsequently extended through Fiscal 2025 as BC Hydro and BCUC dealt with other issues arising during the COVID pandemic.
- Beginning in Fiscal 2026, the BCUC would likely set BC Hydro's net income higher than the \$712 million per year that Government set in recent years, in recognition that the utility should earn a reasonable return on investment.
- Government will work with BC Hydro to identify approaches to net income that maintain affordability while safeguarding the Fiscal Plan.

Customer Crisis Fund:

- On May 1, 2018, BC Hydro started the Customer Crisis Fund (CCF) pilot program to provide bill relief for certain customers, as directed by the BCUC.
- A residential BC Hydro account holder may apply for a grant under the CCF if their account is overdue due to a temporary financial crisis and they are facing disconnection. Eligibility is not dependent on income or whether the account holder receives other forms of Government assistance.
- Under the CCF, eligible customers may receive a grant equal to the amount owing on their account, up to maximum grants of \$600 for customers who heat their homes with electricity, and \$500 for customers with non-electrically heated homes (e.g., natural gas heat).

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- The CCF pilot program expired on May 31, 2021 and Government put in place a direction to the BCUC that allowed the CCF to continue past that date on a temporary basis.
- The temporary continuation of the CCF is being funded, in part, through a surplus using unspent funds that were collected prior to the expiry of the pilot (approximately \$5 million). An additional \$6 million in funding, drawn from higher-than-expected BC Hydro revenues, was added in fall 2022.

Advice/Recommendations

Cross Reference: 21 – Rates and Rate Design

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: BC Hydro Task Force

Drafted/Revised: February 14, 2024

Issue: An update on the BC Hydro Task Force

Response:

- Announced on March 14, 2023, as part of the Province's New Energy Action Framework, the BC Hydro Task Force draws on Indigenous and external energy experts to provide strategic advice on advancing three key priorities:
 - Improving the speed of permitting and delivery of required electrification infrastructure;
 - Modernizing regulatory framework to better align with government priorities while protecting ratepayers; and
 - Identifying, enabling and accelerating economic opportunities in clean energy, including opportunities for Indigenous Nations.
- The Task Force's membership includes senior staff from the Premier's Office, the Ministry of Energy, Mines and Low Carbon Innovation (EMLI), the Ministry of Environment and Climate Change Strategy (ENV), and external Indigenous and energy experts.
- The Task Force made an initial set of recommendations to the EMLI and ENV ministers in October 2023, which include the following early targeted actions focused on accelerating the planned acquisition of new clean or renewable energy resources:
 - BC Hydro to formally announce that the call for power in spring 2024 will be the first in a series of energy acquisitions, as the transition to clean energy continues to accelerate as BC Hydro requires additional resources to electrify the B.C. economy;
 - BC Hydro to continue to engage proactively with First Nations and proponents to provide timely information so they can respond promptly to the future energy acquisition processes;
 - BC Hydro to accelerate the overall timeline associated with its planned spring 2024 call for power to bring new energy resources online, including the bid process, proposal evaluation and awarding of electricity purchase agreements with power producers;

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Government to direct the Clean Energy and Major Projects Office (CEMPO) to establish a mechanism to support renewable-energy project proponents through the regulatory and First Nations engagement process; and
- Government to identify other ways to reduce timelines associated with permitting and assessment of new clean-energy projects in advance of the upcoming call for power.
- The Government is taking action toward implementing these Task Force recommendations.
- In alignment with the Task Force's mandate to protect ratepayers, BC Hydro announced in October 2023 that it was applying for a rate increase below the rate of inflation for the sixth consecutive year.
- To accelerate the delivery of required electrification infrastructure, the Province announced in January 2024 a \$36 billion investment in BC Hydro's updated 10-year capital plan for community and regional infrastructure projects that will deliver clean and affordable electricity to people and businesses in the future.
 - This represents an increase of 50 percent over BC Hydro's previous capital plan (\$24 billion) and includes a significant increase in electrification and emissions-reduction infrastructure projects (nearly \$10 billion, up from \$1 billion).

Background/Status:

- Announced on March 14, 2023, as part of the Province's New Energy Action Framework, the BC Hydro Task Force draws on Indigenous and external energy experts to provide strategic advice on advancing three key priorities:
 - Improving the speed of permitting and delivery of required electrification infrastructure;
 - Modernizing regulatory framework to better align with government priorities while protecting ratepayers; and
 - Identifying, enabling, and accelerating economic opportunities in clean energy, including opportunities for Indigenous Nations.
- The Task Force is chaired by Shannon Salter, DM to the Premier and Head of the Public Service. The Task Force's membership includes senior staff from the Premier's Office, the Ministry of Energy, Mines and Low Carbon Innovation (EMLI), and Ministry of Environment and Climate Change Strategy (ENV), and external Indigenous and energy experts.

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Minister Responsible: Josie Osborne

- Task Force members from Government and BC Hydro include:
 - Shannon Salter, Deputy Minister to the Premier and Head of the Public Service
 - Matt Smith, Chief of Staff to the Premier
 - Doug White, Special Counsel to the Premier
 - Shannon Baskerville, Deputy Minister, Energy, Mines and Low Carbon Innovation
 - Kevin Jardine, Deputy Minister, Environment and Climate Change Strategy
 - Lori Wanamaker, Chair, BC Hydro
 - Chris O'Riley, President and CEO, BC Hydro
- External experts include:
 - Russell Myers Ross (former Elected Chief of Yunesit'in Government);
 - Dan Woynillowicz (Principal of Polaris Strategies + Insights);
 - Kate Harland (Canadian Climate Institute); and
 - Blake Shaffer (Associate Professor at the University of Calgary).
- The Task Force is a 12-month commitment, ending in spring 2024, to identify and implement short-term and medium-term actions that can advance the three key priorities.
- The Task Force has met 10 times since it was established in Spring 2023.

Cross Reference: New Energy Action Framework
CEMPO Overview

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: BC Hydro Electrification Plan

Drafted/Revised: February 13, 2024

Issue: BC Hydro is continuing to implement its Electrification Plan in support of the province's CleanBC targets

Response:

- Electrification is one of the key pathways identified in the CleanBC Roadmap to 2030 to reduce or avoid building, transportation, and industrial emissions.
- BC Hydro's Electrification Plan (Plan) was released in September 2021 and positions BC Hydro as a leader in addressing climate change, driving clean economic development, while keeping rates low for British Columbians.
- The specific actions within the Plan were designed to complement and build upon existing government and BC Hydro initiatives.
- The Plan includes programs and incentives to promote the switch from fossil fuels to clean electricity in the transportation, building, and industrial sectors, and reduce the cost and time it takes for customers to connect to the BC Hydro grid.
- Electrification efforts will require significant growth of transmission infrastructure and investment in grid modernization. BC Hydro's 2024 Capital Plan, *Power Pathway: Building B.C.'s Energy Future* supports increased investments in electrification and replacement of aging assets to ensure a future-ready grid.
- In 2023, the Province and BC Hydro announced the first call for power in over 15 years to add 3,000 gigawatt hours of clean and renewable electricity. Increasing the clean energy generation will support electrification efforts in the built environment and greenhouse gas (GHG) emission reductions.
- The BC Hydro task force is also providing government with recommendations to support electrification efforts in the province – including on building infrastructure, modernizing the regulatory environment and pursuing new clean growth opportunities.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Background/Status:

- The Province's CleanBC Plan aims to reduce GHG emissions from transportation by up to 32%, and from buildings and communities by up to 64% by 2030.
- There is also a goal to reduce industrial emissions by 2.5 megatonnes per year.
- BC Hydro's Plan is a five-year plan to use B.C.'s clean electricity to reduce carbon emissions and build a clean economy in alignment with the province's CleanBC targets. The Plan and associated expenditures for Fiscal 2023 to Fiscal 2025 was filed with the BC Utilities Commission as part of the Revenue Requirements Application in August 2021.
- If the Plan is fully realized, domestic electricity sales will be 3,100 GWh higher, customer rates will be about 1.6% lower, and GHG emissions reduced or avoided by 930,000 tonnes/year by 2026 than without the Plan.
- The Plan outlines BC Hydro's commitment to invest \$260 million over five years to make it easier and more affordable for buildings, transportation, and industry to use B.C.'s clean electricity instead of fossil fuels with the following incentives:

\$26 million for the built environment

- Aims to increase the accessibility of heat pumps through rebates and support electrification in the commercial building sector.

\$30 million for the transportation sector

- Support the expansion of public charging infrastructure for electric vehicles and promote fuel switching of medium and heavy-duty vehicles.
- Collaboration with large customers on the development of future electrification projects for public transit, including buses and ferries.

\$105 million for industrial electrification

- Over \$60 million in incentives for fuel switching initiatives;
- Up to \$25 million in incentives for study funding for new customers; and
- Up to \$20 million in incentives for studies to support hydrogen production.

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity and Utility Regulation Division	778-698-7183
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BC Hydro Estimates Note

10-year Capital Plan: Power Pathway: Building B.C.'s Energy Future

Key Messages

- BC Hydro is committed to delivering clean, reliable, and affordable power.
- BC Hydro is in an energy transition as British Columbians look to switch from fossil fuels to cleaner, renewable sources of power, resulting in an unprecedented level of anticipated interest and demand on our electricity system.
- To meet the growing demand, BC Hydro, in partnership with the Province of B.C. is preparing for a call for power this spring to acquire more clean or renewable electricity, while making major investments in its system.
- BC Hydro's new 10-Year capital plan contains \$36 billion in community and regional infrastructure investments across B.C.
- This new plan represents an increase of about 50% in investments over BC Hydro's previous capital plans and reflects the province's growing demand for electricity over time from residential, commercial, transportation and industrial sectors.
- These investments represent a first step to electrification and reduce greenhouse gas emissions, address load growth and increased customer connections, and sustain and upgrade existing assets including B.C.'s valuable network of dams, transmission lines and substations.

Key Facts

- Annually, BC Hydro updates a 10-year capital plan that quantifies the investments required to safely operate its system and meet the electricity demands of its customers.
 - It also helps BC Hydro assess the resources it will need in the near- to medium-term, consider rate impacts associated with capital investments and plan engagement with First Nations, local governments and regulators.

- In January 2024, BC Hydro released its latest 10-year Capital Plan, Power Pathway: Building B.C.'s Energy Future, which outlines the investments it plans to make to sustain and expand the electricity system with three main objectives:
 - Support B.C.'s electrification and meet CleanBC emissions reductions targets;
 - Reinforce the system to enable customer connections and meet load growth; and
 - Sustain the system, ensuring BC Hydro can safely and reliably meet the needs of their customers while keeping rates low.
- The new plan represents an increase of about 50 per cent in investments over the previous capital plan and reflects the province's growing demand for electricity over time from residential, commercial, transportation and industrial sectors.
- The plan proposes spending nearly \$36 billion over the next 10 years as follows:
 - approximately \$9.4 billion on electrification and greenhouse gas reduction,
 - \$5.3 billion to address load growth and increased customer connections; and
 - \$21 billion to sustain existing capital assets, dam safety and reliability.
- The 10-year capital plan also outlines the amounts to be invested in community and regional infrastructure investments across the B.C, as follows:
 - Lower Mainland: \$7.2 billion
 - North: \$4.7 billion
 - Southern Interior: \$5.8 billion
 - Vancouver Island: \$3.2 billion
- These capital investments will provide many thousands of high-quality jobs for skilled workers and generate economic growth for First Nations and communities all over the province.

CONFIDENTIAL

- BC Hydro estimates its 10-year capital plan will support 10,500 to 12,500 jobs on average annually.
- BC Hydro currently has the second lowest residential electricity rates in North America, and the third lowest commercial and industrial rates, and they are committed to ensuring our rates remain affordable while investing in our clean energy future.
- As they move to build into our future by investing in current and new assets, BC Hydro is working to keep cumulative rate increases below inflation over time.

Q&A

1. How does BC Hydro determine which projects make it into the plan and which projects do not?

- BC Hydro has a defined criteria for what is included in the capital plan when they update it annually.
 - Capital plan updates are guided by a number of factors including: BC Hydro's Five-Year Strategy's priorities (support GHG reduction/electrification/affordability) and other needs such as load growth, system reliability, safety and asset health.
- There are also currently a significant number of potential industrial, customer-driven projects.
- While the customer-driven projects are being developed, BC Hydro works with the customers to understand their needs, such as timing, while assessing likelihood of the project going forward.
- When the customer driven projects are significantly advanced, BC Hydro will include the projects' associated investments in their capital plan.

2. For projects in the northeast, what is BC Hydro doing to ensure the infrastructure needed is constructed if they are not included in the capital plan?

- BC Hydro continues to actively work with customers in the northeast to support their connection requests and help them build the infrastructure that will ultimately connect them to the clean electricity grid.

- Much of the project work in the northeast are customer-built lines and facilities, and therefore don't show up in BC Hydro's capital plans.

3. Why is this such a dramatic jump in funding from previous BC Hydro capital plans?

- The 50 per cent increase supports the targets in the British Columbia's government's Clean BC Roadmap, our Five-Year Strategy, increased focus on new housing, among other key strategic objectives.
- The Advanced Electrification Scenario in BC Hydro's most recent Integrated Resource Plan projects demand growing significantly, by 2030, in support of CleanBC Roadmap objectives.
- These investments are required to enable BC Hydro to meet the projected demand. BC Hydro, and utilities across North America and around the world, are seeing rapid changes in demand as a result of electrification to reduce emissions.
- This plan will increase expenditures by \$11.8 billion for:
 - Investments of \$7.8 billion for electrification and greenhouse gas reduction initiatives to support the Clean BC Roadmap (high-growth area investments and North Coast Transmission projects);
 - Additional funding of \$3.4 billion in the base capital plan to address the on-going impacts of inflation on planned and active projects and to address safety related programs with identified immediate investment requirements; and
 - Investments of \$0.6 billion to address increased volumes in customer connection requests.

4. Is BC Hydro prepared for the growing demand for electricity?

- BC Hydro's 10-Year Capital Plan containing \$36 billion outlines the investments they plan to make to sustain and expand the electricity system.
- This new plan represents an increase of about 50 per cent in investments over our previous capital plans and reflects the province's growing demand for electricity over time from residential, commercial, transportation and industrial sectors.

- The critical regional system investment programs and projects set out in BC Hydro's 10-Year Capital Plan will support electrification and reduce greenhouse gas emissions, address load growth and increased customer connections and sustain and upgrade existing assets including B.C.'s valuable network of dams, transmission lines and substations.
- To meet the growing demand, BC Hydro, in partnership with the Province of B.C. is also preparing for a call for power this spring to acquire more clean or renewable electricity, while making major investments in its system.

5. How will this impact B.C.'s economy?

- The 10-Year Capital Plan outlines \$36 billion in community and regional infrastructure investments across the B.C.
- These capital investments will provide many thousands of high-quality jobs for skilled workers and generate economic growth for First Nations and communities all over the province.
- BC Hydro estimates that the 10-Year Capital Plan will support 10,500 to 12,500 jobs on average annually.

Back-Up Data and Context

- Project highlights the 10-year Capital Plan, Power Pathway: Building B.C.'s Energy Future include the following:
 - **Regional and economic development - North Coast Transmission Projects**
 - The North Coast of B.C. is experiencing growth from sectors such as ports, mining and liquified natural gas. There are three transmission upgrade projects currently under development: Prince George to Terrace Capacitors, Prince George to Glenannan Transmission, and Glenannan to Terrace Transmission.
 - **Critical urban electrification corridor examples – Mount Pleasant substation expansion, Scott Road substation rebuild and Goldstream substation**
 - The Mount Pleasant substation was built to accommodate future expansion within the existing footprint, adding additional transformer capacity and feeder sections without major modifications of substation building and structures. This project will add the add enough capacity to supply an additional 30,000 to 50,000 homes and is expected to be in-service in Fiscal 2029.

- North Surrey, including Surrey City Center, South Westminster and Guildford, is one of the fast-growing areas in Lower Mainland and is presently supplied by two substations – Scott Road and Whalley substations. Early indication of municipal plans for these areas are indicating rapid growth across residential, mixed use and light industrial sectors. This is in combination with the Port of Vancouver Electrification Roadmap 2030. To accommodate this load growth, the existing Scott Road substation will be decommissioned (due to equipment recaching end of life) and a new substation will be built within existing property to serve the North Surrey area. BC Hydro expects it to be in-service in Fiscal 2031 and it will provide power to 20,000 to 35,000 homes.
- The existing Colwood substation serves the cities of Colwood and Langford. The area has several large developments, including South Skirt Mountain, Bear Mountain, Westhills and Royal Bay developments. To accommodate the anticipated growth, BC Hydro is planning a new substation that will provide power to 40,000 to 70,000 and is expected to be in-service by Fiscal 2032.

BC Hydro Estimates Note

Call for Power

Key Messages

- We are in the midst of an energy transition here in B.C. – across Canada and the world – as more and more people and businesses look to transition from fossil fuels to reduce their impact on the environment.
- Delivering clean, renewable and affordable power to British Columbians is BC Hydro’s priority. That’s why BC Hydro is partnering with the Province to launch a competitive call for power in April 2024 to acquire more affordable clean and renewable electricity.
- BC Hydro is estimating a need for about 3,000 gigawatt hours per year of new renewable generation from large projects that can connect directly to the system starting as early as 2028.
- This is one of the most important projects BC Hydro currently has underway, and it is a key step to ensuring we remain well prepared to address increasing electrification and population growth across the province.
- A main focus of the call is the commitment to exploring meaningful economic reconciliation opportunities and the requirement that all projects include First Nations economic participation.
- This is the first time BC Hydro is proposing a participation requirement with First Nations to participate in our competitive call.
- The call for power is expected to be the first in a series of calls in the coming years. The call launching in April 2024 will shape the way BC Hydro conducts future calls in the coming years.

Key Facts

- On June 15, 2023, BC Hydro filed its Signpost Update, which indicated BC Hydro’s plan to acquire power as early as 2028 – three years earlier than the original 2021 Integrated Resource Plan timing of fiscal 2031. BC Hydro estimates it needs to procure approximately

3,000 gigawatt hours (GWh) per year of new clean or renewable electricity starting as early as 2028.

- BC Hydro intends to issue its first call in April 2024, which will seek proposals from projects between 40 to 200 megawatts. Eligible projects must be located in B.C., be able to connect to BC Hydro's integrated system, include a minimum 25 per cent of equity held by First Nation(s) in whose territory the project is located, and meet other eligibility requirements to participate, with incentives for up to 51% First Nation ownership.

Q&A

1. When is the call being launched and when will Electricity Purchase Agreements be awarded?

- Please note that all dates are draft until the RFP is issued.
- BC Hydro intends to issue its first Call for Power in April 2024. The closing date for project proposal submissions will be September 16, 2024.
- BC Hydro expects to award Electricity Purchase Agreements on December 16, 2024.

2. What are BC Hydro's requirements for project proposals?

- BC Hydro Call for Power will seek proposals from projects between 40 to 200 megawatts.
- Eligible projects must be located in B.C., be able to connect to BC Hydro's integrated system, include a minimum 25 per cent of equity held by First Nation(s) in whose territory the project is located, and meet other eligibility requirements to participate.

3. What type of resources are expected to be added to BC Hydro's resource portfolio?

- BC Hydro is seeking proposals from clean or renewable resources.
- While BC Hydro is not defining what type of clean or renewable resources, we expect to see more wind and solar added to our resource mix.
- The use of these resources has increased significantly in the past few years as the technology has improved and the cost has come down significantly.

4. What is BC Hydro doing to mitigate ratepayer impacts from a procurement perspective?

- To mitigate ratepayer impacts, BC Hydro is:
 - Creating a competitive process to establish fair market prices
 - Acquiring energy with attributes that align with system needs
 - Allocating risks to IPPs where appropriate to protect ratepayers
 - Fully assessing the impacts and benefits of IPPs (capacity, transmission, intermittency) to the system and selecting accordingly

5. What engagement occurred and what was the feedback?

- BC Hydro has completed extensive engagement with First Nations and industry on the design of the call, consisting of:
 - 31 Information sessions, focus groups and engagement sessions.
 - 42 Individual meetings with First Nations
 - 99 First Nations engaged
 - Over 650 attendees at events
 - Over 2500 individual pieces of feedback received
 - 5 surveys

- A Phase 1 engagement summary is available online.

- Generally the feedback from Phase 2 engagement (September to January) was:
 - Support for the First Nations equity participation model
 - Request for more time to prepare bids
 - That the EPA seems to have a fair allocation of risk
 - Some First Nations would have liked to have a First Nations-only part of the call
 - Feedback on the call documentation issued for comment in January 2024.

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION INFORMATION BRIEFING NOTE

PURPOSE: For INFORMATION for David Eby, KC, Premier

For INFORMATION for Shannon Salter, Deputy Minister,
Cabinet Secretary and Head of the Public Service

ISSUE: Key policy questions accompanying BC Hydro's upcoming call for power.

SUMMARY:

- BC Hydro (BCH) is issuing a call for power to acquire approximately 3,000 gigawatt hours per year (GWh/y) of energy from independent power producers (IPPs) in British Columbia (BC) as early as 2028. The call will be a competitive process and target 100 percent clean and renewable electricity such as wind, solar and hydroelectricity.
- The call for power is expected to be the first in a series of calls to help BCH continue to provide affordable and reliable electricity to its customers as BC's electrification demands continue to increase. Depending on the quality of the responses from IPPs, BCH may consider purchasing more or less power than 3,000 GWh/y.
- This series of calls is expected to result in \$2.3 - \$3.6 billion in capital spending and create thousands of new jobs and economic growth in the clean energy sector and in communities across the province.
- There has been concern raised by IPPs about short timelines for the call, as the environmental assessment and permitting processes may present challenges for IPPs to meet required completion dates. To help with timelines, the Province is working with BCH to expediate environmental assessments and permitting, while BCH is offering incentives to IPPs to meet earlier project deadlines.
- The Province's \$140 million endowment to the New Relationship Trust (NRT) will help provide a source for BCH to acquire clean energy from smaller projects outside of the call. Ministry staff, NRT, BCH, and PacifiCan are working on development of the funding stream to support Indigenous-led clean energy projects smaller than 15 megawatts (MW) in capacity.

BACKGROUND:

- BCH's Integrated Resource Plan (IRP) outlines the utility's plan to meet customer electricity needs over a 20-year period and requires BC Utility Commission (BCUC) approval. The 2021 IRP was filed in December 2021 and included a plan to acquire additional power for the province by fiscal 2031.
- Since its release, there have been indications of increased load and a decreased supply of energy in the province. This was reflected in BCH's June 2023 Signpost Update, which forecast electricity demand to increase by 15 percent or more by 2030, moving the timeline for the acquisition of new resources to as early as 2028.

- BCH updated its IRP to accelerate or extend the timing of some of the 2021 IRP near-term actions while also including the new near-term action of acquiring additional energy from greenfield projects and existing facilities.
- As a result, BCH is issuing a call for 3,000 GWh/y of new clean or renewable energy from greenfield facilities able to achieve commercial operation as early as fiscal 2028, three years earlier than the originally forecasted need.
- The BCUC approved the updated IRP, including the call target of 3,000 GWh, in March of this year.

DISCUSSION:

BCH is moving forward with a call for power to help electrify BC's growing clean economy as the province pushes to meet its climate targets and accommodate a growing population. The call for power is scheduled for release in April 2024 and the Request for Proposals will target around 3,000 GWh/y of energy. Project minimum and maximum size is 40 MW and 200 MW, respectively. For a sense of scale, 3,000 GWh/yr is equivalent to the annual output of nine 100MW wind farms.

The call will position BCH to meet the potential electrification load associated with the Province's greenhouse gas reduction targets, as represented by the accelerated electrification load scenario within its updated IRP, with a small surplus in fiscal 2029. There is flexibility in the process to purchase more or less energy.

Factors BCH will consider in a decision to buy more than 3,000 GWh are whether pricing is competitive and seen to be good value for ratepayers, and the updated demand forecast for electricity at the time contracts are awarded. BCH is also considering contracting for more than 3,000 GWh to accommodate attrition (some projects may not be successful for a variety of reasons), that has occurred in prior calls.

The 2024 call for power will be a first in a series of calls. BCH expects the next call to be issued in calendar 2026 depending on need as informed by the IRP, with successive calls to be launched following a similar timeline (i.e. every 2 years). BCH is planning to initiate internal design work for the next call, in early summer, followed by formal engagement and consultation after the conclusion of this call, scheduled for December 2024. Each successive call will be tailored to the system needs at the time of call design, and so may have different volumes, product requirements, locational considerations, etc., depending on BCH's projected needs at that point in time. BCH also expects that the call for power and the subsequent calls will result in \$2.3 - \$3.6 billion in capital spending while creating thousands of new jobs and economic growth in the clean energy sector and in communities across the province. The extent and location of these investment and jobs benefits will depend on which projects are successful in the call.

Project-related permitting is a key to the overall project schedule and has been an area of strategic focus on the call and the subject of BC Hydro Task Force recommendations to the Province. Following these recommendations, BCH is in discussions with the Environmental Assessment Office, Ministry of Water, Land and Resource Stewardship,

and the Clean Energy and Major Projects Office to support work to streamline and accelerate permitting for projects where possible. Strategies for helping with timely environmental assessments and the subsequent permitting process include:

- Pending confirmation of funding, allocating dedicated staff resources and opportunities to centralize technical review teams to manage simultaneous influx of call for power environmental assessment project applications.
- Working concurrently on both environmental assessment project and permitting needs for environmental assessment projects depending on proponent readiness.
- Advancing strategic opportunities including guidance to support IPPs and regulatory agencies through the environmental assessment and permitting processes.

Advice/Recommendations; Cabinet Confidences; Government Financial Information

BC Indigenous Clean Energy Initiative Funding

In tandem with the June 2023 announcement of the upcoming call for power, the Province announced a \$140 million endowment to the NRT to expand the BC Indigenous Clean Energy Initiative (BCICEI) and further support small-scale, Indigenous-led clean energy projects.

The Province, NRT, BCH, and PacifiCan are currently working on a new program stream for Indigenous-led small-scale renewable energy projects (e.g. <15 MW in size) that will be ineligible for the call for power due to their smaller sizes. The \$140 million will help offset the higher anticipated capital cost per MW and higher energy costs of smaller-scale clean energy projects through this stream. The BCICEI program development team intends to release a discussion paper on the new funding stream in April 2024. Among the considerations is the timeline to launch the new program and how to support projects in a fair manner. There will be opportunities to engage and provide feedback on the discussion paper once it is released.

INDIGENOUS PEOPLES CONSIDERATIONS:

The call includes a commitment to economic reconciliation with a requirement for all projects to include First Nations economic participation. The economic participation model was developed in collaboration with First Nations to ensure that the call creates

opportunities for meaningful economic benefits, in alignment with the Declaration on the Rights of Indigenous Peoples Act. The First Nations economic participation model consists of a requirement that each proposal include a minimum 25 percent of First Nations equity ownership in the project, plus evaluation-related credits to incentivize ownership up to 51 percent, and an additional evaluation credit to acknowledge further economic benefits accruing to non-equity holding First Nation(s).

GBA+ OR DIVERSITY AND INCLUSION IMPLICATIONS:

The call for power will help to ensure that BCH is able to continue to provide affordable and reliable electricity to all its customers across BC. Ensuring that affordable and reliable electricity continues to be available may be especially material for customers with low incomes and high electricity consumption and bills.

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	Capital Plan						
	29.3		2.3	3.6	Person-years per \$1M Capex	2.3	3.6
Leveraging 2015 Factors & \$ Adjusted by CPI (+2.7% annually over 8 years)	23.7	0.8	1.9	2.9	5.3	9,860	15,433
Leveraging 2015 Factors & \$ Adjusted by Construction Index (+43% over 8 years)	20.5	0.7	1.6	2.5	5.3	8,529	13,349
Leveraging 2018 Factors & \$ Adjusted by CPI (+3.2% annually over 5 years)	25	0.9	2.0	3.1	4.8	9,420	14,744
Leveraging 2018 Factors & \$ Adjusted by Construction Index (+35% over 5 years)	21.7	0.7	1.7	2.7	4.8	8,176	12,798

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: Site C Project Update

Revised: April 9, 2024

Issue: Site C Project

- In December 2017, Government decided to continue with the construction of Site C. In February 2021, Government confirmed its decision to continue with Site C at a revised cost estimate of \$16 billion and with a one-year delay to its in-service date. The project is currently on schedule and on budget.
 - Government also committed to establishing a BC Food Security Fund, a Peace River Legacy Fund, and providing support for First Nations owned clean energy projects (the Continuation Measures).
 - We have been working on proposals for these programs, which will be brought forward for approval as Site C nears completion.
- Construction on the project has progressed on all fronts with some parts of the project already completed or nearing completion. The project is now more than 84 percent complete.
- BC Hydro completed the earthfill dam in July 2023.
- BC Hydro is on track for complete in-service the project in late 2025, which includes a schedule for achieving first power in late 2024, and commissioning units sequentially in 2025.
- BC Hydro has received more than 20 regulatory approvals that were required in order to commence reservoir filling, and is well-positioned to do so in late Summer/early Fall 2024.
- In addition to these authorizations, reservoir filling must consider BC Hydro's operation of the Peace River system, environmental and weather constraints, and construction progress.

Background/Status:

Overview

- Site C will be the third dam and hydroelectric generating station on the Peace River. Designed to provide 5,100 gigawatt hours of electricity each year with 1,100 megawatts of capacity, which is enough power for 450,000 homes.
- Construction began on July 27, 2015. Full in-service for all 6 generating units is scheduled for December 2025.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Right Bank Foundation Enhancements

- Construction has progressed on the right bank foundation enhancements, which address the geotechnical issues that were identified in the bedrock foundation.
- The installation of 96 large diameter concrete-filled vertical steel piles, to further extend the foundation deeper into the bedrock, and the installation of the powerhouse pile caps are now complete.
- The approach channel waterproofing, including bedrock surface excavations, cleaning, installation of waterproofing lining materials, reinforced concrete placements and grouting, and granular fill placements, is nearly completed.
- Many large hydroelectric dam projects have had geotechnical challenges during construction and have modified their design to suit the conditions.
- One example in British Columbia (B.C.) is the Revelstoke Dam, which was completed in 1984. Adverse bedrock geology discovered during construction led to major design changes. Changes in the concrete dam included additional excavation of weak rock, placement of backfill concrete to provide a more stable foundation, and provision of additional drainage.
- The cost of the right bank foundation enhancement work is included within the current \$16 billion cost estimate. BC Hydro expects the work to be completed prior to reservoir filling.
- Ongoing reviews by the Technical Advisory Board and the two independent, world-leading dam experts, continue to confirm that the design of the foundation enhancements meets the highest safety standards and international best practices.

Construction Progress

- Construction on Site C began in July 2015 and is over 84% complete.
- The earthfill dam, Highway 29 realignment, tunnel conversion process, a new substation, and two 500 kilovolt (kV), 75-kilometre (kM) transmission lines have been completed.

Construction activities for 2024

- Capping the dam and building permanent dam access roads across it for crews to travel on once the Project comes into operation;
- Construction in the powerhouse and spillways, including generator and operating gate installations;
- Final enhancements to complete construction of approach channel; and
- Transmission line maintenance and reclamation.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Earthfill dam construction

- The main earthfill dam, which is 60 metres tall, about 500 metres wide at its base and spans more than one kilometre across the river valley, has been completed.

Generating station and spillways work

- Generating station and spillways work includes the Site C powerhouse, penstocks, spillways, turbines and generators.
- By concrete volume, the generating station and spillways civil work is approximately 99% complete.
- The six penstocks, which will channel the water from the reservoir into the turbines and generators, are large steel pipes, which are 10 metres in diameter and 80 metres long. The lower flexible coupling for the penstocks has been redesigned to a half-welded design to address an unsuccessful hydrostatic pressure test of the coupling in June and July 2023 – that redesigned lower coupler has now successfully passed a leakage test.
- All six turbine runners have been transported to site from Brazil.

Substation and transmission lines

- The Site C substation was completed in October 2020, and the two 500 kV transmission lines are now energized ahead of schedule.
- Construction continues on the three transmission lines connecting the Site C substation to the Site C powerhouse, including the installation of the transmission towers.

Highway 29 construction

- Realignment of segments of Highway 29 has been completed.

Reservoir clearing

- BC Hydro has removed trees and vegetation from the 87-kM-long future Site C reservoir area.

Site C employment

- The latest detailed employment statistics show that there were 3,153 total workers on the Site C project in December 2023.
 - Of the total workers, 2,373 or 75% were from British Columbia;
 - There were 638 workers on site from the Peace River Regional District which was 27% of the construction and non-construction contractor's workforce; and
 - There were 342 women and 197 Indigenous people working for Site C construction and non-construction contractors.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

- Peak employment was reached on the project in September 2022.

Indigenous relations

- BC Hydro has implemented benefit agreements with 8 of the 10 First Nations that are most impacted by the project, Advice/Recommendations; Intergovernmental Communications
Advice/Recommendations; Intergovernmental Communications
- BC Hydro continues to advance economic opportunities for First Nations through capacity building and procurement opportunities. Approximately \$818 million in Site C procurement opportunities have been awarded to companies designated by First Nations since the beginning of the project.
- In December 2023, 197 Indigenous people were working on the Site C project. The project peak of 539 Indigenous people working on the Site C project was reached in June 2023.
- In October 2023, the single confirmed burial in the reservoir zone was relocated to a permanent final resting place selected by First Nations.
- Indigenous elders and community members were present for ceremonies, and the work was done under the supervision of Indigenous monitors. BC Hydro continues to work with Indigenous Peoples on development of the future cultural centre. The cultural centre project is an important accommodation for the impacts of Site C.
- The facility will showcase local Indigenous culture and history in the region, and store and display many of the artifacts uncovered during the construction of Site C.
- The participating Nations have agreed on a conceptual design for the facility and support exploring the option to renovate the existing worker accommodation lodge.
- BC Hydro is now working with the participating Nations to develop the detailed design.

Advice/Recommendations; Cabinet Confidences

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BC Hydro Estimates Note

Electricity Purchase Agreement Renewals

Key Messages

- BC Hydro's 2021 Integrated Resource Plan includes a near-term action to renew clean or renewable Independent Power Producer Electricity Purchase Agreements that expire prior to April 2026 at market-based prices.
- BC Hydro is focusing on renewing Electricity Purchase Agreements because this provides greater certainty that these existing clean or renewable energy facilities will continue to be available to meet BC Hydro's needs.
- As compared to greenfield (new) projects, BC Hydro expects that renewal prices will be more favorable, and existing projects will have minimal incremental environmental impacts, and provide greater certainty with respect to timing and volumes of delivered energy.
- In developing the EPA renewal strategy, BC Hydro's objectives were to minimize the impact of the renewals on ratepayers, minimize the cost and complexity of administration and maximize long-term supply certainty.
- Executed Electricity Purchase Agreements under the program will be filed with the BCUC pursuant to section 71 of the *Utilities Commission Act*.

Key Facts

- The 2021 Integrated Resource Plan had identified 19 electricity purchase agreements for clean or renewable resources which were set to expire prior to April 2026. Since the filing of the 2021 Integrated Resource Plan, three of the 19 IPPs identified have elected not to seek a renewal EPA with BC Hydro. These IPP facilities are no longer in operation.
- The eligible projects range in size from 0.2 to 50 megawatts of nameplate capacity. In total, the projects provide over 240 megawatts of nameplate capacity and approximately 925 gigawatt hours in annual generation. The projects include 16 run-of-river, one storage hydro and one biogas facility.
- Most of these projects eligible for the EPA Renewal Program are expected to have a low cost of service because they have remaining asset life, have had time to pay off their fixed

investments and have low operating costs. As such, BC Hydro expects that they will want to continue operating with the offered EPA Renewal Program pricing options and other contract terms, and that they can do so economically.

- BC Hydro has executed seven Electricity Purchase Agreements under the terms of the EPA Renewal Program. Six of these Electricity Purchase Agreements have been filed with the BCUC for acceptance and on February 27, 2024, the BCUC issued an order accepting each of these agreements under section 71 of the *Utilities Commission Act*. The seventh executed Electricity Purchase Agreement is expected to be filed with the BCUC by March 1, 2024.
- Each of the eligible projects which have renewed their agreements with BC Hydro have executed long-term contracts (i.e., a 20 year duration) at a fixed energy price in accordance with the terms of the EPA Renewal Program. These executed EPAs, represent around two-thirds of the total volume available from the 19 EPAs set to expire prior to April 1, 2026.
- The June 2023 Signpost Update to the Integrated Resource Plan included a plan to renew existing clean or renewable independent power producers with electricity purchase agreements expiring after April 1, 2026 on a cost-effective basis, which may include continuing market-priced based renewal offers.

Q&A

1. What impact will these renewals have on rates?

- BC Hydro is working to ensure ratepayers get the best value from the renewals and has chosen to develop an EPA Renewal Program based on cost-effective pricing options.
- Each executed Electricity Purchase Agreement renewal will be filed with the BC Utilities Commission for review and acceptance.
- BC Hydro has developed the Electricity Purchase Agreement Renewal Program with the key objectives of:
 - minimizing the impact on ratepayers of renewing Electricity Purchase Agreements
 - minimizing the complexity and cost of agreement administration
 - maximizing long term supply certainty for when supply is needed in the future

- As compared to greenfield (new) projects, BC Hydro expects that renewal prices will be more favorable, and existing projects will have minimal incremental environmental impacts, and provide greater certainty with respect to timing and volumes of delivered energy.

2. Weren't there 19 projects in the Integrated Resource Plan?

- There were previously 19 clean or renewable IPP projects that were eligible for the program.
- As of February 2024, three of the 19 IPPs identified have elected not to seek a renewal EPA with BC Hydro. These IPP facilities are no longer in operation. The three IPP facilities that are no longer in operation are Vancouver Landfill Gas #1, Eagle Lake Micro Hydro, and Hartland Landfill Gas Utilization.

3. Is the 700 GWh mentioned in the Updated IRP part of the 3,000 GWh Call for Power?

- No. BC Hydro estimates there is approximately 700 GWh per year of new clean or renewable energy available from existing facilities that are already connected to the BC Hydro system but that are not selling this additional energy to BC Hydro.
- BC Hydro plans to seek to acquire energy from these existing facilities within the next several years and, provided that such acquisitions can be achieved at cost-effective pricing, expect such resources would be available prior to fiscal 2029.
- BC Hydro anticipates that the acquisition of new clean energy from these existing facilities would be through a process of bilateral negotiations with individual independent power producers.

4. Are there other projects for which were identified as expiring prior to April 2026?

- There are two other Electricity Purchase Agreements – SEEGEN and Island Generation (Gas-Fired Thermal on Vancouver Island) – which were or are set to expire prior to April 2026 that are not from 100 per cent clean or renewable resources. These expiring agreements will be dealt outside of the EPA Renewal Program.
- The renewal of the Electricity Purchase Agreement for the Island Generation facility was executed in May 2022 for a for a 4.5-year term with Capital Power, which gives BC Hydro exclusive rights to dispatch and purchase electricity.

- BC Hydro entered into this short-term agreement with Island Generation for additional back-up support for Vancouver Island while BC Hydro continues to repair transmission cables to the island that were damaged in summer 2021.
- This Electricity Purchase Agreement renewal was filed with the BC Utilities Commission under section 71 of the *Utilities Commission Act* and was accepted in November 2022.
- The SEEGEN Electricity Purchase Agreement is due to expire in March 2025. SEEGEN is a Municipal Solid Waste Disposal facility owned by Metro Vancouver, and located in Burnaby. The waste heat from the incineration process is used to generate electricity as a by-product. Metro Vancouver has also entered into agreements with River District and the city of Burnaby to use a portion of SEEGEN’s waste heat in district energy systems to supply heat and hot water to nearby residential and commercial developments, resulting in reduced greenhouse gas emissions as compared to heating with natural gas.

BC Hydro Estimates Note

Integrated Resource Plan (IRP)

Key Messages

- The Integrated Resource Plan outlines how BC Hydro will meet the evolving electricity needs of its customers over the next 20 years.
- It is a flexible plan that supports British Columbia’s legislated greenhouse gas reduction targets, electrification goals and the drive to shift from fossil fuels to clean electricity to help combat climate change.
- The Integrated Resource Plan was shaped with input from the public, Indigenous Nations and industry experts through extensive consultation.
- BC Hydro filed the 2021 Integrated Resource Plan with the BC Utilities Commission in December 2021, with an update filed in June 2023.
- The June 2023 Signpost Update showed that electricity demand is now forecast to increase by 15 per cent or more by 2030, and the need for new resources had moved up to as early as 2028. As a result of the Signpost Update, BC Hydro is launching a call for power to acquire 3,000 GWh of clean, renewable energy.
- With a decision from the B.C. Utilities Commission on the 2021 IRP Update expected this spring, BC Hydro is turning its attention to the next iteration of long-term resource planning.

Key Facts

- The IRP considers a variety of scenarios to develop action plans, which provide flexibility for a range of possible load outcomes. The Near-term Actions from the 2021 IRP include demand-side management initiatives, infrastructure investments and the renewal of existing contracts with independent power producers.
- Since the 2021 IRP was developed during a time of energy transition and global economic uncertainty, BC Hydro committed to monitoring various “signposts” – changes in BC Hydro’s operating environment, such as economic conditions and the rate of electrification – to determine whether any adjustments were required to the IRP as it was being implemented.

- The first iteration of BC Hydro’s signposts process occurred through early 2023 (BC Hydro 2021 IRP Application Signpost Update). As part of this process, BC Hydro took a fresh look at how BC Hydro customers’ future demand for electricity was evolving, and also updated its forecasted savings from demand-side management activities.
- This included an updated Reference Load Forecast scenario, which represents BC Hydro’s assessment of expected future electricity demand considering future load additions and subtractions that can be forecast with reasonable certainty. It showed a 2,300 gigawatt hours (GWh) higher load than the Reference Load Forecast used in the 2021 IRP after Fiscal 2030, primarily due to higher large industrial and commercial demand.
- In addition to this, BC Hydro considered the Accelerated Electrification Load scenario, which represents the electricity load impacts associated with one of many, potential pathways to meet the Province of B.C.’s greenhouse gas reduction targets in the years 2025, 2030 and 2040.
 - Relative to the 2020 vintage, the 2023 Accelerated Electrification Load scenario is approximately 2,000 GWh lower in Fiscal 2030 primarily due to adjustments to the timing of forecast electrification in the natural gas industry, and approximately 3,400 GWh higher in Fiscal 2040 primarily due to forecast load from the additional production of hydrogen through electrolysis.
- The update also examined the latest contributions from BC Hydro’s existing supply resources. These updates resulted in the following supply changes for the year Fiscal 2030, relative to what was included in the 2021 IRP submission to the B.C. Utilities Commission filed in December 2021:
 - a 900 GWh decrease in forecast supply from existing, committed and planned resources, primarily due to reductions in the expected energy generation from biomass generating facilities related to future fuel supply risk
 - We reflected the success of our demand side management efforts which helped our customers reduce their demand by 800 GWh, which also helped those customers with affordability by reducing their bills. Those customer actions are now embedded in our view of future demand.

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- The net impact of these changes (from both demand and supply) was that the Near-term Actions set out in the 2021 IRP were no longer sufficient to meet future needs of BC Hydro’s customers. In addition, the first year of need for future energy resources had advanced from Fiscal 2031 to Fiscal 2029.
- As a result, BC Hydro decided to accelerate or extend the timing of some of the 2021 IRP Near-term Actions. BC Hydro also added a new near-term action: to acquire new clean or renewable energy from greenfield projects and existing facilities.
- In the 2021 IRP proceeding, BC Hydro committed that it would submit its next long-term resource plan for the integrated power system within 18 months of the BCUC’s decision on that application.

Key Timelines

Date	Milestone/Activity
December 21, 2021	BC Hydro files Integrated Resource Plan with BC Utilities Commission
June 15, 2023	BC Hydro submits Signposts Update to BC Utilities Commission

Q&A

1. How is BC Hydro’s energy planning process adapting to the rapid change of B.C.’s energy transition?

- With a decision from the B.C. Utilities Commission on the 2021 IRP Update expected in March or April 2024, BC Hydro is turning its attention to the next iteration of long-term resource planning. In the 2021 IRP proceeding, BC Hydro committed that it would submit its next long-term resource plan for the integrated power system within 18 months of the B.C. Utilities Commission’s decision on that application.
- BC Hydro is proposing a new “living” long-term resource planning cycle, with regular long-term resource plan filings that are better able to match the potential pace of change in this time of energy transition.

For questions on energy supply, please refer to B3. Energy Supply

For questions on call for power, please refer to B6. Call for Power

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Industrial Electrification – Mega-Loads and North Montney

Drafted/Revised: April 9, 2024

Issue: Increased large industrial project demands for electricity

Response:

- Electrification is one of the pathways identified in the CleanBC Roadmap to 2030, leading to reduced or avoided emissions in the industrial sector.
- One example of this is the strong interest in electrifying development of natural gas reserves in the North Montney region of northeastern British Columbia (B.C.), where no transmission lines currently exist.
- Following the January 2023 agreement between the Province, the Blueberry River First Nations and other Treaty 8 Nations, North Montney electrification development discussions have restarted, and the Province is focused on facilitating collaboration between BC Hydro, proponents, and First Nations.
- BC Hydro is also aware of an increasing and unprecedented number of proposed industrial projects throughout BC requiring over 150 megawatts (MW) of electrical capacity (mega-loads). Depending on investment decisions, the generation resources and electricity infrastructure that may be needed to serve these mega-loads could be significant.
- To meet the need for power, BC Hydro launched a competitive call for power on April 3, 2024 – the first in 15 years – to acquire more affordable clean and renewable electricity this spring.
- It is expected to be the first in a series of calls for power as BC Hydro requires more power in order to electrify B.C.'s growing economy and meet the province's climate goals.
- BC Hydro's updated 10-year capital plan provides for almost \$4 billion in spending every year to drive economic growth for communities and to ensure that people and businesses can power up with clean, reliable and affordable electricity.
- The Province is considering the potential impacts of mega-loads as it develops the Climate Aligned Energy Framework with the goal of responsibly managing our clean electricity resources while also encouraging economic growth.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Background/Status:

- B.C.'s industrial sector accounts for 40% of B.C.'s greenhouse gas (GHG) emissions, mostly due to processing and compressors in the natural gas sector, diesel engines in mining and forestry, and processing heat in the forest sector. Industry represents the largest electrification opportunity to reduce emissions in B.C.
- BC Hydro is aware of an increasing and unprecedented number of proposed industrial projects requiring over 150 MW of electrical capacity. This includes hydrogen production, oil and gas, mining, port electrification, and cryptocurrency.
- Since the introduction of Tariff Supplement 6 (TS6) in 1991, BC Hydro has not connected any customer loads greater than 150 MW.
- Under TS6, projects requesting over 150 MW of capacity are required to pay the cost of any incremental generation needed to serve their load. These costs could be significant and could result in negative final investment decisions.
- If these generation costs are not passed on to the new industrial customer, the cost of new energy and capacity resources required to supply these projects would put upwards pressure on rates for all customers.
- Potential new generation resources and electricity infrastructure needed to serve these mega-loads could be significant. The Province is considering the potential impacts of this future demand along with the potential demands from other sectors as it develops the Climate Aligned Energy Framework.

Advice/Recommendations

North Montney Electrification:

- In Spring 2021 BC Hydro issued the North Montney Expression of Interest which confirmed there is strong industry interest in electrifying natural gas development in the North Montney region of northeastern B.C.

Advice/Recommendations

- In 2021, a BC Hydro project to investigate building a shared 100 kilometre-230 kilovolt transmission line in the North Montney was put on hold pending outcome of negotiations between the Province and Blueberry River First Nation following the June 2021 *Yahey* decision.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- On January 18, 2023, the Province reached an agreement with the Blueberry River First Nation, and North Montney Electrification restarted with industry expressing interest in building their own transmission lines to connect to the BC Hydro system.
- BC Hydro is working with prospective customers and Government to coordinate shared infrastructure development to reduce cumulative effects.
- Proponents have requested government support for: expedited permitting; First Nations consultation and participation opportunities, including co-ownership; federal funding; and emissions target relief if transmission infrastructure can't be built in time despite best efforts.
- Next steps include continuing to work with BC Hydro, industry, and First Nations to coordinate development that minimizes cumulative impacts, explore equity ownership opportunities, and ensure the timely advancement of projects.

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity and Utility Regulation Division	778-698-7183
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Powerex Power Imports

Drafted/Revised: February 12, 2024

Issue: Details and context for power imports in 2023

Response:

- With severe drought conditions impacting the Province for more than a year, Powerex imported approximately 10,000 gigawatt hours (GWh) of electricity to meet BC Hydro customers needs in 2023.
- Under average water conditions BC Hydro has a surplus of clean power which Powerex, BC Hydro's trading subsidiary, can export. B.C.'s clean exports help reduce overall greenhouse gas emissions (GHG) in the western electricity grid.
- Even with this year's drought condition, BC was still a net exporter of power for the past five-year period.
- While imports have been higher than average years due to managing through drought conditions, 80 per cent of the power generated is still coming from hydroelectric facilities across the province.
- The current short-term need for BC Hydro to import additional electricity does not reduce the Province's ability to meet electrification goals.
- Powerex imports from the US and Alberta are from clean or unspecified market energy sources.
- Unspecified market electricity in the West has been trending away from fossil fuels towards cleaner forms of generation as more wind and solar replace retiring coal and natural gas.
- Powerex continues to prioritize power imports from trading partners during their hours of surplus clean energy production (e.g., solar from California during the day).
- The carbon intensity of electricity supplied in B.C. is calculated and reported publicly by the Climate Action Secretariat (CAS) in its Electricity Emissions Intensity Factor.
- B.C.'s supply of electricity is cleaner than every other state and province in western North America.

Background/Status:

- BC Hydro's electricity system is part of the Western Interconnection, a network of high-voltage transmission lines that connect B.C. with other utilities in western North America, including those in Alberta and eleven western U.S. states.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- The BC Hydro system is comprised predominantly of hydroelectric generation facilities, which produce over 90% of the electricity supply for the Province in a typical year.
- Powerex is BC Hydro's trading subsidiary that purchases and sells wholesale power with trading partners throughout the interconnected grid.
- Most years, the BC Hydro system has an annual surplus of electricity generated from renewable resources, which is exported and sold in western wholesale electricity markets by Powerex. B.C.'s clean energy exports help reduce overall GHG emissions in the western electricity grid.
- For the last year and a half B.C. has experienced severe drought. This drought, concurrent with increased demand, has resulted in an energy shortfall in the BC Hydro system and B.C. becoming a net importer in 2023.
- Powerex imports from sources of clean generation or unspecified market electricity. Unspecified market electricity has been the standard in the wholesale power markets and represents a blend of all the resources in the market.
- Unspecified market electricity in the West has been rapidly trending away from fossil fuels towards cleaner forms of generation.
- All emissions associated with imported electricity are reported to CAS, which publishes an Electricity Emission Intensity Factor.
 - In 2023, this value was just over 11 tonnes of CO₂ equivalent per GWh (tCO₂e/GWh), which is a small fraction of the emissions rate from natural gas 500 tCO₂e/GWh, or coal generation (1,000 tCO₂e/GWh).
- Powerex's imports serve more than just BC Hydro's demand, but also enable exports for future need. Maintaining trade income also allows the Province's electricity rates to remain among the lowest in Canada.
- The Province's power supply will have new sources of clean generation when the 5,100 gigawatt-hour per year Site C dam fully comes into service in 2025, in addition to the BC Hydro Call for Power seeking an additional 3,00 gigawatt-hours per year later this decade. BC Hydro has announced the 2024 Call for Power will be the first of ongoing power calls required to keep up with growing demand for clean power.
- The Province has set itself on a path to decarbonize its economy and is making good progress towards that goal both in the electricity sector and using its clean electricity to decarbonize other economic sectors.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity and Utility Regulation Division	778-698-7183
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BC Hydro Estimates Note

Rates / Electricity Affordability Credit

Key Messages

- BC Hydro is committed to keeping rates affordable for customers while providing safe, reliable power and continuing to invest in its system.
- As residents and businesses across B.C. look to reduce their greenhouse gas emissions by making the switch to clean electricity, we are committed to investing and growing our system now and into the future. But ensuring our rates remain affordable is equally important.
- We recognize that rising costs affect everyone and the need for electricity is a key part of everyday living for households and businesses.
- The Electricity Affordability Credit is a one-time bill credit in 2024/25 to help reduce electricity costs for British Columbians. In total, it is estimated to save electricity ratepayers about \$370 million over the next year.
 - The credit is available to all residential, commercial and industrial electricity ratepayers regardless of income levels and business size, and to customers of BC Hydro and non-BC Hydro electricity utilities.
- The Electricity Affordability Credit will more than offset the anticipated impacts of BC Hydro's 2.3 per cent general rate increase approved by the BC Utilities Commission on February 20, 2024, which is equivalent to about one-half of the credit.
- The Electricity Affordability Credit will be based on electricity consumption in 2023/24 and on average, residential households should see savings of about \$100 over 12 months starting in April 2024.
- On average, commercial businesses and industrial customers will see savings of 4.6 per cent based on their consumption in the previous year, to help reduce rising operating costs.

Key Facts

- Over the past five years (Fiscals 2020 to 2024), the cumulative customer bill increase has been 2.1 per cent. This is:
 - approximately 11.6 per cent lower than the previous government's 10-Year Rates Plan forecast of 13.7 per cent over the same period;
 - approximately 6.0 per cent lower than the Phase 1 Comprehensive Review forecast of 8.1 per cent over the same period; and,
 - approximately 16.6 per cent lower than the actual and forecast rate of inflation of 18.6 per cent over the same period.
- BC Hydro rates are currently 15.6 per cent lower than the cumulative rate of inflation over the past seven years (starting 2017-18).
- BC Hydro rates are currently 12.4 per cent lower than the previous government's 10-Year Rates Plan, saving residential customers approximately \$36 million per year, commercial customers approximately \$32 million per year and industrial customers approximately \$14 million per year.
- BC Hydro rates continue to remain among the lowest in North America.

Q&A

1. Why are BC Hydro's rates increasing given the Province's affordability mandate?

- The primary drivers of the 2.3% bill increase in 2024/25 are:
 - Increase in forecast base operating costs primarily driven by inflationary pressures, including labour costs.
 - Increase in forecast finance charges related to the debt increases to support BC Hydro's capital plan, including Site C which is forecast to be in-service in late 2024/25.
 - Increase in the forecast cost of energy primarily to serve a forecast increase in customer load.

- The Electricity Affordability Credit will be based on electricity consumption in 2023/24 and on average, residential households should see savings of about \$100 over 12 months starting in April 2024.
- On average, commercial businesses and industrial customers will see savings of 4.6 per cent based on their consumption in the previous year, to help reduce rising operating costs.
- BC Hydro is committed to keeping rates affordable for customers while providing safe, reliable power and continuing to invest in its system.
- As residents and businesses across B.C. look to reduce their greenhouse gas emissions by making the switch to clean electricity, we are committed to investing and growing our system now and into the future. But ensuring our rates remain affordable is equally important.
- We recognize that rising costs affect everyone and the need for electricity is a key part of everyday living for households and businesses.
- BC Hydro rates are currently 15.6 per cent lower than the cumulative rate of inflation over the past seven years (starting 2017-18).
- BC Hydro rates are currently 12.4 per cent lower than the previous government's 10-Year Rates Plan, saving residential customers approximately \$36 million per year, commercial customers approximately \$32 million per year and industrial customers approximately \$14 million per year.

2. What are rates starting April 1, 2024?

- The Electricity Affordability Credit will more than offset the anticipated impacts of BC Hydro's 2.3 per cent general rate increase just approved by the BC Utilities Commission, which is equivalent to about one-half of the credit.
- A decision on the Fiscal 2025 bill increase was issued by the BCUC on February 20, 2024.
- The BCUC approved BC Hydro's application that seeks the Deferral Account Rate Rider (DARR) and the Trade Income Rate Rider (TIRR) to be set at amounts that would result in an overall net bill increase of 2.3 per cent on a combined basis in Fiscal 2025 to promote bill stability and limit bill volatility.

3. How much of a credit will customers get and how do they receive the credit?

- An average BC Hydro residential customer will see \$100 in bill credits in 2024/25, while commercial/industrial customers will see a 4.6 per cent credit (see below).

BC Hydro	# of customers	Average Annual Bill Credit (\$)	Cost to BC Hydro (\$M)
Residential	Advice/Recommendations;	100	Advice/Recommendations;
Commercial/Small Industry	Government Financial Information	Advice/Recommendations;	Government Financial Information
Large Industrial		Government Financial Information	
Total Cost to BC Hydro			340

- The credit is calculated based on customer electricity consumption prior to March 31, 2024, and the credit will be applied to BC Hydro customer bills over the April 2024 to March 2025 billing period.
- Customers do not have to apply to BC Hydro to receive the Electricity Affordability Credit if they were customers of BC Hydro as of March 31, 2024. The credits will be calculated automatically and applied to bills in 2024/25.
- The Electricity Affordability Credit will not affect current or future BC Hydro rates as they are independently set by the BCUC. As such, rate increases approved by the BCUC will still appear on electricity bills, but a separate credit will show on each customer bill over the 2024/25 billing period.
- Actual credits for each ratepayer will vary, and they are dependant on electricity usage prior to March 31, 2024.

4. What is the cost of the Electricity Affordability Credit and who pays?

- The Province is paying for the Electricity Affordability Credit. The total cost of the Electricity Affordability Credit is estimated at \$370 million and will be shown as a cost to the Fiscal Plan in 2023/24. This estimate includes:
 - \$340 million for BC Hydro in respect of its customers as of March 31, 2024; and

- BC Hydro will recognize the costs of providing Electricity Affordability Credits for its customers by reducing its planned net income in 2023/24 (Fiscal 2024) by \$340 million.
 - Section 35 of the *Hydro and Power Authority Act* enables government directives for BC Hydro to pay BC Hydro customers a specified amount.
 - The costs to BC Hydro will remain manageable and BC Hydro expects to remain within its 80:20 debt-equity target in 2023/24 and 2024/25.

5. How does this new credit compare to the 2022 credit?

- In late 2022/23, the Province provided a \$100 one-time flat bill credit to residential customers and credits to commercial ratepayers, but did not include industrial customers.
- The focus of the 2022 rebates was on residential and commercial customers who were most significantly impacted by the pandemic. Had the 2022 rebate been extended to industrial customers, this would have reduced the amount available for residential and commercial customers which included small businesses.
- Since 2022, inflation has taken off at levels not expected, and this has significantly impacted everyone, including large industrial customers who are critical in helping to maintain and grow the B.C. economy and jobs.
- Extending the Electricity Affordability Credit to large industrial customers does not mean enhancing shareholder profits. At 4.6 per cent, the credit is intended to temporarily offset the expected impact of BC Hydro's 2.3 per cent rate increase effective April 1, 2024, help reduce operating costs following the recent high inflation period and help ensure continued jobs for British Columbians.

6. Will the Office of the Auditor General have concerns about government direction impacting the BCUC's rate-setting authority?

- In implementing the Electricity Affordability Credit for BC Hydro customers, the government intends to issue a directive to BC Hydro under authority of section 35 of the *Hydro Power and Authority Act*, and not through a direction to the BCUC. Section 35 enables government directives for BC Hydro to pay BC Hydro customers a specified amount from its net income.

Back-Up Data and Context

- Following Phase 1 of Government’s Comprehensive Review, BC Hydro has taken a number of steps to help keep rates affordable for its customers. As a result, rates were reduced by 1.62 per cent for Fiscal 2021. Keeping with the commitment to keep rates low, BC Hydro applied for a modest 1.16 per cent rate increase for Fiscal 2022, which is below inflation. In July 2021, BC Hydro submitted a compliance filing to the B.C. Utilities Commission (BCUC), which calculated the impact of these adjustments and reduced the rate increase from 1.16 per cent to 1 per cent.
- In August 2022, BC Hydro filed its Fiscal 2023 to 2025 Revenue Requirements Application (RRA), requesting an average annual bill increase of 1.1 per cent over a three-year test period:
 - Fiscal 2023: bill decrease of 1.4 per cent
 - Fiscal 2024: bill increase of 2.0 per cent
 - Fiscal 2025: bill increase of 2.7 per cent
- On June 19, 2023, the BCUC issued its final order on BC Hydro’s Fiscal 2023 to 2025 Revenue Requirements Application, which directed adjustments to BC Hydro’s revenue requirements for Fiscals 2023 to 2025. The decision resulted in slightly higher rates than the approved interim rates for Fiscal 2023 and Fiscal 2024, which resulted in minor bill adjustments.
- From a bill impacts perspective, this resulted in the following:
 - A bill decrease of 1.23 per cent for Fiscal 2023 compared to the bill decrease of 1.4 per cent in the Revenue Requirements Application.
 - A bill increase of 2.20 per cent in Fiscal 2024 compared to the bill increase of 2 per cent in the Revenue Requirements Application.
- A decision on the Fiscal 2025 bill impact was received on February 20, 2024 and the BCUC has accepted BC Hydro’s requested a 2.3 per cent bill increase.
- At the end of September 2023, there was a one-time catch-up charge on customer bills, related to the BCUC’s June 19, 2023 decision on Fiscal 2024 bills, of about \$4 for residential customers on average.

BC Hydro Estimates Note

Residential Inclining Block Rate Redesign

Key Messages

- BC Hydro and government are committed to keeping electricity rates affordable for British Columbians.
- In June 2023, the BCUC directed BC Hydro to file an application to update or eliminate the current two-tier Residential Inclining Block (RIB) conservation rate by June 30, 2024.
- The way BC Hydro’s residential customers use electricity has changed a lot since the RIB rate was first introduced, and we’re developing new rate options to provide customers with more choices.

Advice/Recommendations

Key Facts

- The current RIB rate applies to 98.7% of residential customers (1.9 million). The rate breakdown is as follows:

Basic Charge	21.17 ¢ per day
Step 1 Energy Charge	9.75¢ per kWh
Step 2 Energy Charge	14.08¢ per kWh
Step 1 / Step 2 Threshold	1,350 kWh per two-month billing period (675 kWh per one-month billing period)

- The Step 1 threshold of 675 kWh was set at approximately 90% of the median consumption of BC Hydro’s Zone I Residential customers.
- The average monthly consumption of all Residential customers in fiscal 2023 was 826 kWh, which is about 10,000 kWh a year, with an average monthly bill of approximately \$97.
- 55% of RIB rate customers live in single-detached homes and duplexes and 31% live in apartments.

- Distribution of RIB customers by region is as follows:

Lower Mainland	Vancouver Island	Southern Interior	North
60%	21%	12%	7%

Key Timelines

Date	Milestone/Activity
2008	RIB rate introduced
June 2023	BCUC directs BC Hydro to update or eliminate the RIB rate by June 2024
Fall 2023 & Spring 2024	Residential customer research and stakeholder engagement workshops
June 30, 2024	Application due for filing with BCUC

Q&A

1. The RIB rate was intended to encourage conservation. Is this no longer a priority for BC Hydro?

- Conservation remains a priority for BC Hydro, the RIB rate is no longer achieving incremental energy savings.
- BC Hydro encourages customers to be smart with power in when they use it and how much they consume.
- As the province continues to electrify, BC Hydro also wants to make sure that rate designs do not discourage British Columbians from using more of B.C.’s clean electricity to meet their needs.
- The RIB rate is just one of a number of options available for customers to use energy more efficiently. For example:
 - Team Power Smart Challenge
 - Rebates for making home energy efficiency upgrades
 - The new optional Time-of-Day rate which will offer customers a way to save money on their bills if they can shift usage to lower-price times of the day

2. Will changes to the RIB rate result in higher bills for customers?

- Introducing a suite of rate options to better meet customers' lifestyles and needs provides customers the opportunity to choose a rate that can help them save on their bills.

3. Why is BC Hydro also filing a RIB pricing principles application when you plan to update the RIB rate?

- Pricing principles are filed separately from the broader Rate Design Application because they have different purposes and follow a different regulatory process.
- The current RIB pricing principles are set to expire March 31, 2024, so BC Hydro will apply in February 2024 for RIB pricing principles to be effective April 1, 2024. These pricing principles will be in place (pending BCUC approval) until a decision is made on BC Hydro's Residential Rate Design Application.

Back-Up Data and Context

- Currently, the RIB Rate applies on a default basis to all Residential customers in our integrated service area (i.e., Zone I). There are limited options available to some qualifying customers under other rate schedules:
 - Qualifying Residential farms may take service under RS 1151, 1161 (Exempt Residential Service Rate) which has a flat energy charge instead of inclining block energy charges like the RIB Rate.
 - There are also a small number of customers, such as common areas of Residential multi-occupancy buildings, who have options to select the applicable General Service or Residential Service rate.
 - Qualifying Residential customers with small scale generating facilities, such as rooftop solar, may also participate in RS 1289 - Net Metering Service.

BC Hydro Estimates Note

Transmission Service Rate

Key Messages

- On December 15, 2023, The British Columbia Utilities Commission (BCUC) approved a new flat rate for BC Hydro's transmission service customers that will replace current stepped rates, helping to remove a barrier to electrification.
- There will be a three-year transition period that will help mitigate annual bill increases for customers, provide recognition for past customer investments in energy efficiency while ensuring a timely transition to the new rate.
 - Customers will start to be charged under the transition rates on April 1, 2024 and will be transitioned to the new flat rate by April 1, 2026.
- This will encourage more customers to make the switch from using fossil fuels to clean electricity, helping to reduce greenhouse gas emissions.
- Conservation continues to be a BC Hydro priority, even without maintaining the stepped rate design. Energy efficiency programs and initiatives will continue and are planned to ramp up to higher levels in future years.

Key Facts

- The new flat rate for transmission service customers is a flat energy charge of \$44.39 per megawatt hour (MWh) and demand charge of \$11 per kilovolt-ampere (kVA) (in fiscal 2024 dollars).
- BC Hydro serves approximately 200 individual customer sites at Transmission voltage across its service territory. 150 of those customers were previously on the stepped rate.
- BC Hydro estimates that 68 transmission service customer accounts will experience bill decreases, 30 customer accounts will experience bill increases of to up 4%, and 17 customer accounts will experience bill increases greater than 4%.

- Transmission service customers accounted for about 27% of BC Hydro’s total energy consumption and 18% of domestic revenue in fiscal 2022.

Key Timelines

Date	Milestone/Activity
2006	Transmission Service Rate first introduced
February 2021 – October 2022	Customer consultations/engagement
March 16, 2023	Application filed with BCUC
December 15, 2023	BCUC approves application

Q&A

1. Why are you moving to a flat rate?

- The provincial government’s 2002 Energy Plan provided the initial rate design and policy framework for the development and implementation of the Stepped Rate.
- The previous stepped rate was originally intended to encourage conservation among BC Hydro’s large industrial customers and reflected the economic and policy environment in place at the time.
- In July 2021, the Phase 2 Comprehensive Review of BC Hydro identified flattening the transmission stepped rate as an action to support CleanBC by removing a barrier for electrification.
- Flat rates can provide greater bill stability to our customers – especially for those looking to switch from fossil fuels to clean electricity, helping to reduce greenhouse gas emissions.
- The new flat rate eliminates the higher tier 2 energy charge, which simplifies the rate structure and removes the disincentive to switch to clean hydroelectricity from fossil fuels for our industrial customers.

2. Why have you included a three-year transition period? Why not move to the flat rate immediately?

- Most customers will move to a flat rate during the transition, only customers that have made past investments in energy efficiency have the option to continue on the stepped rate for two more years.

- The proposed transition was designed and presented after stakeholder consultation and careful study and consideration.
- The transition provides transmission customers who are expected to see bill increases time to adjust to the new flat rate and to mitigate immediate impacts.

3. Why is BC Hydro encouraging customers to use more power when they are also forecasting that new sources of electricity will be required earlier than expected?

- We know many British Columbians are interested in fighting climate change and reducing their carbon footprints. A great way to do that in B.C. is to switch from using fossil fuels to clean hydroelectricity.
- Conservation continues to be a BC Hydro priority, even without maintaining the stepped rate design. Energy efficiency programs and initiatives will continue and are planned to ramp up to higher levels in future years.

4. Does the new flat rate align with what other jurisdictions are doing?

- Yes. Most utilities in Canada offer a rate with a flat energy charge and a flat demand charge. The only other utility offering an inclining block energy rate is Newfoundland and Labrador Hydro, which has a small price differential between the energy price tiers.
- Across Canadian jurisdictions, the flat energy charges range from \$33.06 per MWh (Hydro Quebec) to \$89.87 per MWh (Nova Scotia). Demand charges range from \$1.49 per 21 kW (Newfoundland and Labrador Hydro) to \$14.80 per kW (New Brunswick), in fiscal 2022 dollars.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Indigenous Clean Energy Opportunities; Declaration Act Action Plan, Action 4.43

Drafted/Revised: February 14, 2024

Issue: First Nations are calling for expanded clean energy economic opportunities to meet the province's reconciliation objectives and obligations under the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act) and Declaration Act Action Plan.

Response:

- Our government is committed to advancing reconciliation with Indigenous peoples and aligning provincial legislation with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) as required under the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act).
- Section 4.43 in the Declaration Act Action Plan commits the province to co-develop recommendations on strategic policies and initiatives for clean and sustainable energy with First Nations.
- To fulfil this commitment, the Province and the First Nations Leadership Council (FNLC) jointly convened the Indigenous Clean Energy Opportunities (ICEO) initiative as a forum for the Province and First Nations to work together to advance First Nations participation in the B.C. clean energy sector.
- ICEO is co-led by the First Nations Energy and Mining Council (FNEMC) and the Ministry of Energy, Mines, and Low Carbon Innovation (EMLI).
- Through the focused working groups and public workshops, ICEO is helping the Province and First Nations:
 - share knowledge and perspectives about First Nations' clean energy opportunities;
 - collaboratively develop recommendations for how to increase and improve First Nations' participation the B.C. clean energy sector, including clean electricity; and
 - engage with one another about clean energy legislation and policies, including statutory amendments, to better align the province's clean energy laws with UNDRIP.
- Notable work for ICEO in 2024/25 will include the development of models for increased First Nations participation in the B.C. electricity market and focused engagements regarding clean

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

energy regulations and legislation.

- I look forward to a continued partnership with the FNLC and FNEMC through ICEO, and to receiving the co-developed recommendations arising from that collaboration.

Background:

- Under the Declaration Act Action Plan, EMLI has committed to co-develop recommendations on strategic policies and initiatives for clean energy with Indigenous partners (Action 4.43).
- In May 2021, then Minister Bruce Ralston and the FNLC agreed to co-design and co-lead this province-wide initiative. FNLC designated FNEMC to partner on the process with EMLI.
- ICEO is part of the Relationship Protocol agreement between FNLC and EMLI.
- In FY23, the Province provided \$2.4 million in up front funding to the FNEMC to support activities under the Relationship Protocol for three years (FY24 to FY26). EMLI and FNEMC will jointly develop and approve a workplan and budget to determine how this funding will be distributed amongst Relationship Protocol initiatives. In FY24, ICEO received \$105,000 in Relationship Protocol funding.
- ICEO was funded from the Ministry of Indigenous Relations and Reconciliation (IRR) Indigenous Funding Program (IFP) in FY22 and FY23. IFP Funding for FY25 has been requested to further ICEO engagements and activities.
- ICEO has established strong working relationships between EMLI and FNEMC through this co-led process. These relationships have supported collaborative discussions between the ICEO and BC Hydro, the BC Utilities Commission, and the New Relationship Trust. There is strong interest in ICEO engagement across EMLI and among First Nations organizations.

Engagement Table Framework:

- Input from workshops held in March 2022 was used by EMLI and FNEMC to jointly develop "Engagement Tables" to advance collaborative policy development and engagement on priority topics.
- In July 2022, EMLI Minister and FNLC leadership approved the Engagement Tables framework, establishing three ICEO Engagement

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Tables: Electricity Table, Hydrogen Market Opportunities Table, and Legislative Standing Table.

Electricity Table:

- The work of the Electricity Table has focused on sharing knowledge and building capacity with First Nations leadership, communities, and organizations to ensure all participants have common understanding of B.C.'s clean electricity sector.
- Knowledge topics include the provincial electric grid, generation, transmission, end-use, utilities, and regulation of utilities.
- An Electricity Table Advisory Group (ETAG) has been established to establish key areas of focus, provide feedback and recommendations, and suggest areas of exploration for Electricity Table activities. ETAG representatives consist of First Nations, EMLI, and industry representatives. The First Nation ETAG representatives also worked collaboratively with BC Hydro on the Call for Power First Nation engagements.

Hydrogen Market Opportunities Table:

- With the support of the B.C. Hydrogen Office, Natural Resources Canada, and industry partners including Foresight, the ICEO hosted two interactive workshops for rightsholders to provide knowledge about the hydrogen sector and potential market opportunities for First Nations in the hydrogen industry.
- In December 2023, FNEMC produced a B.C. First Nations Hydrogen Strategy for First Nations in BC building on feedback provided at the ICEO hydrogen workshops in January and June 2023. Future opportunities to advance collaborative discussions on First Nations' participation in the B.C. hydrogen market are expected to be explored between EMLI, FNEMC and NRCan.

Legislative Standing Table:

- The work of the Legislative Standing Table is intended to support EMLI's efforts to align clean energy legislation with UNDRIP as per DRIPA Section 3 obligations.
- The Legislative Standing Table will create a forum to bring forward provincially proposed clean energy legislative and regulatory amendments for discussion with First Nations, EMLI and FNEMC. First Nations leadership, rightsholders and/or the FNEMC will also bring forward legislative proposals for discussion.
- The ICEO Legislative Standing Table will support EMLI engagement processes with rightsholders on proposed legislative and regulatory

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amendments.

- Legislative Standing Table work is expected to increase in fiscal year 24/25.

Cross Reference: ERD 07 - BC Hydrogen Strategy

SIPD 01 – UNDRIP Implementation

Contact:

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2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Low Carbon Fuel Standard

Drafted/Revised: March 11, 2024

Issue: New Legislation governing the BC Low Carbon Fuel Standard

Response:

- On January 1, 2024, the *Low Carbon Fuels Act* (LCFA) and its two associated regulations came into force replacing the previous statute.
- The Low Carbon Fuel Act serves as the framework for British Columbia's (BC) Low Carbon Fuel Standard (LCFS).
- This updated framework expands the low carbon fuel scope to include jet fuel and incorporates updates to keep the LCFS an adaptive and effective policy.
- The Standard is the single largest contributor to meeting CleanBC's greenhouse gas (GHG) reduction targets and is an integral part of BC's GHG reduction policies.

Background/Status:

- The LCFS was introduced in 2008 and implemented in 2010. It sets:
 - minimum renewable content requirements, and
 - annual carbon intensity (CI) reduction targets that use a lifecycle analysis encompassing all stages of a fuel product's life from raw material to final use.
- Annual compliance with CI targets is calculated in terms of compliance units, a positive number (credits) for low carbon fuels and a negative number (debits) for high carbon fuels. At the end of each compliance period, a person must have a balance of zero or credits to avoid non-compliance penalties.

Policy improvements:

- On January 1, 2024, the LCFA and its regulations came into force, implementing updates to the LCFS that include:
 - Recognizing jet fuel as a new category and setting renewable and low carbon fuel requirements for jet fuel and its alternatives,
 - Expanding the low carbon fuel requirements to non-transportation uses,
 - Expanding the scope of Initiative Agreements to increase the supply of low carbon fuels in BC by enabling support for new proponents and new business opportunities, and
 - Closing compliance and enforcement gaps.

Global Emission Reductions

- Between 2010 and 2022, actions taken to comply with the LCFS have avoided over 18.8 million tonnes of global GHG emissions.

- From 2024 to 2030 the LCFS gasoline, diesel and jet fuel categories are expected to deliver 58.5 million tonnes of reductions in global GHG emissions. These global emissions account for the entire emissions avoided from a fuel's lifecycle.
- Fuels come from a diversity of sources, and consideration of the full lifecycle is a means of ensuring that there is a net environmental benefit regardless of how or where the fuel is produced.

The LCFS contribution to CleanBC:

- At a 30% reduction in CI in the diesel and gasoline category and a 10% reduction in the jet fuel category by 2030, the LCFS is expected to deliver a nearly 5 million tonnes of reductions in BC's GHG inventory emissions in 2030, which represents approximately 18 % of CleanBC's current 2030 target.

Jet Fuel

- Beginning in 2026, suppliers of jet fuel will become subject to a carbon intensity reduction requirement of 2% rising to 10% by 2030. The renewable fuel requirement for jet fuel will begin in 2028 at 1% and rise to 3% in 2030.
- This gradual phasing in of the jet fuel requirements ensures that sufficient low carbon jet fuel demand is present in BC to support any potential low carbon jet fuel supply or production projects in the near term.

Fuel Pricing:

- The LCFS encourages market transformation from fossil-derived fuels to low carbon fuels. The cost of low carbon fuels is expected to decrease as the market for and accessibility to low carbon fuels expand. Subsequently, as the carbon intensity reduction targets become more rigorous, the cost of high carbon fuels may increase.
- If the wholesale fuel market is competitive, a high portion of this cost could be passed forward to the consumer. If the wholesale fuel market is oligopolistic, as the BC Utilities Commission suggests it is, a high portion of the cost may displace monopoly profits rather than being passed forward to the consumer.
- When credits are purchased to meet carbon intensity reduction requirements, there is cross subsidy from suppliers of fossil fuel to suppliers of low carbon fuels.

Government Financial Information

Cross Reference:

02 Renewable and Low Carbon Fuel Production in British Columbia.

Contact:

Nat Gosman

ADM

Energy Decarbonization Division

778-698-7282

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osbourne

Title: Renewable and Low Carbon Fuel Production in
British Columbia

Drafted/Revised: February 20, 2024

Issue: Renewable and Low Carbon Fuel Production Goal

Response:

- The Low Carbon Fuel Standard (LCFS) is driving the increased production and supply of low carbon renewable fuel in BC each year.
- BC is on schedule to achieve the 1.3 billion litres of renewable fuel production target set by the CleanBC Roadmap to 2030.
- Made-in-BC renewable fuel increases energy security and ensures British Columbians benefit from a low carbon economy.
- In 2022, 9.9% of gasoline category fuels supplied and 13.1% of diesel category fuels supplied was renewable. The percentage of renewable diesel decreased from 13.4% in 2021.
- Producing low carbon jet fuel in BC will make this province a leader in the low carbon jet fuel (LCJF) market and help meet the goal of 1.3 billion litres of renewable fuels production.
- Initiative Agreements currently support projects expecting to produce approximately 840 million litres of low carbon renewable fuel by 2026. The Ministry will continue to work to ensure that these projects are successful.
- The *Low Carbon Fuels Act* (Act) now allows Initiative Agreements to support projects that focus on the manufacture or supply of feedstocks for use in renewable fuel production.
- The scope of the Act was expanded to include fuel used in cargo handling equipment at seaports, ground support equipment at airports, and heavy-duty forklifts across BC.
- Work is underway to assess additional applications in the future, further increasing the demand for low carbon renewable fuels.

Background/Status:

- The LCFS was introduced in 2008 and implemented in 2010. It sets:
 - minimum renewable content requirements of 5% in gasoline and 4% in diesel fuel;

- jet fuel will require a 1% in 2028, 2% in 2029, and 3% renewable content by 2030; and
 - increasingly stringent annual carbon intensity (CI) reduction targets to achieve a 30% reduction in CI in the diesel and gasoline category and a 10% CI reduction in the jet fuel category by 2030.
- The LCFS, including Initiative Agreements, is a strong tool for attracting investment in renewable and low carbon fuel production. Initiative Agreements replaced Part 3 Agreements on January 1, 2024.
 - Initiative Agreements support actions that reduce the carbon intensity of a fuel or increase the use of fuels with a carbon intensity below limits prescribed in the Act.
 - Initiative Agreements have supported 42 projects with investments expected to exceed \$2.25 billion. Upon completion, the projects are expected to supply fuel that will reduce lifecycle greenhouse gas emissions by approximately 4.0 million tonnes of carbon dioxide equivalent globally per year.
 - Initiative Agreements are supported with compliance units, not government funding, that can be sold to fuel suppliers or used to meet compliance requirements.
 - The ongoing impact of COVID-19 has caused delays and cost increases in many of the supported projects. The Initiative Agreement program shifted from looking to fund additional projects to working with the impacted groups, to increase investments in the existing projects to ensure their success, while increasing the scope of the projects to further increase renewable fuel production in BC.
 - Initiative Agreements support both the Parkland Refinery in Burnaby and the Tidewater Refinery in Prince George in producing low carbon renewable gasoline and diesel fuel.
 - The LCFS continues to support Parkland Refining efforts to further increase their co-processing of renewable fuels capabilities.
 - Tidewater Renewables began production in November 2023 at Canada's first standalone Renewable Diesel plant, located in Prince George. This project was achieved through the support of the Initiative Agreement program and is expected to produce 150 million litres of renewable diesel a year.
 - Jet fuel was included in the scope of the LCFS on January 1, 2024. Most processes that create renewable diesel fuel can be modified to produce low carbon jet fuel.
 - The Ministry continues to engage with companies and stakeholders who are considering increasing BC's production of renewable fuel.

Cross Reference: 01 Low Carbon Fuel Standard

Contact:

Nat Gosman ADM Energy Decarbonization Division 778-698-7282

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: CleanBC Go Electric Program, Vehicles and Industry Investments

Drafted: February 20, 2024

Issue: Investments to stimulate increased uptake of zero-emission vehicles (ZEV), and further economic development in the ZEV sector in British Columbia

Response:

- British Columbia (B.C.) is a leader in clean vehicle adoption with the second highest zero-emission vehicle (ZEV) adoption rate in North America in 2023 (23% of new light-duty vehicle sales in B.C. compared to 25% in California).
- The CleanBC Go Electric Program has been highly successful in: reducing market barriers; encouraging the adoption of ZEVs by British Columbians; leveraging private, municipal, and federal investment in ZEVs and infrastructure in B.C.; and supporting new economic opportunities in the ZEV sector.
- The CleanBC Go Electric Program provides rebates for zero-emission light-duty vehicles, medium- and heavy-duty trucks and buses, marine vessels, and airport and port ground equipment, and makes investments in infrastructure, training, public outreach, and economic development.
- In 2023, the CleanBC Go Electric Passenger Vehicle Rebate program transitioned its funding source to revenues from BC Hydro's sales of credits obtained through the Low Carbon Fuel Standard.
- In September 2020, \$30 million in funding was announced through Stronger BC, B.C.'s economic recovery plan for the creation of the Commercial Vehicle Innovation Challenge under the CleanBC Go Electric Advanced Research and Commercialization Program. The first funding call launched in 2023 and will commit \$20 million to successful projects in 2024. The second funding call will occur in 2025.
- In May 2019, the Province passed the *Zero-Emission Vehicles Act* (ZEV Act) which requires automakers to meet ZEV sales targets reaching 10% of new light duty vehicle sales by 2025, 30% by 2030, and 100% by 2040. The CleanBC Roadmap to 2030 accelerated the ZEV sales targets to 26% by 2026, 90% by 2030 and 100% by 2035, which were officially added to the ZEV Act on November 9, 2023. The CleanBC Roadmap also announced the development of new ZEV targets for medium- and heavy-duty vehicles. The purpose of the ZEV Act is to ensure increased ZEV availability and choice at more affordable prices in B.C.

Background/Status:

- In 2011, B.C. introduced ZEV programming, currently called the CleanBC Go Electric Program (the Program). Including Budget 2023, and fiscal year-end funding in Fiscal 2023, more than \$600 million has been committed to make ZEVs more affordable and reduce greenhouse gas emissions.
- Budget 2023 approved an additional \$40 million for the CleanBC Go Electric Commercial Vehicle Pilots Program, increasing the total budget to \$89 million.
- As of December 31, 2023, the Program has led to the following positive outcomes for ZEVs and the B.C. ZEV sector:
 - over 140,000 new light-duty ZEVs on the road (accurate to October 31, 2023);
 - over 1,400 ZEVs in commercial applications, such as forklifts, medium/heavy-duty vehicles, cargo e-bikes and port and airport ground equipment;
 - over 110 early-market commercial medium/heavy-duty ZEVs for diverse on-road and off-road applications, as well as 118 commercial vehicle charging points;
 - almost 100 electric school buses; and
 - an economic development program for B.C.'s ZEV sector supporting 21 research and commercialization ZEV projects leading to approximately 180 additional full-time equivalent jobs.
- There are multiple Program streams:
 - The income-tested passenger vehicle rebate program provides up to \$4,000 for small light-duty ZEVs priced below \$55,000, or for larger light-duty ZEVs priced below \$70,000, including minivans, sport utility vehicles, and pickup trucks. The rebate may be combined with federal rebates, for a total rebate of up to \$9,000 per ZEV.
 - Commercial Vehicle Pilots Program, which provides funding for vehicles, infrastructure, and data analysis to support zero-emission technologies. The sixth funding call is open and accepting applications until March 31, 2024. The first five funding calls allocated funding to 31 projects.
 - Supporting a pilot program with the Vancouver Fraser Port Authority that is expected to support the deployment of twelve low and zero-emission drayage trucks, a biofuel-based switch locomotive, and a biofuel-based harbour patrol vessel.
 - Go Electric Rebates (formerly Specialty Use Vehicle Incentive) program which provides a rebate up to 33% for e-cargo bikes, electric motorcycles, low-speed vehicles, medium/heavy-duty vehicles, airport and port vehicles, and utility vehicles. Medium/-heavy-duty rebates may be combined with federal rebates, for total rebates of up to \$300,000. The name of the program was changed to Go Electric Rebates in July of 2023.

- School Bus program which provides public, private, and Indigenous schools with funding for ZEV buses and charging stations.
- The Advanced Research and Commercialization program which supports projects that create jobs and lead to economic growth in the ZEV industry sector in B.C. The third funding call's expression of interest stage closed on September 15, 2023. The deadline to submit full proposals for proceeding applicants is February 16, 2024.
- A new Commercial Vehicle Innovation Challenge under the Advanced Research and Commercialization program launched in 2023. It aims to help attract international investment to B.C. companies and address the current technology gap in the hard-to-decarbonize commercial vehicle sector. The deadline to submit proposals was September 29, 2023. Successful projects will be announced in 2024.
- CleanBC Go Electric Programs support the growth of B.C.'s ZEV sector, which as of 2023 (an updated economic assessment will be published in the summer of 2024) has:
 - 384 companies and organizations involved in all aspects of the supply chain, an increase of 94% compared to 2015.
 - Employs 14,650 people, 120% more than in 2015.
 - Produces \$2.9 billion in total economic output, an increase of 142% since 2015.
 - Contributes \$1.6 billion to the provincial gross domestic product, an increase of 140% since 2015.

Cross Reference:

- 01_Low Carbon Fuel Standard (EDD)
- 04_CleanBC Go Electric Infrastructure Training (EDD)
- 05_Zero Emission Vehicles Act / Regulation (EDD)
- 06_Clean Transportation Action Plan (EDD)
- 08_ICE Fund 3-year Spending Plan (EURD)

Contact:

Nat Gosman ADM Energy Decarbonization Division 778 698-7282

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: CleanBC Go Electric Program, Infrastructure and Training Investments

Drafted: February 20, 2024

Issue: Investments to stimulate increased uptake of zero-emission vehicle (ZEV) infrastructure and jobs training in British Columbia

Response:

- The CleanBC Go Electric Program provides rebates for zero-emission light-duty vehicles, medium- and heavy-duty trucks and buses, marine vessels, and airport and port ground equipment, and makes investments in infrastructure, training, public outreach, and economic development.
- The CleanBC Go Electric Program has been highly successful in: reducing market barriers; encouraging the adoption of ZEVs in British Columbia (B.C.); leveraging private, municipal, and federal investment in ZEVs and infrastructure in B.C.; and supporting new economic opportunities in the ZEV sector.
- B.C. is a leader in clean transportation infrastructure and training, with one of the largest public charging networks in Canada (over 5,000 public charging stations), the largest public hydrogen fuelling network in Canada (five stations), a world-leading hydrogen and fuel cell industry, and a ZEV automotive maintenance training program offered at seven post-secondary institutions.

Background/Status:

- In 2011, B.C. introduced ZEV programming, currently called the CleanBC Go Electric Program (the Program). Including Budget 2023, and fiscal year-end funding in Fiscal 2023, more than \$600 million has been committed to make ZEVs more affordable and reduce greenhouse gas emissions.
- A total of \$45.7 million was approved for 2022-2023 fiscal year-end funding, which includes \$26 million for the Public Charging program, \$19.5 million for a Medium and Heavy-Duty Charging Infrastructure program, and \$0.2 million for First Nations low-carbon transportation planning. Budget 2023 approved a further \$40 million for the Commercial Vehicle Pilots Program.
- As of December 31, 2023, the Program has led to the following positive outcomes for ZEV infrastructure and training:
 - 5,107 public charging stations across 1,955 locations, including 3,989 Level 2 chargers and 1,118 fast-charging stations;

- a network of five public hydrogen fueling stations, spanning Metro Vancouver, Victoria, and Kelowna;
- automotive technician training at seven B.C. technical institutions, electrician training; and
- a multi-faceted ZEV outreach and awareness program called Emotive, including community awareness in remote, rural and Indigenous communities, and planning funding.
- There are multiple Program streams:
 - Home and workplace charger rebates, which provide up to \$350 for charging stations in homes, and up to \$2,000 for charging stations and free EV advisor services in apartments, condos and workplaces. Rebates up to \$3,000 are available to complete an EV Ready Plan for condominiums and apartments and up to \$600/parking stall for electrical infrastructure upgrades (maximum of \$120,000 per complex). Increased rebates are available for Indigenous communities and businesses.
 - Public charging infrastructure funding, which provides up to 50% funding for public fast charging stations (up to \$80,000). Increased rebates of up to 90% of project costs (to a maximum of \$130,000) per station are available for Indigenous-owned DCFC stations.
 - Hydrogen fuelling infrastructure funding, which provides funding for public hydrogen fuelling stations. Through RFP competitions, applicants can receive capital funding of \$850,000 per station and an additional \$100,000 to support operations and maintenance.
 - Fleet Charging program, which provides funding for ZEV fleet and infrastructure assessments, electrical upgrades, installations of Level 2 and fast charging stations, and advisory services.
 - “Emotive”, the province-wide ZEV public outreach program developed and delivered under partnerships with local governments and community organizations, including Indigenous communities.
 - Funding to upgrade electrician and automotive technician training to incorporate charging infrastructure and ZEVs.

Cross Reference:

05 *Zero Emission Vehicles Act*

01 Low Carbon Fuel Standard

06 Clean Transportation Action Plan

Contact:

Nat Gosman

ADM

Energy Decarbonization Division

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: Zero-Emission Vehicles Act and Regulation

Drafted/Revised: February 20, 2024

Issue: The *Zero-Emission Vehicles Act* (ZEV Act) and Regulation require automakers to increase their supply of zero-emission vehicles (ZEV) to British Columbia (BC)

Response:

- BC's Zero Emission Vehicles Act helps to ensure that British Columbians have better access to ZEVs at more affordable prices.
- The ZEV Act requires automakers to meet an escalating annual percentage of new light-duty ZEV sales, as committed to in the CleanBC Roadmap to 2030.
- ZEV Act targets will see 26% of light-duty vehicle sales as zero emission by 2026, 90% by 2030, and 100% by 2035.
- The Roadmap also commits to implement medium and heavy-duty regulations by 2030.
- ZEV Act amendments are based on lessons learned and aligned, where possible, with changes to ZEV mandates in other jurisdictions.
- The ZEV Act provides flexible pathways (through sales, trading of compliance units, initiative agreements for sales of used and medium/heavy duty ZEVs, or purchase agreements), for suppliers to achieve compliance while ensuring that the Province meets its ZEV and GHG targets.
- The Ministry of Energy, Mines and Low Carbon Innovation (Ministry) has an online ZEV Reporting System which regulated parties use to demonstrate their compliance with the ZEV Act. Eighteen automakers are actively using the system and have been submitting annual compliance reports since October 2021.
- Quebec and 15 US states have or have plans to adopt a ZEV standard. Additionally, more than 20 countries worldwide have either announced a future ban on the sale of new gasoline and diesel cars or targeted 100% of vehicle sales to be ZEVs.
- The ZEV Act is part of a coordinated and expanding program of activities under the Province's highly successful CleanBC Go Electric Program that aims to: reduce market barriers; encourage the adoption of ZEVs by British Columbians; leverage private, municipal and federal investment in ZEVs and infrastructure in BC; and support new ZEV sector economic opportunities.

Background/Status:

- The ZEV Act passed on May 30, 2019, and the ZEV Regulation on July 30, 2020, to ensure that more ZEVs are available for purchase in BC.
- Bill 39, the *Zero-Emission Vehicles Amendment Act*, which amended the ZEV Act, received Royal Assent on November 30, 2023. The amendments to the Act implement the CleanBC Roadmap to 2030 commitment to increase the light-duty ZEV targets, address lessons learned under the first two compliance periods and align, where possible, with other jurisdictions.
- The Province plans to bring forward subsequent amendments to the ZEV Regulation in late Spring 2024 to implement the full suite of amendments to the ZEV Act.
- The ZEV Act sets phased-in annual targets and other compliance requirements, ensuring automakers increase ZEV availability to meet demand.
- Technical reviews of the ZEV Act are held at regular intervals to review market trends, receive input from stakeholders, and allow for any necessary adjustments.
- In July 2022, as part of the first formal review of the ZEV Act, the Ministry released an Intentions Paper on its proposed amendments to the Act and Regulation to stakeholders. The feedback received from stakeholders informed the amendments to the Act and forthcoming proposed amendments to the Regulation.
- A ZEV Advisory Council has been established to provide input into the Ministry's ZEV programming and policies including the ZEV Act. The ZEV Advisory Council is comprised of industry, ENGOs, local governments, Indigenous organizations, infrastructure providers, and academics. In September 2023, the ZEV Advisory Council hosted ZEV Days, a two-day event to bring together ZEV stakeholders and provide input to the ZEV Advisory Council and the Ministry.
- In 2023, BC had the highest uptake of ZEVs in Canada. New ZEV sales averaged 23% of light-duty vehicle sales over the year.
- In December 2023, the Government of Canada published the Electric Vehicle Availability Standard which introduces a mandatory target for all new light-duty cars and passenger trucks sales to be zero-emission by 2035. The mandate includes interim targets of at least 20% by 2026 and at least 60% by 2030. BC's ZEV Act was the first in the world to include a 100% ZEV target.

Cross Reference:

- 03 - CleanBC Go Electric Vehicle and Industry
- 04 - CleanBC Go Electric Infrastructure Training
- 06 - Clean Transportation Action Plan

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Clean Transportation Action Plan

Drafted/Revised: February 20, 2024

Issue: Clean Transportation Action Plan, a commitment under the CleanBC Roadmap to 2030

Response:

- CleanBC's Roadmap to 2030 (Roadmap) committed to developing a Clean Transportation Action Plan (CTAP).
- CTAP is part of a comprehensive approach to work towards achieving British Columbia's (BC) transportation sector greenhouse gas (GHG) reduction target of 27-32% below 2007 levels by 2030.
- It also aims to achieve net-zero GHG emissions by 2050, as well as to work toward transportation-related targets outlined in the Roadmap (e.g. vehicle kilometres travelled [VKT] reductions for passenger vehicles).
- The Province is already taking many actions to reduce transportation GHG emissions, including through programs, policies and regulations that support active transportation, zero-emission vehicles (ZEV), and clean fuel adoption. Examples include: the suite of Go Electric programs, the *Zero Emission Vehicles Act*, and the Low Carbon Fuel Standard (LCFS).
- Building upon existing work across Ministries, the CTAP will profile actions currently underway and identify new actions to support progress toward GHG and transportation targets.
- These actions seek five key outcomes: (1) supporting the creation of clean transportation infrastructure; (2) moving people via more affordable and efficient modes; (3) moving goods more efficiently; (4) making ZEVs and low carbon fuels more accessible; (5) and enhancing clean transportation data collection and dissemination.
- Decarbonizing and increasing energy efficiency in B.C.'s transportation sector helps to achieve Government priorities such as supporting clean jobs and increased affordability, all while stimulating province-wide economic activity.

Background:

- The Ministry plays a leading role in developing policies, programs and standards that improve the energy efficiency and reduce GHG emissions in the transportation sector.

- B.C.'s transportation sector accounts for approximately 41% of provincial GHG emissions: approximately 37% of transport emissions from light-duty vehicles, 21% from on-road medium- and heavy-duty vehicles, 23% from off-road vehicles and equipment, and 19% from marine vessels, rail, and aircraft (2021 emissions inventory, latest data available).
- In 2021, transportation emissions had risen 8% in B.C. since 2007, largely due to increasing emissions from medium- and heavy-duty vehicles, rising vehicle populations, and increasing fuel consumption.
- CleanBC and the CleanBC Roadmap to 2030 identify additional transportation targets including:
 - ZEV targets:
 - accelerated *Zero Emission Vehicle Act* targets - 26% of new light-duty vehicles by 2026, 90% by 2030, 100% by 2035; and
 - new ZEV targets for medium- and heavy-duty vehicles aligned with California or leading jurisdictions.
 - Vehicle kilometres travelled (VKT) reduction targets: reduce light-duty VKT by 25% by 2030, compared to 2020.
 - Mode share targets: increase share of trips (e.g., commuting for work and personal activities) made by walking, cycling, transit to 30% by 2030, 40% by 2040, and 50% by 2050.
 - Energy intensity targets for commercial transportation: reduce the energy intensity of goods movement (tonne-kilometres) by at least 10% by 2030, 30% by 2040, and 50% by 2050, relative to 2020.
- CTAP will include short-term actions and a long-term view, which is necessary to work toward 2030, 2040 and 2050 targets.
- CTAP is being developed by the Ministry of Energy, Mines, and Low Carbon Innovation and the Ministry of Transportation and Infrastructure, with support from the Ministry of Environment and Climate Change Strategy and Ministry of Housing.
- Ongoing engagement with First Nations on CTAP started in Summer 2022. Engagement with local governments started in Fall 2022. A consultation paper was issued to technical stakeholders in February 2023. Ministry-specific engagement on commercial ZEV requirements has been underway since spring 2023.
- CTAP is anticipated to be released as a public document in spring 2024.

Cross Reference:

- 03 - CleanBC Go Electric Vehicle and Industry
- 04 - CleanBC Go Electric Infrastructure Training
- 05 - Zero-Emission Vehicles Act & Regulation

Contact:

Nat Gosman	ADM	Energy Decarbonization Division	778 698-7183
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2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: CleanBC

Drafted/Revised: March 11, 2024

Issue: CleanBC Implementation – Roadmap to 2030

Response:

- The 2018 CleanBC plan and the 2021 CleanBC Roadmap to 2030 (Roadmap), are detailed plans on how the Province will create an equitable, resilient, low carbon future to meet our greenhouse gas (GHG) emissions targets.
- The focus of CleanBC is on energy efficiency, clean fuels and electrification in order to reduce GHG emissions and transition away from fossil fuels.
- The Roadmap commits to maximizing reductions in GHG emissions by enhancing clean transportation and low carbon fuels standards, implementing a GHG emissions cap for natural gas utilities, advancing building energy codes and standards, and continuing to implement the B.C. Hydrogen Strategy.
- The most recent official emissions data from 2021 shows emissions are down 6% since the start of CleanBC in 2018. Emissions are down 4% from 2007 levels, despite GDP growing by 35% in the same period.
- The carbon intensity of B.C.'s economy has decreased 24% since 2007, and GHG emissions per capita are down 21% between 2007 and 2021.
- The Climate Solutions Council provides independent advice to Government on CleanBC to strengthen our actions moving forward.

Background/Status:

- B.C.'s legislated emission targets for 2030, 2040 and 2050 are 40%, 60% and 80% below 2007 levels, respectively. The Province has also set sectoral targets and will develop legislation to ensure B.C. reaches net-zero emissions by 2050.
- In 2021, B.C.'s net GHG emissions were 60.9 million tonnes (Mt) of carbon dioxide equivalent (CO₂e). This represents a net decrease of 4% from 2007 levels (-2.8 Mt CO₂e).
- CleanBC and the Roadmap are a collaborative effort of many ministries across the B.C. Government. The Ministry plays a leading role in developing policies, programs, and standards that decarbonize energy systems, improve energy efficiency, and reduce GHG emissions across B.C.'s economy.

- Launched in December 2018, CleanBC set out the pathway to achieve 75% of the 2030 emission reduction target. In 2020, a new interim GHG reduction target was set at 16% below 2007 levels by 2025. The recently released Roadmap, together with CleanBC, set out actions to achieve 100% of the 2030 target.
- The Roadmap includes a wide range of accelerated and expanded actions that are being implemented in this mandate to reduce pollution and build a cleaner, stronger economy for everyone, including:
 - accelerated Zero Emission Vehicle Standard targets, a strengthened Low Carbon Fuel Standard, and a new emissions cap for natural gas utilities;
 - a revised carbon pricing system to meet or exceed the federal benchmark, with supports for people and businesses;
 - expansion of the Better Homes and Better Buildings programs to help people use less energy and electrify their homes, with increased access for low-income households, multi-unit residential buildings, and Indigenous communities;
 - requirements for new industry projects to have enforceable plans to reach net-zero emissions by 2050;
 - development of the Highest Efficiency Equipment Standards (HEES) for space and water heating, so that all equipment sold from 2030 is at least 100% efficient;
 - near elimination of methane emissions by 2035 in oil and gas, mining, industrial wood waste and other sectors; and,
 - a new program to support local government climate and resiliency goals with predictable funding.
- The Province conservatively expects the Roadmap to lead to gross domestic product increases of 19% by 2030 and job growth of 7% by 2030. The economic benefits could be greater if new clean technologies cost less than expected, or more jurisdictions accelerate their climate ambitions, as is occurring.

Transportation Successes

- In 2021, transportation remained the largest source of B.C.'s emissions (41% of total). Emissions since 2007 have increased 8%. This is because of increases from heavy-duty vehicles (+8%) and marine and aviation (+11%), off-setting a reduction in emissions from light-duty vehicles (-3%).
- B.C. is a leader in clean transportation. In 2022, B.C. had the second highest zero-emission vehicle (ZEV) adoption rate in North America –18.1% of new light-duty vehicle sales– and in Q3 2023 that number had risen to 26.4%.
- The province has one of the largest public charging networks in Canada, the largest public hydrogen fuelling network in Canada, and a world-leading hydrogen and fuel cell industry.

- In May 2019, the Province passed the Zero-Emission Vehicles Act (ZEV Act) to ensure increased ZEV availability and choice at more affordable prices in B.C.
- The Roadmap targets 26% of light-duty vehicle (LDV) sales to be ZEV by 2026, 90% by 2030, and 100% by 2035, and a commitment to implement medium and heavy-duty ZEV targets, for which work is ongoing. The ZEV Act was amended in November 2023 to include the updated LDV targets.
- In 2011, B.C. introduced ZEV programming, currently called the CleanBC Go Electric Program. To date, more than \$600 million has been committed to make ZEVs more affordable and reduce GHG emissions.
- The Roadmap committed to developing a Clean Transportation Action Plan (CTAP), which is under development and expected to be released in spring 2024. It identifies concrete actions across five areas: vehicle kilometres travelled (VKT) reduction; mode shift to efficient modes; vehicle efficiency; ZEVs; and clean fuels - to help B.C. work toward GHG and Roadmap transportation targets.
- Budget 2023 included \$100M, over three years, to support the CleanBC Active Transportation Strategy with capital funding for more active transportation networks that are safe, accessible, and convenient for pedestrians, cyclists, transit riders and motorists – of all ages and abilities. This builds on \$48M provided in Budgets 2021 and 2022. (Note: this is a Ministry of Transportation and Infrastructure area)
- The Low Carbon Fuel Standard (LCFS) is the single largest contributor to meeting the greenhouse gas (GHG) reduction targets set out under CleanBC and is an integral part of BC’s GHG reduction policies.
- On January 1, 2024, the Low Carbon Fuels Act (LCFA) and its regulations came into force, implementing updates to the LCFS that include:
 - Recognizing jet fuel as a new category and setting renewable and low carbon fuel requirements for jet fuel and its alternatives;
 - Expanding the LCFS to include non-transportation uses of gasoline, diesel, and jet fuel that must comply with low carbon fuel requirements;
 - Expanding the scope of Initiative Agreements to increase the supply of low carbon fuels in BC by enabling support for new proponents and new business opportunities; and
 - Closing compliance and enforcement gaps.
- Between 2010 and 2022, actions taken to comply with the LCFS have avoided over 18.8 million tonnes of global GHG emissions.
- At a 30% reduction in carbon intensity by 2030, the LCFS is expected to deliver nearly 5 million tonnes of reductions in BC’s GHG emissions in 2030, which represents 18% of CleanBC’s current 2030 target.
- Initiative Agreements under the LCFS currently support projects aiming to produce 840 million litres of low-carbon fuel by 2028. The Ministry will continue to work with industry to achieve the 1.3 billion litre production goal for 2030.

Clean Industry Successes:

- In 2021, emissions in the industrial sector (excluding oil and gas) were down 8% compared to 2007 and up 2% from 2020.
- In 2021, emissions from the oil and gas sector were down 13% from 2007 and down 8% from 2020, which can be attributed to declining carbon intensity in natural gas production. Carbon intensity of natural gas production has declined as a result of reductions in methane emissions and electrification, supported by investments through the CleanBC Industry Fund and a robust regulatory framework that continues to reduce methane emissions in the sector.
- In January 2021, government and BC Hydro announced the CleanBC Industrial Electrification Rates comprised of two categories – clean industry and innovation, and fuel switching. The rates provide a 7-year discount from BC Hydro's standard transmission service rate: 20% in years 1-5, 13% in year 6 and 7% in year 7.
- As of August 10, 2023, maximum participation was reached for the CleanBC Industrial Electrification Rates. New applications will be placed on a waitlist in case existing ones do not proceed.
- Since 2019, the CleanBC Industry Fund has invested more than \$215 million into supporting projects that directly reduce industrial emissions, accelerate new emissions reduction technologies, and study potential decarbonization opportunities.
- In 2022 the Province invested \$89.7M in 41 emissions reduction projects across the province through the CleanBC industry Fund. This funding goes towards cost-sharing projects with industry.
- In alignment with the Spring 2024 transition to a B.C. Output Based Pricing System, the CleanBC Industry Fund (CIF) did not launch a new intake for its Emissions Performance and Innovation Accelerator streams in 2023. Instead, around \$24M will be allocated towards waitlisted projects, and \$3M for Feasibility Studies. Funding agreements are in the process of being finalized.

Clean Energy and Major Projects Office (CEMPO)

- On March 14, 2023, the Government of British Columbia announced a new Clean Energy and Major Projects Office (CEMPO) as a major component of the New Energy Action Framework.
- The CEMPO combines the expertise of the former BC Hydrogen Office, LNG Canada Implementation Secretariat, and Woodfibre Implementation Group. It provides project management support to new and existing major clean energy project proponents throughout the full project lifecycle.
- The CEMPO now has the mandate to implement the BC Hydrogen Strategy. Hydrogen is expected to play a key role in helping the Province achieve net-zero

greenhouse gas emissions by 2050, as it is one of the only practical replacements for fossil fuels in the hardest-to-abate sectors.

- The strategy includes 63 actions to undertake over the short term (to 2025), medium term (2025-2030) and long term (2030-beyond).
- In 2023/24, B.C. delivered on several key actions, like publishing the BC Hydrogen Regulatory Mapping Study, supporting the Indigenous Clean Energy Opportunities (ICEO) and the City of Prince George to develop a Central B.C. Hydrogen Hub, and expanding the B.C. Energy Regulator's mandate to include regulation of hydrogen, ammonia, and methanol production.

Buildings and Communities Successes:

- Emissions in the buildings and communities sector were almost unchanged from 2020 and were down 6% compared to 2007 levels, driven by lower emissions from waste (-25%).
- The CleanBC Better Homes and Better Buildings program provides financial incentives to help households, businesses and the public sector save energy and reduce GHG through heating equipment replacement and building envelope improvements.

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- As of September 2023, CleanBC Better Homes and Better Buildings has provided 55,144 residential retrofit rebates, approved pre-registrations for 1,000 residential new construction projects and disbursed 402 incentives, and approved 361 capital incentives for commercial, institutional, and multi-unit residential building energy efficiency and fuel-switching projects.
- In February 2022, the program introduced a stand-alone income qualified program, which is complementary to current residential and income-qualified rebates, providing high value incentives to low- and moderate-income households. As of September 2023, it had provided 4,203 income-qualified rebates, in addition to the rebates mentioned above.
- As of 2022, the CleanBC Remote Community Energy Strategy (RCES) has achieved 5% of the CleanBC commitment to reduce the GHG emissions from diesel electricity generation in remote communities by 80% by 2030.
- RCES programs support the capacity of Indigenous remote communities, and the planning, development and implementation of diesel-displacing energy efficiency and renewable energy generation projects.
- The Roadmap announced new requirements for all new buildings to be zero carbon and new space and water heating equipment to be 100% efficient or greater starting in 2030.
- EMLI staff also support the Ministry of Housing in the design of the B.C. Energy Step Code and Zero Carbon Step Code. These codes set out a series of energy

efficiency and carbon intensity requirements beyond the base B.C. Building Code that local government can voluntarily adopt.

Cross Reference:

- 05 Zero Emission Vehicles Act/Regulation
- 03 CleanBC Go Electric Vehicle and Industry
- 04 CleanBC GoElectric Infrastructure and Training
- 06 Clean Transportation Action Plan
- 05 Clean Energy and Major Projects Office (ERD)
- 01 Low Carbon Fuel Standard
- 08 Better Homes and Better Buildings
- 10 Highest Efficiency Energy Strategy
- 11 Remote Community Energy Strategy
- 02 RNG, GGRR, National RNG Registry [EURD]
- 07 BC Hydrogen Strategy (ERD)
- 11 Remote Community Energy Strategy

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: CleanBC Better Homes and Better Buildings Program

Drafted/Revised: February 20, 2024

Issue: CleanBC Better Homes and Better Buildings Program Overview

Response:

- Through the CleanBC Roadmap to 2030, the Province has a target to reduce emissions from the built environment by 59%-64% by 2030.
- The CleanBC Better Homes and Better Buildings program launched in 2018 to provide financial incentives to help households, businesses and the public sector save energy and reduce greenhouse gas emissions (GHG) through heating equipment replacement and building envelope improvements. The program portfolio includes:
 - residential retrofit and income-qualified incentives;
 - First Nations community retrofit incentives;
 - specialized energy coaching support for small businesses, First Nations communities and civic organizations;
 - retrofit incentives for commercial buildings, social housing, and multi-unit residential buildings;
 - commercial new construction incentives; and
 - additional incentives for northern residential and commercial buildings.

Government Financial Information

Background/Status:

- Achieving the Province's legislated 2030 and 2050 GHG reduction targets will require a shift towards low-carbon heating options and the highest performing buildings.
- Programs are important for preparing the market for planned standards in 2030 that will require all space and water heating to be 100% efficient or more.

- Between 2007 and 2023, the percentage of households using heat pumps for primary or secondary heating increased by 333%.

Better Homes and Better Buildings Program Overview:

- The CleanBC Better Homes and Better Buildings program launched in 2018 and provides financial incentives to help households, businesses and the public sector save energy and reduce GHG emissions through heating equipment replacement and building envelope improvements.
 - **Better Homes:**
 - Residential retrofit rebates for fuel-switching to heat pumps, high efficiency windows, doors and insulation in oil and propane heated homes;
 - High value incentives for income-qualified households;
 - Northern top-up incentives for residential and commercial buildings located north of and including the District of 100 Mile House; and
 - A single application for Provincial, BC Hydro, FortisBC, and local government incentives.
 - **Better Buildings:**
 - Energy study and capital incentives for commercial, institutional, and multi-unit residential buildings and social housing to support fuel-switching and energy efficiency improvements.
 - **Online hubs, energy coaching, and information:**
 - Online web hubs for homeowners and businesses to access information, incentives (provincial, utility and local government) and supports to reduce energy use and GHG emissions in homes (www.betterhomesbc.ca) and buildings (www.betterbuildingsbc.ca).
 - Free energy coaching services for homeowners, contractors, small businesses, Indigenous communities, and civic organizations.
 - The Ministry is developing a virtual home energy assessment tool to generate home energy ratings and help homeowners connect with Better Homes program resources.
- The Ministry continues to increase awareness of heat pumps and available incentives through public and contractor education and marketing.
- The Ministry works with the utilities and Home Performance Stakeholder Council (HPSC) to develop home retrofit installation best practices and subsidizes training for registered members of the Home Performance Contractor Network (HPCN). CleanBC Better Homes requires the use of an HPCN member for heat pump, insulation and all income-qualified incentives. This requirement helps foster quality workmanship and maximize energy efficiency and emission reductions.

- The CleanBC Better Homes New Construction program has been fully subscribed since August 2022. As of May 1, 2023 BC Building Code amendments to require 20% better energy efficiency for most new residential buildings took effect and an opt-in Zero Carbon Step Code was introduced, enabling municipalities to set a maximum annual amount of GHG emissions that new buildings can emit. As the Province is regulating construction, it is not anticipated that a residential new construction offer will be reintroduced.
- The Ministry is exploring enhancements to the program portfolio for fiscal 2024/25 and beyond to increase rebates, optimize support services, and better integrate offers with utility partners for Indigenous communities, multi-unit residential buildings, and income-qualified households.

Cross Reference: 01 – CleanBC
09 – Utility Demand-Side Management
10 – Highest Efficiency Equipment Standards

Contact:

Nat Gosman	Assistant Deputy Ministry	Energy Decarbonization Division	778 698-7282
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B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
<p>CleanBC Better Homes <i>Focus on greenhouse gas (GHG) emission reductions by enabling electrification and efficiency upgrades in homes that don't qualify for utility rebates.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Heat pumps (fossil fuel heating converted to heat pump)	Up to \$3,000 or \$6,000 in North	Up to \$3,000	-	Up to \$5,000 ¹	Up to \$2,000	<ul style="list-style-type: none"> Funded by CleanBC. BC Hydro top-up available. Municipal top-ups available in select communities. Federal rebates available through Canada Greener Homes Grant (GH), which can be stacked with CleanBC/BC Hydro LCE funding. However, registration for GH closed Feb 12, 2024.
	Heat pumps (electric heating converted to heat pump)	-	Up to \$2,000	Up to \$2,000	Up to \$5,000 ¹	-	<ul style="list-style-type: none"> Not funded by CleanBC, outside scope of BHBB. BC Hydro funds in their electric territory. FortisBC funds in their electric territory. BC Hydro and FortisBC rebates cannot be stacked. Federal rebates available through GH, which can be stacked with utility funding. However, registration for GH closed Feb 12, 2024.
	Gas equipment (furnaces, water heaters, fireplaces)	-	-	(Up to \$1,000)	-	-	<ul style="list-style-type: none"> Not funded by CleanBC, outside scope of BHBB. Historically funded by FortisBC. As of Jan. 1, 2024, conventional gas equipment rebates are no longer available due to regulatory changes. FortisBC plans to start supporting dual-fuel heat pump systems.
	Building envelope (windows/doors, insulation)	Up to \$5,500 (insulation); \$100/window, up to \$2,000	Up to \$5,500 (insulation); \$100/window, up to \$2,000	Up to \$5,500 (insulation); \$100/window, up to \$2,000	Up to \$5,000 ¹ (insulation), \$125-\$250/window, up to \$5,000	-	<ul style="list-style-type: none"> CleanBC, BC Hydro, and FortisBC rebates cannot be stacked. CleanBC funds in oil and propane heated homes. BC Hydro funds in electrically heated homes in their electric territory. FortisBC funds in gas heated homes in their gas territory and in electrically heated homes in their electric territory. Federal rebates available through GH, which can be stacked with CleanBC or utility funding. However, registration for GH closed Feb 12, 2024.
B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
CleanBC Income Qualified Program (Better Homes and Better Buildings). <i>Aims to improve energy affordability, enable GHG reductions, and improve energy efficiency.</i>	Heat pumps (fossil fuel heating converted to heat pump)	Up to \$9,500	-	-	Up to \$5,000 ¹ (gas/propane conversions); Up to \$10,000 (oil conversions)	-	<ul style="list-style-type: none"> Funded by CleanBC. Federal rebates available through GH or the Oil to Heat Pump Affordability (OHPA) Program, depending on customer eligibility, which can be stacked with CleanBC funding. Oil conversion incentive planned to increase to \$15,000.

¹ Through the Canada Greener Homes Grant, a maximum of \$5,000 in federal funding is available per home, across all measure types, plus \$600 for completing required EnerGuide evaluations. Registration for new households closed effective February 12, 2024. Homeowners who completed online registration by this date and have an application number can proceed with retrofits subject to funding availability.

B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i>	Heat pumps (electric heating converted to heat pump)	Up to \$5,000	Up to \$5,000 (as of Jan 1, 2024)	-	Up to \$5,000	-	<ul style="list-style-type: none"> Currently funded by CleanBC. BC Hydro will fund effective January 1, 2024 to March 31, 2024 in their electric territory, and tentatively from F25-F27 (subject to approval). CleanBC will continue to fund electric to heat pump upgrades outside of BC Hydro territory. CleanBC and BC Hydro-funded IQP rebates cannot be stacked. Federal rebates available through GH, which can be stacked with CleanBC or BC Hydro funding. However, registration for GH closed Feb 12, 2024.
	Building envelope (windows/doors, insulation)	Up to \$5,500 (insulation); \$950/window, up to \$9,500	Up to \$5,500 (insulation); \$950/window, up to \$9,500	-	Up to \$5,000 ¹ (insulation), \$125-\$250/window, up to \$5,000	-	<ul style="list-style-type: none"> CleanBC funds all building envelope upgrades through IQP up to December 31, 2023, regardless of home heating fuel source. As of Jan. 1, 2024, BC Hydro funds building envelope upgrades in electrically heated homes in their electric territory for low-income customers. CleanBC continues to fund for moderate-income customers in BC Hydro territory, all customers in FortisBC electric territory, and all customers in fossil fuel-heated homes. CleanBC and BC Hydro-funded IQP rebates cannot be stacked. Federal rebates available through GH, which can be stacked with CleanBC or BC Hydro funding. However, registration for GH closed Feb 12, 2024.
B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
CleanBC Indigenous Community Heat Pump Incentive (CleanBC Better Homes and Better Buildings). ² <i>Aims to improve energy affordability, enable GHG reductions, and improve</i>	Heat pumps (fossil fuel heating converted to heat pump or wood heating converted to heat pump)	Up to \$12,000 (fossil fuel); Up to \$6,500 (wood)	-	-	Up to \$5,000 ¹	-	<ul style="list-style-type: none"> Funded by CleanBC. Federal rebates available through GH, which can be stacked with CleanBC funding. However, registration for GH closed Feb 12, 2024.

² For residential retrofits, Indigenous communities can access funding from either CleanBC Better Homes, the CleanBC Income Qualified Program, or Indigenous Community Heat Pump Incentive for an eligible upgrade, but cannot stack CleanBC funding from all programs combined. Subject to approval, the Province and utilities are developing a new Indigenous retrofit program that will integrate provincial and utility offers into a single program with a streamlined, one-window application.

B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
<p><i>energy efficiency.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Heat pumps (electric heating converted to heat pump)	-	Up to \$5,000	Up to \$5,000	Up to \$5,000 ¹	-	<ul style="list-style-type: none"> Not funded by CleanBC (outside scope of BHBB) except conversions for Indigenous communities served by diesel generated electricity. BC Hydro and FortisBC funds in their respective electric territories. BC Hydro and FortisBC rebates cannot be stacked. Federal rebates available through GH, which can be stacked with utility funding. However, registration for GH closed Feb 12, 2024.
	Gas equipment (furnaces, water heaters, fireplaces)	-	-	Up to \$3,000	-	-	<ul style="list-style-type: none"> Not funded by CleanBC. Funded by FortisBC in northern B.C. only for space heating and across B.C. for water heating. As of Jan 1, 2024, conventional gas rebates are otherwise no longer available due to regulatory changes.
	Heat pumps (fossil fuel heating converted to heat pump) in community buildings	Up to \$200,000	-	-	-	-	<ul style="list-style-type: none"> CleanBC is the only rebate that specifically funds retrofits in Indigenous community buildings. Indigenous communities can participate in other utility commercial offers.
	Building envelope (windows/doors, insulation)	-	Up to \$2,000 (insulation); \$7,500 (window/door)	Up to \$2,000 (insulation); Up to \$7,500 (window/door)	Up to \$5,000 ¹ (insulation), \$125-\$250/window, up to \$5,000	-	<ul style="list-style-type: none"> Outside the scope of CleanBC ICHPI. Indigenous communities can participate in IQP for building envelope upgrades. BC Hydro and FortisBC fund building envelope upgrades through their respective Indigenous offers and are <u>not stackable</u>.
B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
<p>CleanBC Multi-Unit Residential Building Offer³ <i>Aims to achieve greenhouse gas (GHG) emission reductions by enabling electrification in fossil fuel heated homes.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Heat pumps (fossil fuel heating converted to heat pump)	\$TBD	-	-	-	\$TBD	<ul style="list-style-type: none"> Heat pump rebates and measures that enable fuel switching (e.g. electrical service upgrades) to be funded by CleanBC. Local governments have expressed interest in providing top-ups, but this is yet to be confirmed. No federal rebates currently available (MURBs ineligible for heat pump rebates through GH).
	Heat pumps (electric heating converted to heat pump)	-	\$TBD	\$TBD	-	\$TBD	<ul style="list-style-type: none"> Heat pump rebates and capacity-related measures (e.g. electrical service upgrades) to be funded by BC Hydro. FortisBC partnership in MURB offer has not yet been determined.

B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
							<ul style="list-style-type: none"> Local governments have expressed interest in providing top-ups, but this is to be confirmed. No federal rebates currently available (MURBs ineligible for heat pump rebates through GH).
<p>CleanBC Better Buildings (Social Housing Incentives Program, Custom Program, Custom-Lite Program, Commercial Express Program, and Commercial New Construction Program).</p> <p><i>Includes CleanBC funding to achieve greenhouse gas (GHG) emission reductions by enabling electrification and fuel switching upgrades.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Energy studies	Up to \$20,000 (retrofit); Up to \$15,000 (new construction)	Funding varies	Up to \$37,500 (retrofit); Up to \$15,000 (new construction)	-	-	<ul style="list-style-type: none"> Funded by CleanBC for fuel switching and electrification projects across all offers, except not required for the Commercial Express Program. Funded by BC Hydro and FortisBC for energy efficiency projects in their territories. CleanBC, BC Hydro, and FortisBC funding cannot be stacked.
	Electrical load analysis	-	Up to \$7,000	-	-	-	<ul style="list-style-type: none"> Funded by BC Hydro in partnership with CleanBC. This offer is only available for the Social Housing Incentives Program (SHIP)
	Project implementation support	Up to \$7,000	Up to \$7,000	Up to \$7,000	-	-	<ul style="list-style-type: none"> This offer is only available through SHIP and the joint BC Hydro and Fortis BC Social Housing Retrofit Support program. Funder depends on scope of project.
	Fuel switching, electrification, and energy efficiency projects	Up to \$200,000 (retrofit); Up to \$500,000 (new construction)	Funding varies	Up to \$500,000 (retrofit); Up to \$500,000 (new construction)			<ul style="list-style-type: none"> Funded by CleanBC for commercial fuel switching and electrification projects only (including social housing via SHIP). Funded by BC Hydro and FortisBC for commercial energy efficiency projects in their territories (including social housing). CleanBC, BC Hydro, and FortisBC funding cannot be stacked.

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Government Financial Information

2024/25 Transition Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Utility Demand-Side Management

Drafted/Revised: February 20, 2024

Issue: Utility demand-side management programs help reduce energy bills and greenhouse gas emissions

Response:

- Energy efficiency programs, capacity-focused programs, and electrification programs – otherwise known as demand-side management (DSM) - are a resource for utilities to address energy and capacity needs, while helping families and businesses to reduce their energy bills.
- The Province provides the regulatory framework for DSM through legislation and regulation, including the *Utilities Commission Act*, the *Clean Energy Act*, the Demand-Side Measures Regulation (DSM Regulation), and the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR).
- BC Hydro's DSM spending is increasing given the demand for electricity driven by actions to achieve climate targets and support increased housing stock and economic development. There has also been a significant increase in natural gas DSM by FortisBC in response to government policies.
- Electrification is becoming a central focus of utility planning given provincial greenhouse gas (GHG) reduction goals and the global focus on climate action.
- BC Hydro released an electrification plan in the fall of 2021, which included \$263 million in spending to advance electrification in buildings, transportation, and industry over 5 years. The electrification plan has been very successful in creating awareness of the need for GHG reductions and electricity's role in accelerating climate action and has been very well received by customers as a means to increase the viability of their electrification projects.

Background/Status:

- Utility energy efficiency and capacity-focused DSM expenditures are approved by the British Columbia Utilities Commission (BCUC).
- Utilities must meet adequacy and cost-effectiveness requirements set out in the DSM Regulation.
- The DSM Regulation offers favorable treatment of programs that are harder to justify through traditional cost-effectiveness tests, including those that:

- Serve low-income customers and renters;
 - Offer education and awareness in schools;
 - Support the transition to more stringent building codes, including the Step Code;
 - Support future standards; and
 - Support technology innovation.
- Electrification is currently considered separately from energy efficiency and capacity-focused DSM in legislation. Utilities in B.C. are authorized under the GRR to undertake electrification projects and programs in order to reduce GHG emissions, provided they are cost-effective to the utility. The BCUC can still rule on the prudence of these expenditures, and BC Hydro has been allowed to defer the cost of fuel switching in the electrification plan to the DSM regulatory account.
 - Gas and electric DSM objectives are supported by EMLI through regulation of minimum energy performance standards (MEPS), development and maintenance of National Standards and administration of Canada's national Energy Efficiency Verification Program.

Natural Gas Utilities:

- In 2022, FortisBC Energy Inc. (FEI) spent \$108.1 million on DSM and achieved 1,200 terajoules (TJ) in new energy savings. FortisBC's current one-year 2023 DSM plan includes spending \$141 million and net incremental savings of 1,600 TJ.
- The Roadmap to 2030 committed to "shift the focus of utility-funded efficiency programs to support market readiness for future standards and codes, place more emphasis on electrification, and to ensure affordability for households and businesses" which was implemented in June 2023 through the DSM Regulation, resulting in the phaseout of conventional gas space and water heating equipment incentives.
- FEI's new DSM plan for 2024-2027 is consistent with the new regulation and commits over \$156 million in the next four years, totalling over \$626 million by 2027. It includes phasing out support for conventional space and water heating equipment that is less than 100% efficient, moving towards heat pumps and deeper retrofits, and the creation of an Indigenous Program Area, among other measures.
- Pacific Northern Gas, which serves portions of northern B.C., has an approved DSM portfolio of \$3.1 million total in expenditures for the years 2023-2024.

Electric Utilities:

- Electricity conservation and energy efficiency will take on increased importance as a resource option to meet BC Hydro's customers' electricity needs as the Province takes action to meet its GHG targets, which will require electrification throughout the economy. Conservation and energy efficiency will also be critical in supporting the increased electricity needs related to increasing housing stock and supporting economic development.

- BC Hydro’s spending on electricity DSM was moderate in the past because of the electricity surplus.
- In September 2021, BC Hydro filed a three-year Revenue Requirements Application proposing to spend \$89 million, \$96 million, \$110 million on DSM in 2023-2025, respectively.
- In fiscal 2023, BC Hydro spent \$77 million on DSM and achieved 639 GWh in new incremental energy savings. This exceeds the savings target of 598 GWh in BC Hydro’s approved 2023-2025 DSM Plan, at a lower cost than planned.
- BC Hydro’s last Integrated Resource Plan (IRP) was filed in December 2021, and proposed to continue with a base level of energy efficiency in the near-term but ramp up in future years. BC Hydro filed an updated IRP in June 2023 which identified the need to accelerate the actions on energy efficiency and demand response. BC Hydro advised this may trigger the need to file revised expenditures for 2023/24 and 2024/25 with the BCUC for their approval.
- In September 2021, BC Hydro released an electrification plan, including \$263 million in spending to advance electrification in buildings, transportation, and industry over 5 years. The funding includes \$193 million to promote fuel switching and \$52 million to attract new load from customers who have flexibility in the regions of the province they can operate.
- BC Hydro concurrently launched a residential heat pump fuel switching incentive of \$3,000, which is integrated with the CleanBC Better Homes rebate.
- FortisBC Inc. (FBC), which provides electricity service in parts of the BC interior, has planned DSM expenditures of \$14.5 million for electric efficiency programs in 2023, with savings of approximately 27 GWh/yr. In 2021 it spent \$12.7 million and achieved 30 GWh of savings. FortisBC plans to invest more than \$82 million in electric efficiency programs through 2027 and expects to achieve collective energy savings of close to 140 gigawatt hours.

Cross Reference:

07 - Better Homes and Better Buildings Program

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Highest Efficiency Equipment Standards

Drafted/Revised: February 20, 2024

Issue: Implementation of the Highest Efficiency Equipment Standards (HEES)

Response:

- The HEES policy commitment in the CleanBC Roadmap to 2030 includes point of sale standards and point of installation standards for space and water heating equipment.
- The Ministry consulted on point of sale standards in January-February 2024 and is preparing an ^{Cabinet Confidences}
- The point of sale standards will prohibit the sale of new and replacement conventional gas- and oil-fired equipment such as residential furnaces, residential boilers, domestic water heaters and weatherized package units as of 2030.
- The Ministry will work with the Ministry of Housing and the federal model building codes process to develop point of installation standards in the building code.
- Starting in 2030, the HEES will impact about 5% of buildings per year, taking 20 years to affect the entire building stock. The HEES will result in a 79% reduction in emissions from buildings by 2050 relative to 2017.

Background/Status:

- The policy will impact building owners when their heating equipment reaches end-of-life and requires replacement or when equipment is purchased for or installed in new construction.
- The HEES provide lifecycle cost savings as a result of lower energy bills, though upfront capital costs will be higher. The standards will have a negligible impact on the cost of new homes and secondary suites due to their alignment with Building Code policies for energy and carbon performance.
- Homeowners and renters in older multi-unit residential buildings and in northern B.C. will be impacted the most by capital costs.
- The HEES will drive adoption of heat pumps, leading to increased access to air conditioning for homeowners and tenants, which is important for health and safety during heat waves and smoke events.

HEES Details:

- The HEES policy will set performance standards that require electric resistance heaters, heat pump technology or dual fuel systems that combine a heat pump with a conventional gas appliance.
- The standards will prohibit the sale of new and replacement conventional gas- and oil-fired equipment such as residential furnaces, residential boilers, domestic water heaters and weatherized package units.
- The policy allows the continued sale and operation of wood or gas fireplaces and stoves, process equipment, cooking equipment and certain niche products. The sale and operation of emergency heating systems such as fireplaces and stoves will not be affected by the HEES.
- Repair parts will continue to be available for emergency repair of conventional gas and oil-fired heating equipment that haven't reached the end of life or are part of a dual fuel system.
- Colder regions of the province will be best served by cold climate heat pumps with electric backup or dual fuel systems that combine a heat pump with a conventional gas appliance.
- Point of sale standards for common, mass-produced heating equipment will be incorporated in the Energy Efficiency Standards Regulation by winter 2023/24 (effective in 2030). This includes gas and oil-fired residential space and water heating products as well as some light commercial products used in smaller multi-unit residential buildings, offices, and retail stores.
- The Ministry will work with the Ministry of Housing and the federal model building code process to develop point of installation standards in the building code. These will cover complex systems, as well as allow for early adoption by municipalities with voluntary effective dates beginning in 2027.
- The Ministry supports development of technical standards with funding and staff participation on steering and technical committees on the Canadian Standards Association's Energy Efficiency and Renewables Program.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: CleanBC Remote Community Energy Strategy

Drafted/Revised: February 20, 2024

Issue: Reducing GHG emissions from diesel electricity generation in remote communities

Response:

- Most remote off-grid communities in British Columbia (BC) rely on diesel for electricity generation. Under CleanBC, the Province aims to reduce emissions from diesel electricity generation in remote communities by 80% by 2030.
- The CleanBC Remote Community Energy Strategy (RCES) includes three streams of action to pursue the CleanBC goal: (1) build remote community capacity to lead energy efficiency and clean energy projects; (2) support remote community efforts to improve energy efficiency and minimize greenhouse gas (GHG) emissions in new and existing buildings; and (3) implement renewable energy generation projects to displace diesel generation.
- Budget 2021 included a \$34 million investment in new RCES programs to support the capacity of First Nations remote communities, and for the Community Energy Diesel Reduction (CEDR) program, which supports the planning, development and implementation of diesel-displacing energy efficiency and renewable energy generation projects.
- In 2022, a first round of CEDR funding provided \$7.1 million to 12 remote communities.
- In February 2023, Treasury Board approved the addition of \$30 million to CEDR, extending the program until March 2028. In December 2023, the second intake allocated \$5.5 million to 13 projects.
- Following engagement with a Working Group of remote First Nations' community representatives, the Ministry developed a RCES Action Plan to achieve the CleanBC diesel reduction goal. The plan includes the development of regulatory approaches to enable diesel-displacing projects.
- In fall 2023, the Ministry engaged on an amendment to the Greenhouse Gas Reduction Regulation (GGRR) to advance renewable energy projects that displace diesel use in remote communities. The amendments would require the B.C. Utilities Commission to allow BC Hydro to recover the costs from ratepayers of EPAs for Indigenous-owned renewable energy projects in BC Hydro's Non-Integrated Areas.

Background/Status:

- The Community Clean Energy Branch (CCEB) is implementing RCES in collaboration with provincial ministries, First Nations, the federal government, and BC Hydro.
- B.C. has the largest number of diesel-dependent remote communities of any province in Canada. RCES focuses on about 44 communities, most of which are governed by First Nations.
- Some remote communities own and operate the diesel generating stations that supply their micro-grids, while others are served by BC Hydro as non-integrated areas (NIAs). Most provincial diesel consumption for electricity occurs in NIAs.
- BC Hydro NIA stations consume over 20 million litres of diesel fuel per year, resulting in about 50,000 tonnes of GHG emissions. Independently owned stations consume about 2.75 million litres per year, resulting in about 7,500 tonnes of GHG emissions.
- The Ministry established a RCES Working Group with seven remote Indigenous Nations to strengthen relationships and gain a further understanding of community priorities and effective program approaches. In June 2022, the Working Group provided recommendations for provincial actions to achieve the CleanBC diesel reduction target.
- The RCES Working Group recommendations informed the development of the Ministry's RCES Action Plan to achieve the CleanBC diesel reduction goal.

Cross Reference: 12 BC Indigenous Clean Energy Initiative

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: British Columbia Indigenous Clean Energy Initiative

Drafted/Revised: February 20, 2024

Issue: Supporting development of clean energy projects in Indigenous communities

Response:

- Formed in 2016 by the New Relationship Trust (NRT) with funding from Western Economic Diversification Canada (now PacifiCan), the BC Indigenous Clean Energy Initiative (BCICEI) provides support and capacity-building funds to Indigenous nations across the province working to develop clean energy projects.
- PacifiCan has provided \$20.78 million (M) in total funding to BCICEI (\$4.2M in 2016; \$4.5M in 2019; \$6.4M in 2021; and \$5.68M in 2022). Their confirmed funding ends March 31, 2024, however funded projects will continue to be implemented after this time.
- The Ministry has supported the program and participated in its governance since its inception, contributing \$5M through CleanBC in 2019. In March 2023, Treasury Board approved a \$140M contribution to expand the BCICEI with access to the Contingencies bottom-line surplus in 2022/23.
- Government Financial Information were invested by the NRT, with interest (estimated \$5-7 million per year) used to support existing BCICEI activities over the next 5-10 years. The Province, New Relationship Trust, BC Hydro, and PacifiCan are developing a new program stream to help offset the higher anticipated cost of small-scale grid-connected Indigenous power projects (e.g. < 15 MW in size) relative to large-scale projects (e.g. 30-50 MW in size). The new stream is expected to draw down the \$140 million over several years beginning in 2028.
- The BCICEI program development team will engage on the new funding stream in spring 2024.
- A key strength of BCICEI is an Indigenous-government-stakeholder governance model that pursues consensus decisions on program parameters and project approvals.

Background/Status:

- BCICEI supports clean energy developments in Indigenous communities, including hydro, wind, biomass, solar, tidal and geothermal projects. The BCICEI also supports energy efficiency projects and energy storage.
- Funding through the BCICEI covers feasibility and site selection activities; environmental review and permitting; project design and engineering; demand-side management; and small-scale clean energy projects.
- The BCICEI program has an established annual reporting regime that tracks the development and impact of each supported project. BCICEI has completed third-party program evaluations that resulted in the implementation of improvements by NRT in 2020 and 2022. The program continues to receive positive feedback from Indigenous nations, government partners and stakeholders.

Cross Reference: 11 Remote Community Energy Strategy

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: First Nations Clean Energy Business Fund

Drafted/Revised: February 20, 2024

Issue: First Nations Clean Energy Business Fund

Response:

- The First Nations Clean Energy Business Fund (FNCEBF) promotes increased First Nation participation in the clean energy sector in BC.
- The fund provides capacity and equity funding toward projects, as well as revenue sharing agreements with eligible First Nations. The fund plays a key role in the development of First Nations-led clean energy projects such as biomass, solar, wind and geothermal across the province.
- In the 2023/24 fiscal year, FNCEBF approved projects from six First Nations across the province. In total, these projects will receive more than \$1.8 million in funding.
- The FNCEBF was created under the *Clean Energy Act* in 2010 and has been administered by the Ministry of Indigenous Relations and Reconciliation (MIRR) since then.
- Effective April 1, 2024, responsibility for the FNCEBF will be transferred from MIRR to the Ministry of Energy, Mines and Low-Carbon Innovation (EMLI) to leverage its clean energy expertise.

Background/Status:

- FNCEBF collects revenues from existing and eligible independent power projects that pay royalties to the province. A portion of the revenues are used to sustain the FNCEBF.
- The FNCEBF provides up to \$500,000 in equity funding for clean energy projects; up to \$150,000 in equity funding toward community energy projects such as energy-efficiency, demand-side management and small fuel-switching projects; and up to \$50,000 in capacity funding for projects like community energy planning, feasibility studies or engagement with private sector clean energy project proponents.
- Communities that have previously reached the \$50,000 maximum for FNCEBF capacity funding have had their limit re-set and have the opportunity to re-apply for capacity funding.

- Since the FNCEBF began, more than 150 Indigenous communities have benefited from \$20.3 million in capacity and equity funding.
- Today, 46 First Nations are benefitting from 71 clean energy revenue-sharing agreements with B.C.
- Over time, First Nations have proposed various improvements to the capacity, equity and revenue sharing components of the fund.
- In June 2023, BC Hydro announced a new call for clean power production that prioritizes Indigenous proponents, and the FNCEBF has not had the resources or flexibility to support these proponents to the extent envisaged under the fund's original mandate. More calls for power are anticipated.
- EMLI has long provided clean energy policy expertise to support MIRR, and developed the database that MIRR uses to administer the fund. The Ministry would like to leverage its expertise to explore fund improvements aligned with the *Clean Energy Act* and *Declaration Act*. MIRR concurs with the re-assignment.
- Effective April 1, 2024, responsibility for FNCEBF will be transferred from MIRR to the EMLI.
- EMLI will initially operate the fund as is, while exploring options that align with First Nations' desires for the future of the fund. Recommended changes to the fund would be subject to Indigenous engagement and Cabinet approval.

Cross Reference:

12 BC Indigenous Clean Energy Initiative,
 11 Remote Community Energy Strategy

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mining Regulatory Excellence and Permitting Efficiency

Revised: March 26, 2024

Issue: Advancement of priority mining projects, through partnerships with Indigenous nations, and as a result of recent permitting budget uplifts

Response:

- Budget 2024 provides approximately \$20 million over the next three years and for the foreseeable future, to continue the Regulatory Excellence in Mining strategy and support robust and efficient decision-making processes across regulatory agencies. Through this funding, the Province is able to permanently secure 38 staff across the four natural resource agencies integral to mine permitting processes in British Columbia (BC).
- Budget 2023 provided \$77 million over three years to help speed up natural resource permitting and begin work to modernize the permitting service delivery model. The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) was allocated \$3 million, providing EMLI with nine new incremental full-time equivalents (FTE) over three fiscal years. The new resources are focused on permitting processes, land use planning, systems and data, and First Nation consultation and engagement.
- Under Deputy Minister Board oversight, EMLI is continuing to advance regulatory performance by:
 - Delivering more efficient and effective permitting on priority projects to create quality economic growth opportunities;
 - Enhancing environmental sustainability and outcomes; and
 - Implementing the Province's reconciliation goals by partnering with First Nations on mining related opportunities.
- The Blackwater mine received its *Mines Act* permit in March 2023, which will reinforce investor confidence in the Province's ability to permit a major mining project in a timely manner with First Nations support.
- EMLI will build on this success through launch of the Critical Minerals Project Advancement Office – a foundational action in Phase 1 of the BC Critical Minerals Strategy.

Background/Status:

- Building on the outcomes from the Mining Jobs Task Force and engagement with the Business Council of BC through the Low Carbon Industrial Strategy, EMLI is taking a focused approach to regulatory performance in the mining sector through oversight of an Executive Project Board (Board) made up of Deputy Ministers from the natural resource sector.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- The purpose of the Board is to ensure that permitting, issues resolution, Environmental Assessments (where applicable), and associated reconciliation efforts are conducted in a timely, coordinated, and high-quality manner. The Board's Terms of Reference has recently been revised to ensure continued focus on removing obstacles from permitting.
- Key focus areas include:
 - Enhanced project management approaches on major projects;
 - Advancing mining opportunities in partnership with Indigenous Nations;
 - Assessment of and improvements to the Province's statutory decision-making framework;
 - Assessment of project specific economic barriers;
 - Advancing policy and legislative reform and Critical Minerals strategy.
- This initiative will contribute to the Province taking advantage of opportunities to become a jurisdiction of choice to supply responsible low-carbon products and critical minerals, and attract investment from a growing pool of investors concerned about environmental, social and governance outcomes.
- Key outcomes to date include:
 - In early March 2023, the Province issued a *Mines Act* permit for the Blackwater Gold project located 112km southwest of Vanderhoof. This was the first "green fields" open pit *Mines Act* permit issued since 2012.
 - In October 2023, the Province issued an Environmental Assessment Certificate for the Cariboo Gold Project located adjacent to Wells. The project is currently in the *Mines Act* permitting process with referral for decision anticipated in June 2024.
 - Secured resources to add 38 new FTEs across mining regulatory agencies to ensure thorough timely reviews, support industry engagement, and address backlogs in regional permitting.
 - Renewed investment of \$6.6M in EMLI's technological systems to ensure internal major mine permitting processes are coordinated and efficient.
 - The Province has negotiated a historic consent-based decision-making agreement based on Section 7 of the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA) with the Tahltan First Nation on the Eskay Creek mine.
 - A second Section 7 DRIPA Agreement was signed in October 2023 between Tahltan First Nation and BC. The agreement outlines consent-based decision making for the review of any substantial changes proposed to the Red Chris Mine Environmental Assessment Certificate.
 - These agreements advance reconciliation and honors Tahltan's jurisdiction in land-management decisions in Tahltan Territory, in recognition of Tahltan's title and rights within its territory.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Establishment of the Southeast Secretariat (SE Secretariat) as a dedicated cross-agency team that acts as a single point of contact to manage the entire major mines regulatory process in southeast BC.
- EMLI will build on this progress through the new Critical Minerals Project Advancement Office (the Office) which is part of the BC Critical Minerals Strategy, Phase 1.
 - The Office will provide dedicated support on issues resolution, investment and funding opportunities, First Nations relations and regulatory processes.
 - Further details on the Office will be released in the coming months.

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2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Permitting Regional Mines

Drafted/Revised: January 29, 2024

Issue: Timelines for processing applications for regional mines

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) continues to work with industry associations to reduce timelines for Notice of Work (NoW) applications.
- This work has resulted in a backlog reduction of 52 percent since March 2022
- Regional mines include mineral and coal exploration, placer, aggregate and stone quarries.
- EMLI has made changes to streamline the permit intake process and to ensure that applications are received by technical reviewers as early in the process as possible.
- Ministry staff continue to improve the NoW application form and to develop accompanying materials that provide more guidance for proponents.
- Ministry staff have also been holding permitting workshops around the Province to provide training, to share knowledge, and to remain accessible and transparent with industry.
- EMLI received funding for 13 new positions to help with regional permitting and all these positions have been filled.
- The new resources, along with the process improvements, are helping to reduce the backlog of files and are starting to improve permitting timelines.

Background/Status:

Mandate Commitment – Permitting Timelines:

- EMLI received funding for 13 new positions in 2021 to help with regional permitting and all these positions have been filled.
- The new resources and process improvements are having a positive impact on reducing the backlog of applications (currently down to 100, a reduction of 52 percent from the backlog of 208 in March 2022) and is starting to improve permitting timelines for new submissions (average is 150 days).
- EMLI has also made improvements to application forms and has provided guidance to industry to assist them in submitting high quality applications that can be processed faster.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Mandate Commitment – Transparency:

- EMLI has been providing permitting workshops at industry events around the province to ensure staff are accessible and transparent with requirements.
- Staff have been meeting with the leadership of the Association for Mineral Exploration B.C. and B.C. Stone, Sand, and Gravel Association regularly to share permitting data and to remain transparent with progress.
- A new permitting database is allowing data to be collected and analyzed in a timely manner so that adjustments can be made as needed to improve the process; this is improving internal transparency for decision making.
- A Public Engagement Portal has been developed to share information about Regional Mines; as well, the B.C. Mine Information website is utilized to share information about larger Regional Mine projects.
- Regional Operations Branch introduced a permit intake window (batching) process in the fall of 2022, for mineral exploration files. This new process provides a scheduled approach to permit reviews and provides proponents with more predictability with respect to when their applications will be reviewed and when feedback will be provided to them. Positive feedback has been received from industry regarding this approach.

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2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Major Mines Permitting Timelines

Drafted/Revised: January 31, 2024

Issue: Industry concerns regarding timelines for permitting major mines

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is aware of industry concerns regarding the time required to review applications for major mines and is continuously working to improve industry guidance, reduce process requirements, and find efficiencies in required processes.
- Major Mines include producing mineral and coal mines and applications are typically technically complex, involve multiple agencies, and significant engagement with First Nations.
- Expected timeline for referral of Major Amendment Applications to Statutory Decision Making (SDM) is 6 to 12 months from acceptance of final application to permit referral.
- EMLI has increased the capacity of the Major Mines Office (MMO) staff to focus on amendment applications through the creation of a dedicated technical compliance and enforcement unit and an indigenous relations branch.
- EMLI staff have been improving application process and information requirement guidance for proponents to support clear, efficient process.
- EMLI has implemented the Departure from Approval Policy, with over 120 submissions being processed in an average of 22 days, since 2020.
- EMLI is continuously developing and implementing guidance and tools to ensure that the detailed requirements for amendment applications are clear and consistent for industry during the development of their applications, which will result in reduced review timelines.
- Ministry staff have implemented a streamlined review process for smaller amendment applications that has reduced timelines by one to six months.
- Timeline Trend - Major project review timelines have reduced from an average of 259 business days to 164 business days since 2019.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Background/Status:

Timeline Trends

- Analysis of major mine permitting review timelines suggest a trend toward more efficient processes:
 - Prior to November 2019, completed major mine permitting review projects averaged 259 business days.
 - Since November 2019, completed major mine permitting review projects have averaged 164 business days.
 - This data pertains to proponent-initiated Major Amendment Applications, which involve mine expansions, mine restarts, or new mines.
 - Timelines are inclusive from when the final application is received from the proponent to when the permit is referred to Statutory Decision Makers.
- Major Amendment Applications are technically complex, require detailed review by technical staff, and are subject to timeline extensions created by the proponent or the resolution of Indigenous Nation concerns, which are outside the control of EMLI.
- The current expected timeline for the review of a Major Amendment Application is 6 to 12 months. Recent examples include Blackwater (10 months), New Afton C-Zone (10 months), Premier Mine Restart (7 months).
- To date, in 2023/24 18 Major Amendment Applications have been processed, an increase from the 12 processed in 2022/23.

Increased Capacity

- Prior to 2021, MMO staff held responsibilities for compliance and enforcement and Indigenous consultation.
- In 2021, the EMLI created the Technical Compliance Unit, which assumed most compliance and enforcement responsibilities from MMO technical staff ensuring they can remain focussed on permitting. This includes seven new FTEs in the past two years.
- In 2023, EMLI created the Priorities Advancement and Indigenous Relations Branch, which has assumed responsibility for leading consultation efforts on behalf of MMO. There are approximately 20 staff, include 5 new FTEs in the past three years, located across the Province that provide consultation and reconciliation leadership support from early exploration stages to advanced permitting stages of mining projects.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Tools and Procedures for Industry

- EMLI has developed both external and internal policies and procedures to assist in streamlining the application review process, including, updated application information requirements, an authorizations guide for proponents, and improved coordination with the Ministry of Environment and Climate Change Strategies (ENV) on joint applications.
- The Departure from Approval process, which provides the ability for proponents to self-assess proposed changes to their mine plans and identify those changes that are 'non-substantial' and do not require amendment applications. This process has reduced timelines for 120 'non-substantial' submissions to 22 business days since 2020.
- The new or updated industry guidance is increasing clarity for proponents to submit complete applications that will take less time to review: Joint Application Information Requirements guidance document, the Technology Readiness Levels (TRL) guidance for water treatment technologies, and the Materials Import Guidance document.
- MMO has developed and implemented a streamlined review process for small, narrowly scoped, and low risk applications. This includes expedited pre-application steps and shorter review timelines. Initial results have reduced process timelines by 1 to 6 months.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mining and Mineral Exploration in BC in 2023

Drafted/Revised: February 5, 2024

Issue: Update on Mineral Exploration and Mining Numbers for British Columbia in 2023

Response:

- According to the Ernst & Young Exploration Survey, mineral-exploration expenditure in the province in 2023 was \$643.5 million, 94.1 percent higher than in 2018, the first full year of this government's mandate (Appendix 1).
- 69 percent, \$441 million, of British Columbia's (BC) total exploration expenditure was in the Northwest Region (the Golden Triangle).
- Currently, there are seven coal mines, nine metal mines, approximately 30 industrial mineral mines, and hundreds of aggregate pits/quarries operating in BC.
- BC's mineral production value is forecasted at approximately \$15 billion¹ for 2023.
- Mining, mineral exploration and related sectors provide well-paying direct jobs for more than 35,000 British Columbians.
- Approximately 600 exploration and 75 major mining companies are headquartered in BC.

Background/Status:

- The goal of exploration is to locate large, high-grade mineral and coal reserves with minimal disturbance to the ground and the environment.
- Exploration projects result in benefits for nearby communities, particularly rural communities, as many mineral and coal deposits are found in rural areas of BC. The industry also provides thousands of spin-off jobs and business opportunities for suppliers and service providers located close to project sites.
- 2023's Exploration Survey found that exploration in BC has continued to shift towards discovery after years focused on the advanced exploration and mine evaluation stages. According to the survey, 35 percent of expenditures were in grassroots and early-stage exploration in 2023, receiving 21 percent less funding than in 2022 but 40 percent more funding than in 2021.
- While there was an observed downturn in spending across most sectors within the exploration industry, the copper sector in BC continued to prosper.

¹ EMLI Forecast

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Preliminary estimates show that spending within the copper exploration sector rose 3 percent year-over-year, increasing from \$235m in 2022 to \$243m in 2023.
- Further results from the 2023 Exploration Survey are expected to be released by the beginning of March prior to the Prospectors & Developers Association of Canada's annual convention.
- According to the most recent forecasts from The Ministry of Energy, Mines and Low Carbon Innovation (EMLI), BC mines produced around \$15 billion worth of commodities in 2022 which would be the 2nd highest amount on record for the province but just short of the \$17.5 billion produced in 2022. The decrease can mostly be attributed to a decline in metallurgical coal prices which was anticipated given record prices observed in 2022.
- According to Natural Resources Canada (NRCan), BC's share of Canadian mineral resource development investments increased from 15.7 percent in 2021 to 16.7 percent in 2022 and this percentage is anticipated to remain similar in 2023 based on revised company spending intentions.
 - Revised spending intentions show Saskatchewan estimated to see a large increase to their share of Canadian mineral resource development investment in 2023 of 4.8 percent which will keep BC's share of investment in check.
 - Current spending intentions published by NRCan show that mine development investment in BC is anticipated to increase slightly in 2023 with many companies increasing project capital spending. Examples include Artemis Gold (Blackwater), Newcrest Mining (Red Chris), Seabridge (KSM), and Ascot Resources (Premier).

Attachments: Appendix 1 – Mineral Exploration Expenditures 2014-2023

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Appendix 1 – Mineral Exploration Expenditures 2014-2023

Year	BC Mineral Exploration Expenditures (CAD \$M)
2014	338.0
2015	272.0
2016	205.0
2017	246.6
2018	331.4
2019	329.5
2020	422.7
2021	659.8
2022	740.4
2023	643.5

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: BC Geological Survey

Drafted/Revised: February 5, 2024

Issue: British Columbia Geological Survey and its role in Critical Minerals and Land Use Planning

Response:

- British Columbia Geological Survey (BCGS) develops, disseminates, and acts as the custodian for British Columbia's (B.C.) geoscience information.
- Over 4 years, starting in FY22/23, government is investing 7 FTEs and \$3.9M in to BCGS to advance critical mineral geoscience.
- To inform the Critical Mineral Strategy, BCGS delivered the B.C. Critical Mineral Atlas, an inventory of 'critical' minerals and several scientific reports directed at understanding B.C.'s critical mineral endowment.
- In addition to ongoing foundational geoscience activities, BCGS is a Canadian leader in delivering digital geoscience that supports innovative mineral potential assessment and information for land use decisions.
- BCGS continues to support economic development in rural BC as public geoscience attracts investment. In B.C., every \$1 provided to public geoscience typically results in \$5 of private sector investment.

Background/Status:

BCGS - Critical Minerals

- Budget 2023 provided \$6 million over 3 years to develop a B.C. Critical Minerals Strategy which includes increased access to geoscience to facilitate critical mineral exploration and assess potential for critical minerals opportunities. BCGS is delivering foundational geoscience that is informing the strategy development.
- Specifically, over 4 years starting in FY22/23, a total of 7 FTEs and \$3.90M are allocated to BCGS (CleanBC FY22/23 – FY24/25: 3 FTEs and \$1.85M; and Critical Mineral Strategy FY23/24 – FY25/26: 4 FTEs and \$2.05M)
- In 2023, BCGS completed an inventory of B.C.'s critical minerals (BC Critical Mineral Atlas) and delivered reports on critical minerals geoscience. On going work is assessing critical minerals in B.C.'s major mineral deposits and enhancing exploration for under-explored opportunities.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

BCGS and Geoscience BC

- BCGS is a ministry branch with staff geoscientists that provide in-house expertise, whereas Geoscience BC is a non-government, independent society with an administrative staff that redistributes government grants to proponents.
- In 2018, the Mining Jobs Task Force's final report recognized geoscience enhances B.C.'s mineral exploration competitiveness and recommended an independent review of B.C.'s geoscience delivery through BCGS and Geoscience BC (March 2019).
- To keep pace with other jurisdictions and maintain B.C.'s status as a highly-competitive exploration destination, the review found the dual geoscience delivery model unsatisfactory and recommended increased base funding to BCGS.
- The Ministry is ensuring its own agency, the B.C. Geological Survey, is resourced to deliver a mandate of public geoscience and to define B.C.'s critical minerals potential.

BCGS and Public Geoscience

- BCGS is the provincial agency that links the mineral industry, government, and British Columbians to the Province's geology and mineral resources.
- Public geoscience is an economic stimulant, and the Prospectors and Developers Association of Canada (PDAC) notes \$1 provided to public geoscience is expected to bring \$5 of private sector investment. According to a recent Geological Survey of Canada evaluation, the return is >\$7 and audits of several Australian public geoscience programs have realized >\$20 return on public geoscience funding.
- BCGS's key roles are to:
 - Advise government on province's minerals resources;
 - Create, maintain and deliver geoscience knowledge for informed decisions;
 - Attract investment to explore B.C. for new mineral and coal resources;
 - Act as the public steward of mineral resources information;
 - Track the economic health of mineral exploration and the mining sector; and
 - Provide mineral potential assessments that ensure mining interests are included in land management strategies and negotiations.
- BCGS is responsible for carrying out geological field surveys and publishing the resulting maps, data, and reports, and providing geoscience expertise to support Government's objectives of responsible resource development and job creation.
- BCGS monitors industry activity, connects investment to B.C.'s mineral resources and provides sector intelligence through the Mineral Development Office in Vancouver.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Cross Reference: Geoscience BC; Critical Minerals Strategy

Contact:

Tania Demchuk	Assistant Deputy Minister	Responsible Mining and Competitiveness Division	250-818-6426
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Geoscience BC

Drafted/Revised: March 26, 2024

Issue: Update on Geoscience BC

Response:

- The Geoscience BC Society (GBC)'s mission is to generate and publicly share high quality and unbiased research and data that (i) improves our collective level of geoscience knowledge; (ii) informs responsible natural resource development and investment decisions; (iii) catalyzes socio-economic opportunities; and (iv) stimulates innovation and geoscience technologies.
- Since 2017, government has provided over \$15 million in grants to GBC, including a \$5 million base funding grant in 2019 from the Ministry of Energy, Mines and Low Carbon Innovation (EMLI).
- In 2023, through shared cost arrangements with EMLI, GBC received \$495,000 in year-end funding and \$400,000 related to the assessment of subsurface carbon dioxide storage.
- GBC has submitted additional funding requests annually, including seeking funding for specific research projects.
- While no new base grant funding was allocated to GBC in recent budgets, EMLI will continue to consider collaborations with GBC on projects of shared interest where expertise outside of EMLI may be needed and where funding allows.
- The Ministry is open to exploring an opportunity for a high-level GBC - EMLI Memorandum of Understanding that aligns GBC with EMLI interests.

Background/Status:

- The British Columbia (BC) Geological Survey (BCGS) is the BC government's geoscience agency with in-house expertise.
- The GBC is a not-for-profit, non-governmental granting society. While both provide geoscientific data, GBC complements but does not replace or compete with the BCGS.
- GBC has received a total of \$77.7 million in funding from the BC government for geoscience activities, with over \$15 million provided since 2017. This includes a five-million-dollar base funding grant in 2019.
- GBC's role has evolved since its creation in 2005, shifting from primarily minerals geoscience to supporting research for broader natural resource development as well as aligning its projects with provincial climate and environmental goals. GBC is undertaking and proposing research on topics including minerals and metals, oil and gas, carbon capture and storage, hydrogen, geothermal and water.

2024/25 Estimates Note Advice to the Minister

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Geoscience: Minerals

- As recommended by the Mining Jobs Task Force, an independent review of BC's current delivery of geoscience through BCGS and GBC was conducted in 2019, which concluded:
 - BC is falling behind other jurisdictions with respect to geoscience;
 - The current dual-delivery model is unsatisfactory;
 - Base funding to BCGS should be increased;
 - Coordination between GBC and the BCGS should be improved; and
 - \$1 to 2 million/year should be directed to airborne geophysical and geochemical surveys.
- EMLI has been enhancing the capacity of the BCGS. For example, Budget 2023 funding supports the development and implementation of BC's Critical Minerals Strategy, including a Critical Minerals Atlas with foundational geoscience released in January 2024.
- July 2023 marked the end of a three-year agreement between BCGS and GBC that detailed coordination and collaboration on mineral resources-related geoscience. GBC is seeking to develop a new Memorandum of Understanding (MOU) with EMLI, which is being considered.
- In February 2022, GBC and the Geological Survey of Canada signed a similar five-year Memorandum of Understanding. To date, the Federal Government has not provided any fiscal resources to GBC.

Geoscience: Other Activities

- Since March 2023, EMLI has provided \$895,000 in funding to GBC through shared cost arrangements for specific research projects, such as carbon capture and storage.
- In January 2024, GBC wrote to EMLI to recommend that the Province continue to fund specific research programs with a minimum of \$1 million before the end of the fiscal year and consider additional targeted funding in fiscal year 2024/2025.
- While no new base grant funding was allocated to GBC in recent budgets, EMLI will continue to consider collaborations with GBC on an ad hoc basis through shared cost arrangements for projects of shared interest where expertise outside of EMLI may be needed and where funding allows.

Cross Reference: British Columbia Geological Survey

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mining Exploration Tax Incentive Programs

Drafted/Revised: March 26, 2024

Issue: British Columbia's mining exploration tax incentive programs include the BC Mining Flow Through Share Tax Credit and the BC Mining Exploration Tax Credit.

Response:

- British Columbia's (BC) mineral exploration incentive programs include the BC Mining Flow-Through Share Tax Credit (MFTS) and the BC Mining Exploration Tax Credit (METC).
- Both programs encourage investment in mineral exploration, which is a critical part of discovering new mineral deposits which can lead to the development of new mines throughout the Province.
- The cost of these incentives to government is a fraction of the mineral exploration investment dollars driven by these programs (Appendix 1), and this investment is an important economic driver in rural BC.
- The MFTS and the METC programs are highly competitive nationally and were made permanent in 2019 as recommended by the Mining Jobs Task Force.
- As part of Phase 1 of the BC Critical Minerals Strategy, the Ministry of Energy, Mines and Low Carbon Innovation (EMLI) will be undertaking a Fiscal Environment Assessment to explore measures to ensure our province's critical minerals competitiveness, for all phases of critical minerals projects.

Background/Status:

Provincial Exploration Tax Incentives

- The MFTS provides a 20 percent non-refundable tax credit to individuals who invest in flow-through shares associated with BC flow-through mining expenditures. The MFTS is completely harmonized with the federal Mineral Exploration Tax Credit for flow-through shares making the after-tax cost of qualifying flow-through share-financed grassroots exploration expenditures in BC among the lowest in Canada.
- The METC is a refundable tax credit equal to 20 percent of non-flow-through funded, eligible BC grassroots mineral exploration expenditures incurred after July 31, 1998. In Mountain Pine Beetle-affected areas, the METC has been increased by 10 percent to 30 percent for eligible exploration.
- The MFTS and METC were made permanent as part of BC's 2019 budget. The credits had previously been renewed on an annual basis.

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- At the beginning of September 2020, the eligibility period for flow-through share purchases was extended from 24 months to 36 months as a temporary COVID - 19 provincial support measure. This aligns with the Federal extension announced in July 2020. Extending the eligibility period provided exploration companies additional time to incur and renounce expenditures associated with flow-through share purchases made by investors in 2019 and 2020. Any agreements entered from 2021 onwards reverted back to the 24-month eligibility period.
- Over the past five years (FY18/19 to 22/23), the METC and MFTS have been estimated to cost the Province an average of \$51 million annually (approximately \$70 million for 22/23 and 23/24).
- BC had the second highest mineral exploration and deposit appraisal expenditures in Canada in 2022 at \$997 million. Ontario (\$1,087) and Quebec (\$914) both had similar expenditures as BC in 2022.
- Both Quebec and Ontario have tax incentives for flow-through share investors while Quebec offers an additional tax incentive program similar to BC's METC program (Appendix 2).
- During Budget 2023 consultations, the Association for Mineral Exploration advocated for modest increases to the METC and the MFTS so that BC would have the most competitive exploration tax incentives in Canada.
- While difficult to rank and compare due to the differing tax approaches to incentives across Canada, an independent assessment conducted for EMLI in 2019 found that BC's incentives compared favorably with competitor jurisdictions.
- Competitor jurisdictions have expanded their exploration incentive programs to improve their competitive position. For example, Saskatchewan increased its mineral exploration tax credit from 10 percent to 30 percent and increased funding for their Targeted Mineral Exploration Incentive Program as part of their 2023/24 budget. Other jurisdictions including Ontario, Quebec, and Newfoundland have enhanced or developed new exploration incentive programs to encourage investment in critical mineral exploration (Appendix 3).
- In January 2024, the province committed to conducting an assessment of BC's fiscal environment, including exploration incentives, as part of Phase 1 of its Critical Minerals Strategy.
- In January 2024, an environmental non-governmental organization released a report criticizing provincial and federal tax incentives for mineral exploration.
 - This report did not account for the significant economic activity exploration creates relative to government cost, and the essential role exploration plays in finding the critical minerals we need for the low carbon future.

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Appendix 1 – Costs of BC’s Exploration Tax Incentive Programs Relative to Minerals Exploration Expenditures

Fiscal Year	BC Mining Exploration Tax Credit Cost (\$M)	BC Mining Flow-Through Share Tax Credit Cost (\$M)	Total Mining Exploration Tax Credit Costs (\$M)	BC Mineral Exploration Expenditures (\$M)*
2023/24 (Planned Cost)	30	40	70	644
2022/23	35	40	75	740
2021/22	28	25	53	660
2020/21	29	20	49	423
2019/20	36	20	56	330
2018/19	10	10	20	331

* Based on Calendar Year

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Appendix 2 – Exploration Tax Incentives in Canada

Jurisdiction	Incentive	Rate
BC	Mining Flow-Through Share Tax Credit (non-refundable)	20 percent
	BC Mining Exploration Tax Credit (refundable)	20 percent to 30 percent (Mountain Pine Beetle-affected areas)
Ontario	Ontario Focused Flow-Through Share Tax Credit (refundable)	5 percent
Saskatchewan	Saskatchewan Mineral Exploration Tax Credit (non-refundable)	30 percent
	Fuel Tax Rebate – Mineral Exploration	Full fuel tax rebate on fuel used in unlicensed machinery and equipment used in mineral exploration.
	Drilling Services PST Exemption	PST exemption applies to drilling services related to mineral exploration/
	PST Remission for Mineral Exploration	PST exemption applies to equipment used exclusively for mining exploration or geophysical surveys.
Manitoba	Manitoba Mineral Exploration Tax Credit (non-refundable)	30 percent
	Sales Tax Exemption	PST exemption applies to geophysical survey and exploration equipment (other than a drill rig).
Quebec	Tax Credit Relating to Resources (operators) (refundable)	12 percent 18.75 percent (Near and Far North)
	Tax Credit Relating to Resources (explorers) (refundable)	28 percent 38.75 percent (Near and Far North)
	Flow-Through Share deductions	Up to and additional 20 percent above the basic 100 percent deduction

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Appendix 3 – Examples of Critical Mineral Programs in Canada

Jurisdiction	Program	Description
Ontario	Ontario Junior Exploration Program (OJEP)	<p>Eligible junior mining companies can receive:</p> <ul style="list-style-type: none"> • up to \$200,000 per project to cover 50 percent of eligible costs • up to \$10,000 to cover 100 percent of eligible costs per project supporting Indigenous employment and business opportunities <p>OJEP is providing an additional \$12 million for a critical minerals funding stream.</p>
	Critical Minerals Innovation Fund (CMIF)	The CMIF provides a maximum of 50 percent of eligible project costs, up to \$500,000 per project, for projects that supports research and development and increases critical minerals exploration, mining, development, production and processing.
Saskatchewan	Targeted Mineral Exploration Incentive (TMEI)	<p>Starting in 2023-24, funding for the TMEI program has increased from \$750,000 to \$4 million annually and has expanded to include all hard-rock mineral exploration projects at any location throughout the province.</p> <p>Eligible companies can receive a grant of 25 percent of direct drilling costs up to \$50,000 per year for uranium drilling; or up to \$150,000 per year for all other hard rock mineral projects.</p>
Quebec	NQ Investissement Minier (NQIM)	NQIM is a regional institutional fund that will invest primarily in mineral exploration companies to encourage regional participation in mining investments that supports Quebec's Plan for the Development of Critical and Strategic Minerals and regional socio-economic development. The initial investment in the new limited partnership will be \$17 million in shares and cash.
Newfoundland	Critical Mineral Assistance (CMA)	Critical Mineral Assistance (CMA) funding will be provided as part of the province's Junior Exploration Assistance Program. It includes an annual budget of \$1.3 million to provide focused assistance for projects exploring for critical minerals.

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Minister Responsible: Josie Osborne

Appendix 4 – Exploration and Deposit Appraisal Expenditures in Canada, 2018-2023, \$M

Jurisdiction	2018	2019	2020	2021	2022	2023p
BC	427.9	388.7	513.5	898.1	996.8	764.6
Quebec	564.8	503.2	534.0	987.6	913.8	834.7
Newfoundland and Labrador	47.1	50.3	74.3	169.3	267.4	218.5
Nova Scotia	40.4	37.9	26.3	50.2	28.6	36.5
New Brunswick	25.6	12.7	14.1	27	24	21.6
Ontario	591.4	523.2	566.2	896.7	1,087	952.2
Manitoba	49.7	77.5	61.7	99.2	190.6	155.4
Saskatchewan	261.9	277.5	158.5	281.1	355.5	400.9
Alberta	26.6	53.2	46.6	20.8	18.6	34.6
Yukon	182.3	166.2	83.6	153.9	186.8	164.3
Northwest Territories	112	79.8	41.9	75.4	107	112.9
Nunavut	155.6	116.4	70.7	119.1	255.4	217.1

p= preliminary estimate

Source: Natural Resources Canada, from the federal-provincial/territorial Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures. Quebec data are compiled by l'Institut de la statistique du Quebec.

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Joe Rich Quarry / Joe Rich Properties Ltd.

Drafted/Revised: January 30, 2024.

Issue: Community opposes proposed aggregate quarry in the Joe Rich area of Kelowna

Response:

- The Joe Rich Quarry is a proposed aggregate quarry on private land in Kelowna.
- There has been substantial public opposition to the quarry.
- The Statutory Decision Maker continues to wait for technical studies to be completed by the proponent and a public engagement meeting will be held prior to making a decision on this file.
- The public engagement meeting will allow the proponent to present the project, gather further information regarding community concerns and respond to any questions that the community may have.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) representatives will also attend the meeting to listen to the community and to speak to any permitting process questions.

Background/Status:

- A Notice of Work application was submitted on December 16, 2020 by Joe Rich Properties Ltd. for a quarry in the Joe Rich Area of Kelowna on undeveloped private land. The proposed project is an aggregate quarry with a life expectancy of 40 years and a total disturbed area of 4.69 hectares over the life of mine.
- During the public review period there were many concerns expressed by the Joe Rich community, some of which pertained to ground water, noise, dust, traffic, and the effect of the project on local property values. The proponent has commissioned technical studies to support the permitting process.
- The Statutory Decision Maker has also directed the proponent to hold a public engagement meeting to present the project, gather further information regarding community concerns and respond to any questions that the community may have. EMLI representatives will also attend the meeting to listen to the community and to speak to the permitting process.
- The schedule for the public engagement meeting is dependent on completion of the technical studies. As such, the adjudication of the permit is currently on hold

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while the proponent completes technical studies to support the application.

- Indigenous consultation on the Joe Rich quarry has been completed with all affected Nations. Westbank First Nation is the only one that responded, providing their support for the proponent to move forward with a 5 year development permit.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: FPX Nickel Corp.'s Baptiste Nickel Project

Drafted/Revised: February 13, 2024

Issue: Potential Critical Minerals project that is seeking to advance exploration

Response:

- FPX Nickel Corp. (FPX) is seeking to advance the Baptiste Nickel Project (Project), which has the potential to be a significant contributor to the critical minerals sector of British Columbia (B.C.) and Canada.
- The Project is aligned with both provincial and federal critical minerals strategies, as nickel, cobalt and copper are all identified as critical minerals by B.C. and Canada.
- The Project has strong economic potential and has seen interest and investment from major international investors like Sumitomo Metal Mining.
- Nickel at the Project is sulphur-free and strongly magnetic, meaning no acid rock drainage and less energy-intensive process to retrieve the nickel.
- FPX has announced the results of their Preliminary Feasibility Study, indicating a net present value of US\$2.12 billion for the Project over a 29-year life of mine.
- FPX is considering power line routes that would bring additional benefits to local communities.
- Mine construction would create 1,250 jobs with 500 direct jobs during operations.
- The Project is situated in an area of significant cultural importance to Tl'azt'en First Nation.
- The Province is making significant efforts to understand the importance of the area to Tl'azt'en First Nation while also working to understand the varying perspectives of other potentially impacted First Nations.

Background/Status:

FPX is a junior nickel mining company, headquartered in Vancouver with a current market capitalization of \$87.7 million. The company's flagship project is the 100 percent owned Project, located on the Decar property in North-Central BC (90 kilometers northwest of Fort St. James). It is a promising advanced exploration project that can produce a high-grade nickel concentrate for direct feed into the stainless-steel industry or, with further refining, nickel, and cobalt for the electric vehicle battery material supply chain, along with copper concentrate products. FPX has attracted support and interest from major international investors including – strategic equity investments by Japan's major global nickel producer Sumitomo Metal Mining; a strategic arrangement with

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Japanese consortium – Prime Planet Energy & Solutions (PPES, 51 percent Toyota Motor and 49 percent Panasonic) to produce a nickel feedstock for its battery supply chain; and a Memorandum of Understanding signed with Japan Organization for Metals and Energy Security (JOGMEC) and PPES to explore collaborative opportunities for the vertical integration of nickel production and continues to seek various critical minerals funding opportunities.

The Project is located on the traditional territory of the Binche Whut'en (Binche), Yekooche, Takla and TI'azt'en (TI'azt'en) First Nations. TI'azt'en has stated that they are in strong opposition to the project as it is in an area of cultural significance, known as Wally's Mountain. Intergovernmental Communications

Intergovernmental Communications

The Province recognizes the efforts of FPX to initiate proactive engagement and seek partnership with Indigenous Nations. Intergovernmental Communications

Intergovernmental Communications

FPX had requested in the Fall of 2023 that the province put a pause on the review of their 2023 drilling application. The pause was requested to allow additional time for both FPX and the Province to work with potentially impacted First Nations on addressing concerns related to the project.

The company plans to enter the Environmental Assessment (EA) process in later 2025 and anticipates an EA decision in early 2027.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Wicheeda Rare Earth Element Project, Defense Metals Corp. & McLeod Lake Indian Band

Drafted/Revised: February 13, 2024

Issue: Defense Metal Corp.'s Wicheeda Project is a critical minerals project under development in partnership with McLeod Lake Indian Band

Response:

- Defense Metals is a British Columbia (BC) based mineral exploration and development company focused on the development of its Wicheeda Project north of Prince George.
- The Wicheeda Rare Earth Element Project is a critical minerals project that aligns with provincial and federal critical minerals strategies.
- The Province is committed to growing a sustainable and competitive critical minerals mining sector in BC and to foster economic reconciliation with First Nations. The Province recognizes the potential of the Wicheeda Project to contribute to both commitments.
- Defense Metals and McLeod Lake Indian Band have signed an Equity Partnership and Co-Design Agreement.
- The Project currently holds approvals for exploration activities until December 31, 2024, with expected submission of a Notice of Work application for additional work on the Project for 2024 and beyond.

Background/Status:

- The Wicheeda Project is located 80 kilometers northeast of Prince George. It is accessible via existing roads and is near infrastructure, including hydro power transmission lines, gas pipelines and railway. Its location allows for easy access to port facilities in Prince Rupert.
- The Wicheeda deposit has rare earth elements including cerium, lanthanum, and neodymium, with minor concentrations of niobium also present. Rare earth elements have clean energy applications for electric vehicles, wind turbine batteries and magnets, as well as other applications including health care technologies, agriculture, electronics, aerospace, and defense.
- The Project has a projected annual production of 25,000 tonnes of Rare Earth Oxides which Defense Metals has expressed as equating to 10 percent of current global production. Technical work related to mining and mine design is being carried out as the company works towards completion of a Pre-Feasibility Study, ^{Advice/Recommendations}

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- Defense Metals and McLeod Lake Indian Band signed an Equity Partnership and Co-Design Agreement on January 17, 2024, at the B.C. Natural Resources Forum. They will jointly plan the design of the project including technical, social, engineering, and environmental elements. The two parties have presented the agreement as an opportunity for the Province to demonstrate progress on its Critical Minerals Strategy, to illustrate the advancement of a strategically important project, and to showcase a model of industry-Indigenous partnership.
- In addition to McLeod Lake, the Province has also consulted with West Moberly and Doig River First Nations on the Project and received no opposition.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Siwash Lake Wilderness Resort (Golden Sky Minerals)

Drafted/Revised: January 30, 2024.

Issue: Eco-Tourism tenure holder concerns related to Rayfield exploration project

Response:

- A permit was issued on December 7, 2023 to Golden Sky Minerals to conduct early stage mineral exploration activities at the Rayfield Copper-Gold property in the Cariboo region.
- The Rayfield property is adjacent to the Siwash Lake Wilderness Resort, which is a 300-acre property located east of 70 Mile House; the permitted exploration area excludes Siwash private lands.
- The owner of the wilderness resort expressed concern about the prospect of mine development in the vicinity of their eco-tourism resort, related financial impacts to their operation and impacts to trail systems used by guests of the resort.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) staff have conveyed to the resort owner that this is an early exploration project and if the proponent wishes to pursue further development, then rigorous regulatory approvals would be required, which would include more consultation with Nations and with the public.
- EMLI acknowledges the importance of the tourism sector to the provincial economy and seeks to find a balance with overlapping tenure holders by mitigating concerns and working towards solutions that will meet the interests of all parties, to the extent possible.

Background/Status:

- Golden Sky Minerals applied for a Notice of Work to conduct mineral exploration at the Rayfield Property in July 2021. The company applied for 10 drill sites and a maximum disturbance area of 1.38 hectares.
- Siwash Lake Wilderness Resort expressed concerns to EMLI about a lack of opportunity to discuss their issues relating to the proposed exploration activities. Their primary issues included non-complimentary uses of the land (i.e. potential mine development adjacent to eco-tourism resort), financial impacts to the resort, impacts to trail systems utilized by the resort, and impacts to an area utilized by the resort under a non-exclusive license of occupation.
- EMLI staff have spent considerable time meeting with Siwash and discussing their concerns with the applicant to explore options for mitigation. An in-person

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meeting was held between EMLI staff and Siwash owners, as well as three virtual meetings and numerous email exchanges to provide information about the project and to receive feedback, over the course of two and a half years. In addition, permitting staff worked with the proponent to address comments and concerns raised by Siwash and came to an agreement on permit conditions to address concerns where practicable.

- The proponent made the following accommodations in response to Siwash's concerns:
 - Revisions to the proposed permit area to exclude Siwash private lands;
 - Seasonal restrictions on exploration activities to minimize impacts to the resort during peak tourist season;
 - Commitment to restore all pre-existing trails utilized by Siwash upon completion of exploration activities;
 - Commitment to provide written communication to Siwash 30 days prior to the start of operations within or adjacent to Siwash's License of Occupation.
- After conducting a comprehensive review of the file, collaborating with numerous local and provincial agencies, conducting consultation with Indigenous Nations, and reviewing all comments received, the statutory decision maker issued a five-year permit on December 7, 2023, with conditions to mitigate all of the concerns received.
- EMLI is looking at ways to communicate the existence of overlapping tenure holders to applicants, in an effort to improve communications between different users of the land base.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: McAbee Quarry – CN Rail

Drafted/Revised: January 30, 2024.

Issue: CN rail seeking permit extension for McAbee Quarry

Response:

- CN Rail (CN) is seeking to extend their permit for the McAbee Quarry, which is a key site for their operations to supply ballast and rip rap for maintenance.
- CN is working with First Nations to seek support for their permit application.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) recognizes the importance of the McAbee quarry to the safety of CN operations, and the impact those operations have on both the provincial and federal economies.
- EMLI has granted a temporary authorization to CN to resume production so that critical thresholds for the safe operation of the railroad are not jeopardized while discussions with First Nations are ongoing.
- EMLI staff are working with CN to ensure that engagement with First Nations is reasonable and appropriate,

Background/Status:

- McAbee Quarry is situated on private land owned by CN, east of Cache Creek, and has been permitted since 1996.
- The quarry serves as a key source of ballast and rip rap for maintenance of the railway across western Canada.
- McAbee is 1 of only 3 such quarries that CN owns in all of Canada (2 in BC and 1 in Quebec) and has a 15-year mine life remaining. As such, it is a critical site and resource for the company.
- CN's permit to operate the quarry was reaching expiration in the fall of 2023 and the company has been seeking to extend the authorization for another 5 years. EMLI issued a temporary authorization to CN, which is in place until March 7, 2024, to continue operating the McAbee Quarry while discussions with Nations are ongoing, in an effort to ensure that safety of the railway is not compromised.
- A prior permitting decision for the McAbee Quarry, made in April 2019, was the subject of litigation by Stk'emlupsemc Te Secwepemc Nation, in which case the courts determined that consultation by the province had not been sufficient. As such, EMLI staff and CN are working closely to ensure that engagement with

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Nations is being carried out deeply and according to established procedures and agreements that are in place.

- EMLI staff are committed to ensuring that consultation is reasonable and appropriate, while also ensuring that public safety is maintained.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Ruddock Creek

Drafted/Revised: January 30, 2024

Issue: Status of the Notice of Work submitted for the Ruddock Creek Project in 2022 – concern from Nations due to past history of proponent

Response:

- A Notice of Work (NoW) application was submitted for the Ruddock Creek Project by Imperial Metals in 2022, for the future development of an underground zinc and lead mine (critical minerals).
- Ruddock Creek is considered to be an advanced exploration project.
- The NoW proposes a new mine tunnel (portal) for underground drilling related to mineral exploration, with underground sumps and surface settling ponds.
- The location of Ruddock Creek and the association of the proponent with the Mount. Polley mine, are causing concern for First Nations whose territories overlap the NoW area, and they have voiced their opposition to this project.

Background/Status:

Imperial Metals currently holds a permit for the Ruddock Creek site, located east of Vavenby, and is seeking to amend the permit to include additional works. The current permit for Ruddock Creek was issued in 2005 for exploration of zinc and lead. The existing disturbance includes a 40 person camp located in the alpine, a portal for underground exploration, drill pads, and processing areas totalling approximately 1 hectare of disturbance. The 2022 NoW application identifies seven drill sites, 0.31 kms of new trail development, underground drilling with a waste pile, a second portal, and a settling pond for a total of 2.08 hectares of disturbance.

The NoW was submitted to the ministry in 2022; however, the technical review identified significant deficiencies in the application and the proponent has been working to address the deficiencies.

Imperial Metals also owns the Mount. Polley mine, which suffered a catastrophic tailings dam failure in 2014 and has left Nations mistrustful of the mine owner. In 2014, Neskonalith Indian Band issued an eviction notice to Imperial Metals from the Ruddock Creek Project site, in response to the Mount Polley incident. The area has been identified as culturally important to Nations whose territories overlap the NoW area. ¹Advi

Advice/Recommendations; Intergovernmental Communications

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Advice/Recommendations;
Intergovernmental Communications

At this time, the Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is not aware of any efforts by the proponent to engage Nations. EMLI staff have not initiated consultation with affected Nations, as a technically suitable application has not yet been resubmitted by the proponent. However, EMLI staff are working to set up meetings with the proponent and Nations to start a dialogue on the NoW.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Taranis Resources – Thor Mineral Exploration Project

Drafted/Revised: January 31, 2024

Issue: Proponent has filed a Petition seeking a permit decision without further delay on Thor Notice of Work.

Response:

- Taranis Resources Inc. has filed a petition for a judicial review relating to the delay of a decision regarding its Notice of Work (NoW) in Southeastern British Columbia (BC).
- Ktunaxa Nation Council (KNC) and member First Nations sent letters of non-consent for the project and declared a moratorium on mining activities in their territory.
- Natural resource agencies have been working in coordination with each other and with the Ministry of Indigenous Relations and Reconciliation (MIRR) to find a path forward on natural resource decisions, which has taken time.
- Following a deep and comprehensive consultation period, the Province has notified Nations that it will be moving forward with decisions.
- Consultation with Lakes Tribe, a transboundary Nation, is still underway as the Nation recently expressed an interest in being consulted.
- Permitting staff have developed proposed permit conditions that have been shared with the company and will also be shared with Nations prior to decision on the permit application.

Background/Status:

- In August 2022 Taranis submitted an application proposing to amend their existing permit on the Thor project with a five-year Multi Year Area based mineral exploration (MX) program consisting of a maximum of 24 drill sites and 5.75 km of new trail (2.94 ha of new disturbance).
- Intergovernmental Communications
Intergovernmental Communications The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) has continued to work collaboratively through ongoing consultation to address concerns raised by Nations and has worked extensively with Taranis to amend conditions in the draft permit.
- On November 27, 2023, Lakes Tribe notified EMLI that, though the project may not meet the thresholds that normally trigger engagement for them, they wanted to be engaged on the project. EMLI agreed to the request, although the

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consultation process was otherwise reaching conclusion and KNC had already been notified that permit decisions would be issued. Advice/Recommendations

Advice/Recommendations

Once EMLI staff are satisfied that consultation has been reasonably completed and discussions with the proponent regarding permit conditions have reached a conclusion, then staff will move to decision.

- Challenges Intergovernmental Communications in permitting, which triggered the proponent to file a judicial review regarding administrative fairness. Staff continue to work with Nations and with the proponent to advance the permitting process and a decision is expected in the near future.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Record Ridge Magnesium Mine Proposal

Drafted/Revised: February 13, 2024

Issue: Residents are concerned about potential impacts of West High Yield Resources' proposed Record Ridge Magnesium Mine near the community of Rossland

Response:

- An application for the proposed Record Ridge Magnesium Mine (critical mineral) has been submitted to the Ministry of Energy, Mines and Low Carbon Innovation (EMLI) for review, after multiple iterations.
- The application has been posted for public review on the BC Mine Information Website as of January 29, 2024.
- A Mine Development Review Committee has been established to conduct a comprehensive review of the proposed project.
- The Environmental Assessment Office (EAO) is considering whether the project is reviewable under the ^{Advice/Recommendations} Advice/Recommendations
- Further public engagement and First Nations consultation is planned for Spring of 2024.

Background/Status:

- West High Yield Resources Ltd. has proposed a 200,000 tonne/year industrial magnesium mine on Record Ridge near Rossland, British Columbia. The proposed project has generated significant opposition from the public, due to its location and proximity to recreational trails near the community of Rossland.
- Due to the complexity of the application and interest in the project, EMLI has established and is chairing a Mine Development Review Committee to conduct a review of the proposed project. The Review Committee includes representatives from the local government in Rossland, the Regional District of Kootenay Boundary, First Nations, and Qualified Professional technical specialists from within EMLI and other government agencies.
- The application has been posted on the BC Mine Information website for public viewing. A formal process for public engagement as well as engagement with Indigenous Nations will be initiated in the Spring of 2024. As well, a decision from the EAO on the potential requirement for an Environmental Assessment is pending and will determine the course of the review process.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Bamberton Quarry

Drafted/Revised: February 12, 2024

Issue: Permit Decision on Bamberton Quarry Application

Response:

- A decision to approve the Bamberton Quarry amendment application was issued on October 30th, 2023.
- All documentation related to the file, including the final permit and Reasons for Decision document were publicly posted on the BC Mine Information website.
- Notification of the decision was sent to affected First Nations and to the Saanich Inlet Protection Society, and they were also informed about the availability of information on the BC Mine Information website.
- Multiple public comment periods were held, including an in-person information session hosted by the proponent; a summary of public comments was compiled and posted on the BC Mine Information website.
- Ministry staff also engaged deeply and sincerely with all affected First Nations.
- Permitting staff conducted an enhanced application review process supported by a team of professionals qualified to assess mining projects and their potential impacts, including environmental impacts and the protection of public safety.
- Permitting staff also consulted with cumulative effects specialists from the Ministry of Water, Land, and Resource Stewardship and with staff from the Environmental Assessment Office
- As per Honourable George Heyman, Minister of Environment and Climate Change Strategy's recommendation, the establishment of an Environmental Review Committee was included as a required permit condition

Background/Status:

- The Bamberton Quarry is on private land owned by the Malahat First Nation and is in the Cowichan Valley Regional District, approximately 6 km south of Mill Bay, on the Saanich Inlet.
- The site has been used for industrial purposes since the early 1900s as a cement plant and later as a quarry.
- Malahat Investment Corporation (MICO) is the business arm of the Malahat First Nation and became the permit holder of the quarry in 2016.
- The quarry was first permitted in 1991 and was authorized for a mine area of 39.3 hectares and an annual production rate of 240K tonnes per year.

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- MICO applied to amend its Bamberton Quarry permit in May 2019, and the final application proposed to increase the production area to 39.5 hectares and the production rate to 479K tonnes per year.
- Products from the Bamberton Quarry serve local construction markets and are primarily shipped by barge via the Saanich Inlet.
- MICO also applied to the Ministry of Forests to amend its foreshore lease to administratively expand its authorized marine area to better accommodate vessels using the foreshore dock; no additional construction is required.

Bamberton Quarry Permit Amendment Application Status:

- A decision to approve the Bamberton Quarry amendment application was issued on October 30th, 2023 and notification of the decision was sent to affected Nations and the Saanich Inlet Protection Society; all related information was publicly posted on the BC Mine Information website.
- Ministry staff coordinated with other government agencies during the application process, with the application being referred for input to Cowichan Valley Regional District, Ministry of Forests, Ministry of Indigenous Relations and Reconciliation, Ministry of Transportation and Infrastructure, and Ministry of Environment.
- A thorough review of environmental impacts was conducted as part of the adjudication process.
- Multiple public comment periods were held, including an in-person information session hosted by the proponent; the Ministry received over 200 letters from the public, with a summary of concerns shared with the proponent and with the statutory decision maker for consideration.
- All concerns were summarized and posted on the BC Mine Information website (still posted).

Application to Minister of Environment for Designation as a Reviewable Project

- One of the key concerns expressed by the public was the lack of a formal Environmental Assessment.
- The Bamberton Quarry permit amendment application does not meet the Environmental Assessment Office's threshold for the *Reviewable Project Regulation* for modification of existing quarries.
- An application was made to the Minister of Environment and Climate Change Strategy (ENV) by the Saanich Inlet Protection Society to designate the Bamberton Projects under the *Reviewable Projects Regulation*.

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- The Minister of Environment issued a decision to not require an Environmental Assessment, but committed the Ministry of Water, Land and Resource Stewardship to conducting a cumulative effects analysis of the Saanich Inlet
- As well, Ministry of Energy, Mines and Low Carbon Innovation committed to conducting an enhanced review process, which included technical specialists in geoscience, geotechnical engineering, and reclamation.
- As per Minister Heyman's recommendation, the final permit also included a requirement for the proponent to establish an Environmental Review Committee,
Advice/Recommendations

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Cariboo Gold Mine Project

Drafted/Revised: February 13, 2024

Issue: Status of the Major Mine permitting processes for Cariboo Gold Project (Cariboo Gold)

Response:

- Osisko Development Corporation (ODV) proposes to develop Cariboo Gold Mine Project (Cariboo Gold), located near the District of Wells, British Columbia (B.C.).
- The Environmental Assessment (EA) process for Cariboo Gold began on May 14, 2020, and an EA Certificate was issued on October 10, 2023.
- Cariboo Gold will require several authorizations and a coordinated authorization process is being led by the Ministry of Energy, Mines and Low Carbon Innovation's (EMLI) Major Mines Office (MMO).
- ODV submitted a Joint Application seeking amendments to *Mines Act* (MA) and *Environmental Management Act* (EMA) authorizations for review on Sept 25, 2023.

Advice/Recommendations

- EMLI and the Ministry of Environment and Climate Change Strategy have made Cariboo Gold a priority assigning dedicated resources to the review of the Joint Application.

Background/Status:

Project Overview

- ODV proposes to develop Cariboo Gold, an underground gold mine adjacent to Wells, B.C.
- Cariboo Gold will have an operating life of 12 years, with a production capacity of 4,750 tonnes per day, and is anticipated to produce 16.7 million tonnes of ore.
- Cariboo Gold has an initial capital cost of \$137 million and another \$918 million over the life of the mine in expansion and sustaining capital.
- Cariboo Gold will have approximately 488 full-time employees during operations, and a peak of 634 full-time employees during the construction phase.

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- The Project encompasses the existing Bonanza Ledge, QR, and Mosquito Creek mines.
- A new 69kV, three phase, transmission line for the project will be constructed privately by ODV, extending from Quesnel to a new substation at the Mill Site outside of Wells.

Intergovernmental Communications

Project Authorizations

- Cariboo Gold received its Environmental Assessment Certificate in October 2023.
- ODV submitted the joint MA and EMA permit applications in September 2023.
Advice/Recommendations
- The MMO is leading the MA and EMA application review process through a Mine Review Committee consisting of Provincial technical experts, Indigenous Nations, and local government representatives.
- MMO is also leading collaborative engagement with Lhtako Dene Nation, Xat̓sūll First Nation, and Williams Lake First Nation, which is seeking consensus on the joint application and other ancillary permit authorizations. Capacity funding has been secured for the three nations via the Indigenous Funding Program for the 2023/2024 fiscal year and requested for the upcoming fiscal year.
- Neskonlith Indian Band, Northern Secwepemc te Qelmuw Chiefs and Tsilhqot'in National Government are being notified of key permitting milestones.
- Local government representatives include the Cariboo Regional District, the City of Quesnel, and the District of Wells.
- Due to the proximity of the project to Wells, a public comment period was held November 9 to December 11, 2023. A public engagement summary report compiling and responding to all comments received will be posted on BC Mine Info website in February 2024.
- ODV submitted a License of Occupation application in July 2021 for a 69 km transmission line. ODV has requested that this application remain outside of the MMO coordinated authorization review process.
- Provincial staff continue to prioritize their workload to support this project and apply innovative approaches to permitting processes including negotiating collaborative engagement agreements with Nations that cover all aspects of permitting.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Eskay Creek Revitalization Project

Drafted/Revised: February 13, 2024

Issue: An overview of the Eskay Creek Mine Revitalization Project

Response:

- The Eskay Creek Revitalization Project is a proposed open pit mine at the existing Eskay Creek Mine. The project would have an 8-to-11-year operational life.
- The proposed project requires both an *Environmental Assessment Certificate* (EAC) amendment and *Mines Act* (MA) and *Environmental Management Act* (EMA) permit amendments.
- The Environmental Assessment Office (EAO) and the Tahltan First Nation reached an agreement on a consent based decision-making process pursuant to Section 7 of the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act), which was signed on June 6, 2022.
- This landmark agreement represents the first such agreement under the Declaration Act and British Columbia (B.C.) is very proud of this achievement.
- The Province is committed to timely EAC process and MA and EMA permit amendment process.

Background/Status:

Mine Overview

- The Eskay Creek Mine is owned by Skeena Resources Ltd. (Skeena) and is located in the Golden Triangle region of B.C., 83 km northwest of Stewart.
- The mine originally operated for 14 years as an underground mining operation and produced approximately 3.3 million ounces of gold and 160 million ounces of silver. Over \$2 billion has been invested in infrastructure in the area.
- The mine site has all-weather road access and is near the 287-kV Northwest Transmission Line. The Volcano Creek Hydroelectric Power Station is 7 km away.
- The mine is in Tahltan Territory and within the asserted traditional territory of the Tsetsaut Skii Km Lax Ha. Concentrate transported to the Stewart Port via Highway 37 and 37A will pass through the Nass and Nass Wildlife Areas of the Nisga'a Nation and the asserted traditional territory of the Gitanyow Nation.

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Eskay Creek Revitalization Project

- The Eskay Creek Revitalization Project is a proposed open pit mine that utilizes the existing tailings storage facility at the Eskay Creek Mine. The project would have an 8-to-11-year operational life.
- The proposed project requires both an EAC amendment and MA and EMA permit amendments.
- A federal Impact Assessment is required and on November 29, 2022, the Federal Minister made the decision to proceed with a substituted Environmental Assessment (EA) process.
- EAO and Tahltan have developed a Decision-Making Agreement that sets out a consent based decision-making process for the Eskay EA Certificate, pursuant to Section 7(1)(b) of the *Declaration Act*. The Agreement was signed on June 6, 2022.
- On November 18, 2022, Tahltan and EAO provided their determination that the project could proceed to an EA. The Process Order was issued on April 18, 2023, and the EA Application is now in the Application Development and Review Phase. *Advice/Recommendations*
- Ministry of Energy, Mines and Low Carbon Innovation's Major Mine's Office (MMO), EAO, and the Ministry of Environment and Climate Change Strategy have developed and are implementing a Project Charter signed between the Province, Tahltan, and Skeena. The Charter sets out efficiencies for the regulatory review and approvals processes.
- Skeena submitted a MA/EMA amendment application for a proposed open pit bulk sample program in December 2023. The application is currently in the Screening Phase *Advice/Recommendations*
- Skeena has indicated they wish to take advantage of the summer construction season and may seek early works for some bulk sample components. MMO is working with Skeena and Tahltan on how best to meet Skeena's construction schedule.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Highland Valley Copper

Drafted/Revised: February 16, 2024

Issue: Status of Environmental Assessment and permitting process for the Highland Valley Copper Mine Expansion

Response:

- Highland Valley Copper Mine (HVC) is an open pit copper mine near Logan Lake, owned by Teck Highland Valley Copper Partnership (Teck).
- Teck's proposal for an expansion, referred to as HVC 2040, would extend the mine life from 2028 until approximately 2042.
- The Environmental Assessment Office (EAO) and the Ministry of Energy, Mines and Low Carbon Innovation's (EMLI) Major Mines Office (MMO) are undertaking a combined Environmental Assessment (EA) and permitting review for HVC 2040. The MMO is coordinating the multiple permitting authorizations required for the project.
- Teck submitted their joint EA Certificate and *Mines Act* (MA) and *Environmental Management Act* (EMA) amendment applications in October 2023.
- The Technical Advisory Committee (TAC) is reviewing the application to support decisions for both the EA and permitting.
- Provincial agencies have made the EA and permitting review of HVC 2040 a priority and EMLI has dedicated resources to the Project.
- First Nations whose interests may be affected by HVC 2040 include Nlaka'pamux [Ing-khla-kap-muh] and Secwepemc [Sheh-kwep-em] groups. The Province is collaborating with these Nations in the joint review of the project.

Background/Status:

Mine Overview

- HVC is an existing operational open pit copper mine located near Logan Lake, BC, owned by Teck.
- HVC 2040 would extend mine life from 2028 until approximately 2042, producing approximately an additional 900 million tonnes of ore and 1 billion tonnes of tailings.
- The project would expand the existing Valley and Highmont pits, extend existing local power and gas lines, and potentially relocate a portion of Highway 97C.

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- The EAO completed the Process Planning phase of the HVC 2040 on December 16, 2022. The Process Order sets out how the EAO will conduct its assessment.
- The EAO and the MMO are co-managing a joint EAC, MA, and EMA application review process, which has resulted in a more efficient and streamlined process.
- Teck submitted its application for an EA Certificate and MA/EMA joint permit applications in October 2023.

Advice/Recommendations

- The EAO and MMO are working closely with the following Nlaka'pamux Nation groups:
 - Citxw Nlaka'pamux Assembly (CNA)
 - Lower Nicola [Ni-co-la] Indian Band (LNIB)
 - Kanaka [Ka-KNOCK-a] Bar Indian Band (Kanaka Bar)
 - Nlaka'pamux [Ing-khla-kap-muh] Nation Tribal Council (NNTC)
 - Spuzzum First Nation
- The EAO and MMO are working with the following Secwépemc [sheh-kwep-em] groups:
 - Stk'emlupsemc te Secwépemc Nation (SSN)
 - Bonaparte First Nation (Bonaparte)

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Copper Mountain Mine

Drafted/Revised: February 16, 2024

Issue: Status of the Copper Mountain Mine New Ingerbelle Expansion permitting process

Response:

- Copper Mountain Mine (Copper Mountain) owned and operated by Copper Mountain Mine (BC) Ltd., a subsidiary of Hudbay Minerals Inc. (Hudbay), is an open pit copper/gold mine near Princeton, British Columbia (BC).
- Hudbay has submitted a *Mines Act* (MA) and *Environmental Management Act* (EMA) joint application for the proposed New Ingerbelle expansion, which would extend the mine life to 2047 (current permitted mine life ends in 2033).
- The Lower Similkameen Indian Band (LSIB) and Upper Similkameen Indian Band (USIB) have expressed significant concerns with the proposed New Ingerbelle expansion.
- Some United States federal and state agencies as well as First Nations Groups have also expressed concerns regarding the potential environmental impacts of the proposed New Ingerbelle expansion.
- The Ministry of Energy, Mines and Low Carbon Innovation's (EMLI) Major Mines Office (MMO) is coordinating the New Ingerbelle expansion application review process.
- The USIB, LSIB, local government, and US federal and state agencies will be invited to participate in the application review process.
- In December 2023, the Environmental Assessment Office (EAO) determined the New Ingerbelle project does not require an environmental assessment, noting the MMO led application review process is already in place and addressing the concerns being raised.

Background/Status:

Mine Overview

- Copper Mountain is an open pit copper/gold mine located 20 km south of Princeton, BC.
- Copper Mountain is owned and operated by Copper Mountain Mine (BC) Ltd., a subsidiary of Hudbay Minerals Inc. (Hudbay).
- The mine is within the territories of LSIB and USIB.

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- The mine directly employs approximately 500 people, mostly from the local community.
- The mine operated from 1972 to 1996, was in care and maintenance from 1996 to 2010 and has been back in operation since 2011.
- The proposed New Ingerbelle Expansion would extend mine operations by 14 years to 2047.
- Hudbay submitted the New Ingerbelle expansion MA and EMA applications on January 19, 2024, after putting application submission on hold in early 2022 to allow more time to engage with LISB and USIB.

USIB/LSIB Concerns

- LISB and USIB have expressed concerns with respect to past and current mining impacts in their territory, specifically, impacts on the Similkameen River Watershed and concerns related to the mine's Tailings Storage Facility and the potential for failure.
- LSIB and USIB are also concerned about the close proximity of Ingerbelle Pit to the Similkameen River, the potential for additional mine contaminant loading in the watershed, and the increased height of the Tailings Storage Facility.
- LSIB applied to the Environmental Assessment Office (EAO) to have the New Ingerbelle expansion reviewed under the *Environmental Assessment Act*.
- The EAO determined an environmental assessment was not required. EAO's decision considered the EMLI led regulatory review process already underway to address First Nations concerns and environmental impacts.

Application Review Process

- MMO will lead the New Ingerbelle application review process, including consultation and engagement in accordance with a collaborative process agreement reached with USIB and MMO.
- LSIB, USIB, local government, the Environmental Protection Agency, and the Washington Department of Ecology will all be invited to join the Mine Review Committee along with Provincial technical experts, which is tasked with the technical review of the New Ingerbelle applications.
- MMO will also lead a public notification process as part of the application review process. The public will have an opportunity to provide comments on the application and a summary report responding to all received comments will be posted to EMLI's website.

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- Following completion of the application review process, approval of the New Ingerbelle Expansion will rest with the MA and EMA statutory decision makers.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Centerra Gold

Drafted/Revised: February 22, 2024

Issue: Status of Centerra mine sites (Mt. Milligan, Kemess, Endako)

Response:

- Centerra owns three mine operations in British Columbia (BC) through its wholly owned subsidiaries: Mount Milligan and Endako (Thompson Creek Metals Company Inc.) and Kemess (AuRico Metals Inc.).
- Mount Milligan Mine - Environmental Assessment (EA), *Mines Act* (MA), and *Environmental Management Act* (EMA)^{Advice/Recommendations}
Advice/Recommendations
- Kemess Mine - capital construction costs of the block-cave design make the project uneconomical, and the project is being re-evaluated.
- Endako Mine – will remain in Care and Maintenance for foreseeable future, with barriers to restart include, low ore grades, an outdated mine plan, volatile molybdenum prices, Intergovernmental Communications
Intergovernmental Communications
-
- Takla, Tsay Keh Dene and Kwadacha First Nations have raised concerns regarding the discharge of selenium to the environment at the Kemess mine. The Province has committed to working closely with these Nations to further understand and address their concerns.
- Nadleh Whut'en and Stellat'en First Nations have raised concerns at the Endako Mine with potential impacts of proposed water management changes to Francois Lake.

Background/Status:

- Centerra Gold is a publicly traded mining company based in Toronto, Ontario, Canada. Centerra's BC offices are based in Prince George.
- Centerra has projects in Canada, United States, and Turkey.
- Centerra owns three mine operations in BC through its wholly owned subsidiaries: Mount Milligan and Endako (Thompson Creek Metals Company Inc.) and Kemess (AuRico Metals Inc.).

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Mt. Milligan:

- Open pit copper and gold mine, in Operation since 2013. Currently permitted until 2028.
- Located 155km northwest of Prince George, within the consultive territories of Takla Nation, McLeod Lake Indian Band, West Moberly First Nations, Halfway River First Nation, Binche Whut'en, and Nak'azdli Whut'en.
- Centerra intends to seek EAC and MA and EMA amendments to extend the permitted mine life by seven years, through an expanded open-pit and larger tailings storage facility.

Advice/Recommendations

Intergovernmental Communications

Kemess:

- Underground block-cave copper and gold mine (Kemess Underground), in Care and Maintenance since 2011.
- Previously operational as an open pit copper and gold mine (Kemess South) with production ceasing in 2011.
- Located 430km northwest of Prince George, within the consultive territories of Takla Nation, Tsay Keh Dene Nation, and Kwadacha Nation First Nations.
- Kemess Underground was fully permitted in 2018, construction was started in 2019, but the site re-entered Care and Maintenance in 2020.
- Centerra has indicated that the upfront capital construction costs of the block-cave design make the project uneconomical and have been unable to find a funding partner since 2020.
- Centerra is re-evaluating the project design with no stated timeline for decisions.
- Takla, Tsay Key Dene and Kwadacha First Nations have raised concerns with the discharge of selenium to the environment. Centerra has implemented several management strategies in their mine plan to mitigate this concern and

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

the province has committed to working closely with these Nations to further understand and address their concerns.

Endako:

- Open pit molybdenum mine, in Care and Maintenance since 2013.
- Located 190km west of Prince George, within the consultive territories of the Nadleh Whut'en and Stellat'en First Nations.
- Centerra has no plans to bring the site back into operation in the next 5 years. Barriers to restart include, low ore grades, an outdated mine plan, volatile molybdenum prices, and reaching agreement with Nations on water discharge plans.
- Nadleh Whut'en and Stellat'en First Nations have raised concerns with potential impacts of proposed water management changes to Francois Lake. An EMA amendment is required to approve these changes.
- The Ministry of Energy, Mines and Low Carbon Innovation will continue to work with Nations, Centerra, and the Ministry of Environment on resolving on-going concerns with water management and water quality.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Operating Steelmaking Coal Mines in British Columbia

Revised: February 13, 2024

Issue: Summary of coal mines currently operating in British Columbia

Response:

- There are currently seven metallurgical (met) coal mines operating in British Columbia (B.C.), employing approximately 4,823 workers.
- B.C. is Canada's largest coal producer with all of its operating mines producing metallurgical coal used in steelmaking.
- There are no thermal coal mines operating in the province.
- The forecasted value of the coal produced in B.C. in 2023 was around \$10.2 billion, down from around \$12 billion in 2022 (due to a decrease in the price of met coal).
- Over 90 percent of the mineral tax the Province collected from B.C. mines in 2022/23 came from coal operations (\$737.2 million) and marked a 45 percent increase from 2021/22 (\$508 million) when it made up around 77 percent of the mineral tax collected.

Background/Status:

- The following coal mines are currently operating in B.C.:

Operation	Company	Community	Est. Employees ¹
Elkview	Teck Resources	Sparwood	1,107
Fording River	Teck Resources	Elkford	1,346
Greenhills	Teck Resources	Elkford	711
Line Creek	Teck Resources	Sparwood	684
Wolverine	Conuma Coal	Tumbler Ridge	375
Brule	Conuma Coal	Tumbler Ridge	325
Willow Creek	Conuma Coal	Tumbler Ridge	275

- The forecasted value of the coal produced in the Province decreased by 14 percent from around \$12 billion in 2022 to around \$10.2 billion in 2023 due to a decrease in the price of met coal.

¹ As reported by the companies.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Met coal is B.C.'s top mineral commodity in terms of production value and mineral tax revenue.
- Over 90 percent of the mineral tax the Province collected from B.C. mines in 2022/23 came from coal operations (\$737.2 million of \$816.7 million). *Advice*
Advice/Recommendations; Government Financial Information
- Four of B.C.'s seven operating coal mines are in Southeast B.C.:
 - The four Elk Valley mines are a significant part of the regional and provincial economy, employing approximately 3,848 people.
 - Teck Resources (Teck) has operated these mines since 2003. In February 2023, Teck announced the reorganization (spinoff) of its business to separate base metals and steelmaking coal into two independent, publicly listed companies: Teck Metals Corp. and Elk Valley Resources Ltd. (EVR).
 - In November 2023, Teck announced it agreed to sell its entire interest in EVR, through a sale of a majority (77 percent) stake to Switzerland's Glencore plc for an implied enterprise value of US\$9.0 billion, and a sale of a minority (20 percent) stake to Japan's Nippon Steel Corporation (NSC) and South Korea's POSCO (3 percent).
 - In January 2024, Teck closed the sale of the minority interest in EVR, to NSC and POSCO. Closing of the sale of the remaining interest (77 percent) in EVR to Glencore is expected to occur in the third quarter of 2024.
 - In April 2020, Teck submitted an Initial Project Description to the Environmental Assessment Office (EAO) for the Fording River Extension (FRX) Project at the Fording River mine. It is understood this project will continue to be advanced by Elk Valley Resources.
 - In February 2023, the EAO issued a readiness decision requiring further engagement with Ktunaxa on FRX.
- Three of B.C.'s seven operating coal mines are located at the Peace River Coalfield near Tumbler Ridge. These are owned by Conuma Coal and employ approximately 975 people from the communities of Tumbler Ridge and Chetwynd.
- Proposed coal projects in the EAO process include Crown Mountain (NWP Coal Canada), Michel Coal Project (North Coal), and Texas Coal (Allegiance Coal).

Coal Prices, Carbon Intensity and Transportation.

- The skyrocketing price of met coal that was seen from the end of 2021 through the first half of 2022 has cooled, following a softening of the surge in steel production caused by the post-pandemic global recovery. The average spot

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price for 2023 was US\$295/tonne. Met coal prices gained momentum during the second half of 2023 and remain robust, with strong demand from India and China. The latest reported spot price was US\$333/tonne on January 24, 2024.

- India continues to be the key driver of met coal demand with increase in its steel production supported by growing automotive and engineering sectors along with traditional construction and infrastructure sectors.
- While global economic weakness continues to weigh on steel consumption in China, additional fiscal stimulus from Beijing to support its slowing property and industrial sectors is expected to further boost its demand for met coal.
- Met coal produced in B.C. is high-quality with low sulfur content, reducing acid rain concerns.
- Our mines also have significantly lower carbon intensity compared to competing jurisdictions due to use of clean energy (50 percent lower carbon intensity than Australia, 300 percent lower carbon intensity than United States).
- Coal produced at B.C. mines is transported by rail to shipping terminals in Vancouver (Port Metro, Westshore, or Neptune Terminals) and Prince Rupert (Ridley Terminals).

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Operating Metal Mines in British Columbia

Revised: February 16, 2024

Issue: Summary of metal mines currently operating in British Columbia

Response:

- There are currently nine metal mines operating in British Columbia (BC), employing approximately 4,937 workers.
- Myra Falls mine that employed 130 workers was placed in long-term care and maintenance in December 2023 due to increased operating costs and fall in the price of zinc.
- The key metals mined in BC are copper, gold, silver, zinc, and molybdenum.
- BC is Canada's largest producer of copper and Canada's only producer of molybdenum, both of which are on Canada's critical minerals list.
- Metal mines accounted for \$4.9 billion of all mine production in 2022, representing about 29 percent of total major mine output.
- The preliminary estimate for all metal mines production in 2023 is around \$5 billion.
- In March 2023, Artemis Gold obtained a *Mines Act* permit to allow construction at its Blackwater Gold project in Central BC.

Background/Status:

- The following 9 metal mines are currently operating in BC:

Operation	Company	Community	Est. Employees ¹	Commodities
Brucejack	Newmont Corp.	Stewart	425	Gold/Silver
Copper Mountain	Hudbay Minerals & Mitsubishi Materials Corp.	Princeton	471	Copper/Gold/Silver
Gibraltar	Taseko Mines Limited	Williams Lake	690	Copper/Molybdenum
Highland Valley Copper	Teck Resources Limited	Logan Lake	1,421	Copper/Molybdenum
Mount Milligan	Centerra Gold Inc.	Prince George	618	Copper/Gold
New Afton	New Gold Inc.	Kamloops	485	Copper/Gold/Silver

¹ As reported by the companies.

2024/25 Estimates Note Advice to the Minister

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Minister Responsible: Josie Osborne

Red Chris	Newmont Corp. & Imperial Metals Corp.	Iskut	467	Copper/Gold/Silver
Mount Polley	Imperial Metals Corp.	Williams Lake	340	Copper/Gold/Silver
Elk Gold	Gold Mountain Mining Corp.	Merritt	20	Gold/Silver

- Metal mines accounted for \$4.9 billion of all mine production in 2022 and the preliminary estimate for production from metal mines in 2023 is around \$5 billion.
- The Province collected \$79.5 million in mineral taxes from BC metal mines in 2022/23 fiscal year. Advice/Recommendations
- Proposed upcoming metal mines include:
 - Near-term projects (1-3 years): Blackwater Gold, Cariboo Gold, Premier Gold, Dome Mountain, and Copper Mountain – New Ingerbelle Extension, Red Chris Block Cave Expansion, Highland Valley Copper 2040 Expansion, Eskay Project.
 - Longer-term projects: Galore Creek, KSM, Kutcho, Turnagain, Baptiste Nickel, Schaft Creek, Yellowhead, Berg, Kwanika, Wicheeda, Aley, Ootsa, and North Island Copper.
- Blackwater Gold Project obtained its *Mines Act* permit in March 2023. Mine production is anticipated in the second quarter of 2025 and is estimated to create 457 jobs from operations and generate an estimated \$52 million in annual mineral tax revenue for the province.
- Premier Gold Mine obtained its *Mines Act* and *Environmental Management Act* amendments in late 2021/early 2022 to restart operations located near the town of Stewart. Mine production is anticipated as soon as Q2 2024.
- Cariboo Gold Project obtained its Environmental Assessment Certificate on October 10, 2023. Mine production is anticipated in 2025.
- 2023 and early 2024 saw significant investment in BC's major metal mines (Appendix 1) with approximately \$7.1 billion invested in mines and advanced projects such as Red Chris, Brucejack, Copper Mountain, Blackwater Gold Project, Premier Gold Project, and KSM.
- The demand for and price of industrial metals including copper and zinc fell due to slow economic recovery in China (including its ailing property and infrastructure sector) and other major economies, coupled with high interest rates and borrowing costs. In 2023, copper averaged US\$ 3.84/lb, dropping by 9 percent since 2021

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Minister Responsible: Josie Osborne

when it averaged US\$ 4.22/lb (and peaked to an all time high of US\$4.97/lb in October 2021, driven mainly by the high demand from China – the world’s largest consumer of copper).

- Myra Falls Mine: The slump in the price of zinc resulted in shuttering of operations in zinc mines including BC’s Myra Falls mine that employed 130 workers. The mine was placed in long-term care and maintenance in December 2023 due to increased operating costs and depressed zinc prices.
- The demand for gold remains strong with investors typically gravitating towards the precious metal as a haven amidst geopolitical tensions, economic uncertainty, and U.S. Fed’s rate cut expectations.
- Over the long term, metal prices are forecasted to gain strength to meet a rising demand for metals such as copper to build clean energy infrastructure.

Attachment: Appendix 1 – Recent investments in BC’s Operating and Proposed Metal Mines.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Appendix 1 – Recent Investments in BC’s Operating and Proposed Metal Mines.

- In January 2024, FPX Nickel closed private a placement financing from Sumitomo Metal Mining for gross proceeds of \$14.4 million in return for 9.9 percent equity ownership in FPX. Proceeds will be used for exploration and development activities at Baptiste, for ongoing environmental baseline activities, feasibility study readiness activities, and general corporate and administrative purposes.
- In January 2024, Kutcho Copper closed a private placement for proceeds of \$1.44 million. Proceeds will be used to advance the Kutcho Copper Project located in Northwest BC.
- In December 2023, Skeena Resources issued a total of 1,258,709 flow-through common shares for proceeds of approximately \$10.7 million. Proceeds will be used to fund exploration activities in Skeena’s projects in the Golden Triangle.
- In November 2023, Hecla Mining invested \$10 million for 15.4 million Dolly Varden shares. The proceeds will be used to advance the Kitsault Valley silver and gold project located in the southern tip of BC’s Golden Triangle region.
- In August 2023, Imperial Metals announce a private placement for gross proceeds up to \$16.8 million. Funding will be used to for further development of the Red Chris gold and copper mine.
- In November 2023, Newmont Corp. concluded their takeover of Newcrest Mining Ltd. for \$22.7 billion. Newmont will acquire BC’s Red Chris gold and copper mine as well as Brucejack gold mine as part of the acquisition. These two mines would represent \$5.42 billion of the overall deal based on the in-situ value of all mineral properties acquired in the deal.
- In July 2023, Eskay Mining Corp sold 5 mining claims in the Golden Triangle area to Skeena Resources Ltd. for \$4 million.
- In June 2023, Seabridge Gold closed a \$198 million secured note to Sprott Resource Streaming and Royalty Corp. Proceeds will be used to complete the physical works at its
 - gold mine in northwest BC.
- In June 2023, Hudbay Minerals completed its acquisition of Copper Mountain Mining. Under the transaction, former Copper Mountain shareholders receive 0.381 of Hudbay shares for every Copper Mountain share. The deal is valued at \$585 million.
- In June 2023, Artemis Gold amended the gold stream agreement with Wheaton Precious Metals Corp. which will provide an additional \$53.26 million to fund early capital investment in its Blackwater mine.

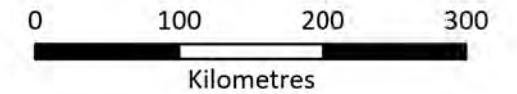
2024/25 Estimates Note Advice to the Minister

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Minister Responsible: Josie Osborne

- In June 2023, Talisker Resources entered into a royalty agreement with Sprott Resource Streaming and Royalty Corp. for \$41.69 million for a net smelter returns royalty covering all minerals produced from the Bralorne Gold project.
- In May 2023, Skeena Resources closes \$73.5 million bought deal financing. Proceeds will be used to finance an on-site lab, earthworks, and detailed engineering at the company's Eskay Creek project in Northwest BC.
- In April 2023, Kutcho Copper announced closing of a non-brokered private placement for gross proceeds of \$4,063,050.
- In February 2023, Artemis Gold Closes \$385 million project loan financing and \$40 million standby cost overrun facility with National Bank of Canada, Macquarie Bank Limited, ING Capital LLC, Société Générale, and Bank of Montreal to fund construction costs of its Blackwater Gold Project.
- In February 2023 – Taseko Mines acquires an additional 12.5 percent interest in the Gibraltar copper mine from Sojitz Corporation for \$60 million.
- In January 2023, Ascot Resources closes \$200 million in project financing for construction of its Premier Gold Project with Sprott Private Resource Streaming and Royalty B Corp and strategic equity investment by Ccori Apu.
- January 2023 – Skeena Resources closes a royalty sale with Franco-Nevada Corp. pursuant to which Skeena grants a 0.5 percent net smelter returns royalty of the Eskay Creek project in exchange for \$27 million and cash contingent cash considerations of \$1.5 million.

Mines, mine development, selected proposed mines, and selected exploration projects in British Columbia, 2023

Gordon Clarke, Bruce Northcote, Nate Corcoran, Cary Pothorin, Hassan Heidarian and Kirk Hancock



Project status (coloured by project type)

- Operating mine*
- Mine in care and maintenance
- Specialty mill
- Mine development
- Proposed mine
- Exploration project
- Temporary shutdown

*Operated in or for a portion of 2023

Project type

- Coal (metallurgical)
- Precious metals
- Precious and base metals
- Base metals
- Base and precious metals
- Rare earth elements
- Industrial minerals
- Aggregates
- Slag
- Other

Geology

Post-accretionary assemblages

- Intrusive rocks
- Supracrustal rocks
- Neogene to Quaternary volcanic rocks

Terranes

- Outboard
- Alexander
- Wrangellia
- Cache Creek and affiliates
- Slide Mountain
- Stikinia
- Quesnellia
- Yukon-Tanana

Ancestral North America

- Cassiar
- Deep-water basin strata
- Platformal strata
- Craton and cover



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Clarke, G., Northcote, B.K., Corcoran, N.L., Pothorin, C., Heidarian, H., and Hancock, K., 2024. Mines, mine development, selected proposed mines, and selected exploration projects in British Columbia, 2023. British Columbia Ministry of Energy, Mines and Low Carbon Innovation, British Columbia Geological Survey Open File 2024-01.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mineral Tax Revenue Forecast / Revenue Sharing with First Nations

Drafted/Revised: February 13, 2024

Issue: B.C.'s Mineral Tax forecast and Revenue Sharing with First Nations through Economic Community Development Agreements.

Response:

- Mineral tax revenue depends on the level of mineral production in British Columbia's (BC) mining sector along with commodity prices. Mineral tax revenues are mainly supported by coal, copper, and gold sales in the Province.
- After reaching record highs in 2022, prices for metallurgical coal cooled off in 2023 as global demand for steel slowed following the surge in demand observed during the post-pandemic recovery. Advice/Recommendations; Government Financial Information
- Government Financial Information; Intergovernmental Communications
- Economic Community Development Agreements (ECDA) representing 54 individual mineral tax revenue streams have been signed with 49 FNs and further are underway or planned.
- The Province recognizes that FNs have been requesting amendments to revenue sharing policy. The Ministry of Indigenous Relations and Reconciliation (MIRR) continue to evaluate policy improvements as part of the New Fiscal Relationship with First Nations with intentions to bring forward reform as committed in the *Declaration on the Rights of Indigenous People's Act* (DRIPA) Plan. While the focus of this work is currently on the forestry sector, the revenue sharing principals established will be used to inform a subsequent evaluation for mining.

Background/Status:

B.C. Mineral Tax

- The mineral tax is a profit-based tax payable by the mines and quarries operating in B.C. The tax was enacted in 1990.

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Minister Responsible: Josie Osborne

- The program applies a tax on prescribed commodities:
 - Coal (approximately 92 percent of forecasted revenue) - Metallurgical, Thermal, PCI (Pulverized Coal Injection)
 - Base and Precious Metals (approximately 8 percent of revenue) – Copper, Molybdenum, Zinc, Gold and Silver
 - Other (less than 1 percent) – Industrial Minerals, Gemstones, rare elements and dimension stones
- The Mineral Tax Revenue projections are based on forecasted commodity prices, various economic indicators and knowledge of the industry. The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is responsible for providing commodity price forecasts while FIN is responsible for the Mineral Tax Revenue projections. EMLI subscribes to a publication called Consensus Economics to generate its price forecasts (Appendix 1).
- There are two tiers of mineral tax:
 - The lower tier is called the Net Current Proceeds tax, calculated at 2 percent of operating cash flows (i.e., revenues plus recoveries minus operating expenditures for the period). This tax is paid before recovery of all operating and capital costs and other deductions.
 - The higher tier is called the Net Revenue Tax, calculated at 13 percent of profits over the life of the mine (i.e., cumulative revenue minus cumulative operating and capital costs and other tax-related deductions). The higher net revenue tax is only paid after recovery of all operating and capital costs and other deductions.

Mineral Tax Revenue Sharing

- In 2008, B.C. became the first province in Canada to introduce a policy to share with FNs direct provincial mineral tax revenue from new and expanded mines.
- ECDA's secure support for mining projects, increase process certainty for the Province, FNs, and industry, and reduce litigation risks for the life of the agreement.
- MIRR leads the negotiation of ECDA's, and FNs receive a percentage of up to 37.5 percent of incremental mineral tax revenue from mine developments in FNs traditional territories.
- The Province's ECDA's represent 54 individual mineral tax revenue sharing streams to FNs which cover 25 metal and coal mines in B.C.
- In March 2023 an ECDA was signed with the Mowachaht/Muchalaht FN for the Myra Falls zinc mine on Vancouver Island. However, the mine went into care

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and maintenance in December 2023 due to declining zinc prices and no revenue is expected to be shared for this mine in 2024.

- Other agreements, including those for Fireside Barite, Cariboo Gold, Elk Gold, Premier, and Kootenay West Gypsum are underway, with further negotiations planned for the near future.

• Advice/Recommendations; Intergovernmental Communications

- Enabling First Nation support and partnership through revenue sharing and capacity building has been identified as a key to success for BC's Critical Mineral strategy.

Attachments: Appendix 1 – EMLI's Price Forecast
Appendix 2 – Payments to FNs through ECDAs in 2022/23

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Minister and Competitiveness
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Appendix 1 – EMLI’s Price Forecast

	Actual 22/23	Forecast (as of Jan 2024) 23/24
Metal Prices (US\$)		
Copper (\$/lb)	3.87	3.77
Lead (\$/lb)	0.95	0.97
Zinc (\$/lb)	1.51	1.13
Molybdenum (\$/lb)	21.91	20.38
Gold (\$/oz)	1,802	1,961
Silver (\$/oz)	21.31	23.56
Coal Contract Prices (US\$/mt)		
Metallurgical Coal	322	276
Low Vol PCI Coal	276	225
Thermal Coal	296	199
Mineral Tax (\$'000s)		
Metals	79,520	35,169
Coal	737,172	430,943
Total	816,692	466,112

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Withheld pursuant to/removed as

Government Financial Information ; Intergovernmental Communications

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Financial Security for Mines

Revised: February 22, 2024

Issue: The purpose of mine reclamation security and the Ministry of Energy, Mines and Low Carbon Innovation's reclamation security policy.

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) requires security at the time of mine permitting and conducts regular reviews of the amount held as conditions change throughout the life of the Mine.
- In April 2022, EMLI released an Interim Major Mines Reclamation Security Policy following engagement with industry, environmental organizations, and Indigenous groups.
- The policy protects British Columbia (BC) taxpayers while ensuring that mining in BC continues to be nationally and globally competitive.
- EMLI is working to close the gap between reclamation liabilities and the amount of reclamation security held in order to reduce the risk to BC taxpayers, and to limit the potential for mine sites to impact the environment.
- EMLI is currently supporting the Ministry of Environment and Climate Change Strategy (ENV) on the *Public Interest Bonding Strategy* to ensure owners of large industrial projects are bonded moving forward so they – not BC taxpayers – pay the full costs of environmental cleanup if their projects are abandoned. EMLI's interim policy will help to inform this work, and the policy will be reviewed and updated as necessary to reflect any changes arising from the *Public Interest Bonding Strategy*.

Background/Status:

- The interim policy ensures that permittees for new major mines pay the full cost of environmental cleanup and reclamation for their mine.
- Under the *Mines Act*, the Chief Permitting Officer sets the financial security requirements at the permitting stage, regularly reviews them during mine operations, and can adjust them as liability or other factors change at any point during the mine's life.
- Acceptable forms of security include cash, surety bonds, qualified environmental trusts, and irrevocable standby letters of credit.
- From 2017 to 2023, financial security at major mines has increased from

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Minister Responsible: Josie Osborne

\$1.36B to \$3.72B and the differential between the amount of financial security and the amount of the reclamation liability has fallen from \$1.43B to \$0.41B.

- Lack of clear policy and insufficient security has been identified in several recent AG reports across the country (Ontario 2015, Alberta 2015, Nova Scotia 2014). This is an evolving area of policy development, and BC is at the forefront of taking action on this with the Interim Reclamation Security Policy and the Public Interest Bonding Strategy.
- EMLI's interim policy is based on current best practices as informed by commissioned reports from Ernst and Young and Stantec report as well as input from industry, environmental organizations, and Indigenous Organizations.
Primary objectives of the interim policy include:
 - Enhance the environmental sustainability of the mining sector;
 - Provide transparency with respect to how reclamation liability cost estimates are to be calculated;
 - Reduce the differential between the mining sector's reclamation liabilities and the reclamation securities held by the Province for existing mines;
 - Promote on-going exploration to reduce the risk of default and to promote stable mining communities;
 - Encourage progressive reclamation and proactive source control measures to reduce the need for long-term water treatment and other environmental liabilities;
 - Maintain and enhance BC's strong practices and reputation with respect to Environmental, Social, and Governance factors;
 - Support the continued competitiveness of BC's mining industry to ensure that this critical industry continues to thrive in BC.
- EMLI is working to close the historic gap between reclamation liabilities and the amount of reclamation security held to reduce the risk to BC taxpayers, and to limit the potential for mines sites to impact the environment.
- EMLI is currently supporting ENV on the *Public Interest Bonding Strategy* to ensure owners of large industrial projects are bonded moving forward so they – not BC taxpayers – pay the full costs of environmental cleanup if their projects are abandoned. EMLI's interim policy will help to inform this work, and the policy will be reviewed and updated as necessary following the conclusion of that work.
- The total bonded security for both major and regional mines has risen from \$10 million in 1984 to approximately \$3.75 billion as of March 2023.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Southeast BC Initiatives

Drafted/Revised: February 20, 2024

Issue: Updates on Initiatives in Southeast British Columbia

Response:

- British Columbia (BC) recognizes the value and significant economic contribution of the southeast coal operations.
- Southeast metallurgical coal deposits are a strategic resource and an important contributor to the economy of local communities, the region and the Province and a significant economic driver for BC.
- Steelmaking coal operations in the southeast sustain more than 12,000 jobs in BC with 3,600 direct and 7,200 in-direct jobs and provide good paying jobs to families across the region.
- BC is committed to a fair, robust and durable permitting process that includes deep consultation with First Nations.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) and other Ministries work collaboratively to manage the permitting process which includes consultation with First Nations and balancing BC's economic, social and environmental interests.

Potential Sale of Teck Coal Assets to Glencore:

- Teck Resources Canada (Teck) has agreed to sell its steelmaking coal business to Glencore in a deal that is expected to close in Q3 2024 subject to regulatory approval.
- If the sale is approved, provincial authorizations currently held by Teck will need to be updated to reflect the new authorization holder. The authorizations will retain all the current regulatory requirements.
- In November 2023, Teck announced that it had agreed to sell its steelmaking coal business, Elk Valley Resources (EVR), to Glencore in a deal that values the operations at US \$9.0 billion. Glencore will acquire a majority stake (77 percent) with the remainder to be held by Nippon Steel Corporation (20 percent) and POSCO (3 percent).
- Closing of the majority transaction to Glencore is subject to approval, including approval under the Investment Canada Act and competition approvals in several jurisdictions. The minority transactions to Nippon Steel Corporation and POSCO are not dependent on the majority transaction and

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
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were completed in January 2024.

- EVR will be required to provide the CDN \$1.9 billion reclamation security through an acceptable financial instrument(s) before the Mines Act permit amendments are referred for decision.

Teck Non-EA Permitting Projects:

- Teck has proposed the Fording River Extension (FRX) Project to authorize future mining in the Elk Valley. In February 2023, the Chief Executive Assessment Officer issued the Environmental Assessment (EA) Readiness Decision concluding that the FRX Project was not ready to proceed with the EA process and required a revised Detailed Project Description.
- The Readiness Decision followed lengthy efforts by Environmental Assessment Office (EAO) to reach consensus including a dispute resolution process triggered by Ktunaxa First Nations.

Advice/Recommendations

- In 2024, Teck is forecasting 10 major projects that support continued mining, including:
 - Projects that extend mine life (e.g., Greenhills Operations Cougar Phase 5 Project, Line Creek Operations Burnt Ridge North Pit Deepening Project, etc.)
 - Projects that manage coal processing waste (e.g., Fording River Operations Eagle South Backfill CCFR Expansion, etc.)
- In addition to projects needed to sustain and continue mining, permit decisions are needed for mitigation projects that improve water quality. Support for continued mining in the Elk Valley is dependent on improvement to water quality and mitigating the historic and current impacts of mining.
- In 2024, Teck is forecasting 16 water quality management projects, including:
 - Water treatment facilities (e.g., Line Creek Operations Dry Creek Water Treatment, Line Creek Operations Line Creek Water Treatment, Fording River Operations North Saturated Rock Fill Phase 3a and 3b, etc.)
 - Calcite remediation and treatment projects (e.g., Elkview Operations Erickson Creek Calcite Remediation Project, Greenhills Operations Thompson Creek Calcite Management Project, etc.)

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Elk Valley Environmental Assessments (EA):

Teck Coal Ltd. Fording River Extension Project (FRX)

- The Chief Executive Assessment Officer issued a Readiness Decision for the FRX Project EA in February 2023, indicating the project was not ready to proceed in the EA process and requiring Teck to submit a revised Detailed Project Description.
- The decision to not proceed with the EA was based on a potential for extraordinarily adverse effects to the Ktunaxa First Nation and their rights. The decision followed lengthy efforts by the EAO to reach consensus on a recommendation, including a dispute resolution process that is enabled in the new EA Act (as of 2018).
- Teck now has the option to collaborate with the Ktunaxa Nation and submit a revised Detailed Project Description that addresses deficiencies outlined by the EAO or withdraw from the EA process entirely and/or restart another process for a different project.
- BC understands that Teck has been engaging directly Ktunaxa, to determine changes to the Detailed Project Description that would be necessary to mitigate potential extraordinarily adverse effects to Ktunaxa rights and interests.

NWP Coal Ltd. Crown Mountain Project

- After 10 years in the EA process, NWP Coal Ltd. has now applied for an Environmental Assessment Certificate for the Crown Mountain open pit coal mine.
- The project is located approximately 12 km north-east of Sparwood in the Kootenay Rockies and would have a mine life of 16 years with a production capacity of 2 million tonnes/year of clean coal and capital investment of \$412M.
- The project requires both a provincial EA under the *Environmental Assessment Act* (2018) and a federal Environmental Impact Study (EIS) under Canadian *Environmental Assessment Act* (2012) (CEAA 2012). A coordinated EA is being conducted.
- On January 16, 2023, Yaq?it ?a·knuq?i'it (YQT) and NWP announced they have signed an Environmental Assessment Process and Consent Agreement for the project. YQT has confirmed that the agreement includes a requirement for YQT consent prior to the EAO referring to Ministers for decision. If consent is not granted NWP will withdraw the application prior to referral.
- NWP's application required three conformity reviews under CEAA 2012 by the Impact Assessment Agency of Canada (IAAC) but following recent acceptance

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

by IAAC it was also submitted to BC and began the 180-day Application Review phase for the provincial EA process.

- It appears that NWP still needs to address substantive outstanding issues.
 - NWP has proposed unproven source control technology to mitigate water quality impacts that does not meet guidelines published by the Ministry of Environment and Climate Change Strategy (ENV) and EMLI and does not demonstrate an ability to meet requirements of the Area Based Management Plan (ABMP).
 - The application also proposes approximately 5 km of impacts to fish bearing streams and a rail load out facility located on Grave Prairie, a spiritually significant site to Ktunaxa Nation which have been identified as major issues throughout the pre-application phases of the EA/EIS.
 - KNC and YQT have expressed significant concern with these issues.

Intergovernmental Communications

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Intergovernmental Communications

Contact:

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Parhar

Executive Lead

Responsible Mining
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Major Mine Projects – New/Restart Mines, Major Amendments – In-Progress, Major Amendments – Pending, and Environmental Assessments

Project	Resource	Proponent/Owner	Location	Employment	Cap. Costs	Status	Details
Permitting: New/Restart Mines							
Cariboo Gold	Gold	Osisko Development Corporation	Wells	634 construction 488 operations	\$137M construction \$918M operations	In Review	<ul style="list-style-type: none"> EAC issued on October 10, 2023. MA/EMA Joint Application in Review Phase. Advice/Recommendations <ul style="list-style-type: none"> Will amalgamated existing Bonanza Ledge, QR, and Mosquito Creek Mines.
Quintette	Coal	Conuma Resources Ltd.	28km south of Tumbler Ridge	400 operations	\$287M construction	In Review	<ul style="list-style-type: none"> Application submitted in September 2023. In Screening Review Phase. Advice/Recommendations
Dome Mountain	Gold	Gavin Mines Ltd.	38km east of Smithers	17 operations	Unknown	In Review	<ul style="list-style-type: none"> In Round 2 of review. s.13
Eskay Creek	Gold Silver	Skeena Resources Ltd.	Stewart	400 operations	\$713M operations	Pre-Application	Advice/Recommendations <ul style="list-style-type: none"> MA/EMA applications will be aligned with final stages of EA process.
Zeballos Gold	Gold	Privateer Gold Ltd.	Zeballos	TBD	Unknown	Pre-Application	<ul style="list-style-type: none"> PD/IRT submitted Jan 2024. Advice/Recommendations
Permitting: Major Amendments - In-Progress							
Highland Valley Copper – HVC2040	Copper	Teck Resources	Logan Lake	1,320 operations	\$2.5B	In Review	<ul style="list-style-type: none"> Joint EA/MA/EMA application in review stage. Advice/Recommendations
Copper Mountain – New Ingerbelle Expansion	Copper Gold Silver	Hudbay Minerals Inc.	Princeton	465 during operations	\$214 M	In Screening	<ul style="list-style-type: none"> MA/EMA application submitted January 2024. EMLI/USIB are discussing a third party geotechnical and geoscience review. US tribes and state governments expressed interest in mine and concern with potential expansion. Advice/Recommendations
Eskay Creek – Technical Sample	Gold Silver	Skeena Resources Ltd.	Stewart	unknown	Unknown	In Screening	<ul style="list-style-type: none"> Technical (bulk) sample of proposed open pit. MA/EMA application submitted December 2023. Advice/Recommendations

Major Mine Projects – New/Restart Mines, Major Amendments – In-Progress, Major Amendments – Pending, and Environmental Assessments

Project	Resource	Proponent/Owner	Location	Employment	Cap. Costs	Status	Details
Brucejack – Production Rate Change	Gold Silver	Pretium Resources (Newmont)	65 km NNW of Stewart	425 operational jobs	\$1.96 billion	In Review	<ul style="list-style-type: none"> MA/EMA amendment to increase production rate. Application submitted Jan 2024. Advice/Recommendations <ul style="list-style-type: none"> Multiple additional permitting processes in progress.
Mount Polley – Springer Pit Expansion	Copper Gold	Imperial Metals Corp.	Likely	300 operations	\$32M	In Screening	<ul style="list-style-type: none"> Springer Pit Expansion will increase operational mine life to 2031. Application submitted in December 2023. Advice/Recommendations Advice/Recommendations <ul style="list-style-type: none"> Additional Mines Act amendments in progress or completed in 2023/24 include - reslope of the TSF embankment, borrow material source, TSF foundation work, new dry-stack TSF. Advice/Recommendations
Teck Coal Water Treatment and Calcite Projects	Water treatment facilities	Teck Coal Ltd.	Elk Valley	Unknown	\$700M	In Review	<ul style="list-style-type: none"> Support for continued and future mining in the Elk Valley is dependent on Teck demonstrating progress in implementing water treatment and meeting the requirements of the Area Based Management Plan. Line Creek Operations – Dry Creek Water Treatment Facility. Line Creek Operations – Line Creek Water Treatment Facility . Elkview Operations – Erickson Creek Calcite Remediation. Greenhills Operations – Thompson Creek Calcite.
Permitting: Major Amendments - Pending							

Major Mine Projects – New/Restart Mines, Major Amendments – In-Progress, Major Amendments – Pending, and Environmental Assessments

Project	Resource	Proponent/Owner	Location	Employment	Cap. Costs	Status	Details
Eskay Creek – Revitalization Project	Gold Silver	Skeena Resources Ltd.	Stewart	400 operations	\$713M over 12 years Since 2014: Skeena reports investment of \$310M in BC economy	Pre-Application	<ul style="list-style-type: none"> Tahltan and EAO determined project could proceed EA process in November 2022; Currently in the Application development stage. Advice/Recommendations <ul style="list-style-type: none"> MA/EMA applications will be aligned with final stages of EA process. Skeena is seeking aggressive EAC and MA/EMA review schedules to start construction in 2026.
Red Chris – UG Block Cave	Copper Gold	Newmont (70%) Operator Imperial Metals Corp. (30%)	80 km south of Dease Lake	500 during operations	\$2.6B for entire block cave exploration and production	Pre-Application	<ul style="list-style-type: none"> EAC amendment in the early stages of the amendment process. Pre-application expected to Advice/Recommendations for Block Cave MA/EMA amendments. Newmont recently tabled an aggressive EAC and permitting amendment schedule requesting A Advice/Recommendations
Mount Milligan – Mine Expansion	Gold	Thompson Creek Metals Company (Centerra Gold Ltd.)	155km NW of Prince George	610 operations	Unknown (not provided)	Not Started	<ul style="list-style-type: none"> Proposed mine expansion would increase production rate and extend life of mine by 7 years. Advice/Recommendations <ul style="list-style-type: none"> Centerra has indicated they will be seeking aggressive review schedules to facilitate construction goal of Q1 2026.
Kerr-Sulpherets-Mitchell (KSM)	Gold Copper	KSM Mining ULC (Seabridge Gold)	65 km northwest of Stewart	1,800 construction 1,040 operations	\$8.35B operations	Not Started	Advice/Recommendations <ul style="list-style-type: none"> January 15, 2024, submitted request for substantial start determination to EAO.

Environmental Assessments: New/Restart Mines

Major Mine Projects – New/Restart Mines, Major Amendments – In-Progress, Major Amendments – Pending, and Environmental Assessments

Project	Resource	Proponent/Owner	Location	Employment	Cap. Costs	Status	Details
Eskay Creek	Gold Silver	Skeena Resources Ltd.	Stewart	400 operations	\$713M operations	Application Development and Review Stage (In Development)	<ul style="list-style-type: none"> Tahltan and EAO determined project could proceed EA process in November 2022. Advice/Recommendations
Crown Mountain	Coal	NWP Coal Canada Ltd.	Sparwood	500 construction 330 operations	\$412M construction	Application Development and Review Stage (In Review)	<ul style="list-style-type: none"> Project has transitioned from 2002 to 2018 EA Act. Proponent has agreement with Tabacco Plains Nation. Application has passed the Federal conformity review and was submitted to EAO in January 2024. Permitting pre-application discussions have not been initiated.
Red Chris – UG Block Cave	Copper Gold	Newmont (70%) Operator Imperial Metals Corp. (30%)	80 km south of Dease Lake	500 during operations	\$2.6B	Application Development and Review Stage (In Development)	Advice/Recommendations <ul style="list-style-type: none"> Newmont recently tabled an aggressive EAC and permitting amendment schedule Advice/Recommendations
Tenas Coal	Coal	Telkwa Mining Ltd. (Bathurst Resources Ltd.)	Smithers	100 construction 90 operations	\$84.2M	Application Development and Review Stage (On Hold)	<ul style="list-style-type: none"> Bathurst is working on responding to detailed information requests before the Assessment and Recommendation phases of the EA process can begin. Permitting pre-application is expected to begin after the EA process is complete. Advice/Recommendations
Angus	Frac Sand	Vitreo Minerals Ltd.	Bear Lake	150 construction 140 operations	\$300M construction \$1.94B operations	Readiness Decision Stage	Advice/Recommendations
Michel Coal	Coal	North Coal	Sparwood	500 construction 300 operations	\$358M	Process Planning Stage (On Hold)	<ul style="list-style-type: none"> EA Application submission paused by North Coal to allow for further engagement with Indigenous Nations.
Spanish Mountain	Gold Silver	Spanish Mountain Gold Ltd.	Likely	1000 construction 260 operations	\$900M	Early Engagement Stage (On Hold)	<ul style="list-style-type: none"> Early Engagement Phase of the BC EA process EA on hold at request of Proponent pending improved market conditions. Permitting pre-application discussions have not been initiated.

Major Mine Projects – New/Restart Mines, Major Amendments – In-Progress, Major Amendments – Pending, and Environmental Assessments

Project	Resource	Proponent/Owner	Location	Employment	Cap. Costs	Status	Details
Fording River Operations - Fording River Extension (FRX)	Coal	Teck Coal Ltd.	Elkford	1,300 operations	Unknown (not provided)	Readiness Decision Stage	<ul style="list-style-type: none"> EA Readiness Decision issued returning Detailed Project Description to Teck for redesign and resubmission with increased consultation.
New Polaris	Gold	Canagold Resources Ltd.	100km south of Atlin	125 construction 215 operations	\$144M construction \$380M operations	Early Engagement Stage (On Hold)	<ul style="list-style-type: none"> IPD submitted March 2023. Comments provided to proponent May 2023.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Red Chris Mine Project

Drafted/Revised: February 16, 2024

Issue: Status of Red Chris Block Cave Project

Response:

- Newmont Corporation (Newmont) of the US acquired Newcrest Mining Ltd. (Newcrest) of Australia in November 2023 in a \$22.7B deal.
- Newmont owns 70 percent of Red Chris Mine with Imperial Metals Limited (Imperial) owning the remaining 30 percent.
- Currently, up to 800 people are employed at the Mine. Approximately 40 percent of employees are from Northwestern British Columbia (BC) communities, including approximately 220 members of the Tahltan Nation (Tahltan).
- Newmont is seeking to transition from an open pit to a block cave underground operation with a 30-year mine life.
- Newmont is required to seek an Environmental Assessment Certificate (EAC) amendment as well as *Mines Act* (MA) and *Environmental Management Act* (EMA) permit amendments prior to implementing the transition. The EAC amendment process commenced in late 2023.
- The Province is actively working with Newmont and the Tahltan to develop the required regulatory pathway.
- Tahltan and BC signed a *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act) consent decision-making agreement for Red Chris Mine on November 1, 2023.

Background/Status:

Mine Overview

- The Red Chris Mine is within the territory of the Tahltan and situated approximately 18 km southeast of the village of Iskut, 80 km south of Dease Lake, and 450 km north of the Town of Smithers.
- The Red Chris Mine has been in continuous operation since February 2015.
- The Red Chris Mine is currently permitted for open pit mining with an operational life of approximately 27 years. The reclamation liability, held in full by the Province, is \$134.6M.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- In November 2023, Newmont, the world's largest gold miner by output, purchased 100 percent of the issued share capital of Newcrest. This included the Red Chris Mine and Brucejack Mine.
- Newmont's interest (70 percent) in the Red Chris Mine is a joint venture with Imperial (30 percent). Newmont acts as operator of the Mine.

Tahltan

- On November 1, 2023, Tahltan and BC signed a *Declaration Act* consent decision-making agreement for Red Chris Mine regarding the Environmental Assessment decision for the upcoming block cave amendment. The agreement sets out the process for consent-based decision making that will be used for assessments of substantial change pursuant to subsection 7(1)(b) of the *Declaration Act*.
- Tahltan and BC engagement has been guided by the Red Chris Management Agreement dated January 24, 2017, an agreement between Tahltan and the Province.
- To date, Tahltan and the Province have worked collaboratively on the review of permit applications. Tahltan and the Ministry of Energy, Mines and Low Carbon Innovation are exploring development of a collaborative workplan specific to the block cave permitting process.

Mine Expansion Plans

- Newmont plans to transition the mining operations to an underground block cave to access higher grade ore. If approved, the mine would have an operational life of 30 years.
- Newmont is required to seek an EAC amendment as well as MA and EMA permit amendments prior to implementing the transition. The EAC amendment process commenced in late 2023.

Business Information

Union Negotiations

- Through a binding arbitration process directed by the British Columbia Labour Relations Board, the United Steelworkers Union Local 1-1937 and the Red Chris Mine now have a collective agreement in place until April 23, 2025.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

Tania Demchuk	Assistant Deputy Minister	Responsible Mining and Competitiveness Division	250-818-6426
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mining Competitiveness

Drafted/Revised: February 21, 2024

Issue: Challenges and opportunities for British Columbia's mining sector competitiveness

Response:

- The competitiveness of British Columbia's (BC) mining sector is key to attracting investment to mineral exploration and mine development.
- The Province's fiscal incentives, rich mineral deposits, world-class infrastructure, and abundant source of clean and affordable energy continue to make BC an attractive jurisdiction for mine investors with approximately \$7.1 billion invested in BC companies and assets in 2023.
- The Province is advancing initiatives to leverage and promote BC's Environmental/Social/Governance (ESG) strengths such as low carbon footprint, commitment to reconciliation and strong regulatory regime.
- On January 22, 2024 Premier Eby announced Phase 1 of the BC Critical Minerals Strategy (Strategy).
- Phase 1 includes 11 actions that support the development and growth of the critical minerals sector, attract investment, and ensure a stable workforce.
- A key Strategy action is the Critical Mineral Project Advancement Office, which will lead a Fiscal Environment Assessment to examine BC's fiscal competitiveness and explore tools to support sector growth.
- The Blackwater mine received its *Mines Act* permit in March 2023, which will reinforce investor confidence in the Province's ability to permit a major mining project in a timely manner with First Nations support.

Background/Status:

- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) service plan highlights EMLI's commitment to position BC as an attractive, responsible, and competitive jurisdiction for investment in the mining sector.
- On May 4, 2023, the Fraser Institute released its annual report ranking jurisdictional investment attractiveness for 2022; BC ranked 15th out of 62 jurisdictions for overall investment. In 2021, BC ranked 16th.
- The Mining Association of BC (MABC) and independent studies commissioned by EMLI have noted the carbon tax as impacting the competitiveness of BC operations, in addition to low ore grades, distance of mines to tidewater, and regulatory complexity.

Intergovernmental Communications

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- To address these challenges, support growth and competitiveness more broadly and support economic recovery from the COVID-19 pandemic, the Province has implemented a wide range of initiatives to support mining in BC.

Fiscal Measures

- Budget 2019 made the Mining Flow-Through Share Tax Credit and the BC Mining Exploration Tax Credit permanent incentives.
- Budget 2020 extended the New Mines Allowance for five years and removed location restrictions on pollution control and waste management machinery/equipment from the Provincial Sales Tax exemption.
- As part of Phase 1 of the Strategy, the Province will conduct a fiscal environment assessment including an analysis to assess the need for targeted incentive programs, that can drive investment throughout the critical-mineral lifecycle, incentivize production and maintain competitiveness. This work will identify competitiveness issues and recommend steps to mitigate any identified.

Permitting

- Resources were secured through Budget 2022 and made permanent in Budget 2024 to add 38 new full time Equivalents (FTEs) across mining regulatory agencies to ensure thorough, timely reviews of major mine projects and address backlogs in regional permitting.
- Budget 2023 provided \$77 million over three years to help speed up natural-resource permitting and begin work to modernize the permitting service delivery model. EMLI was allocated \$3 million, providing the ministry with nine new FTEs focussed on strategic work to improve permitting timelines and certainty.

Carbon Tax

- Budget 2023 announced that on April 1, 2024 BC will transition from its current industrial carbon pricing system, the CleanBC Program for Industry, to a made-in-BC Output-Based Pricing System (OBPS). These changes will ensure that BC's carbon pricing regime meets federal stringency requirements.
- The details of BC's OBPS have been finalized it is supported by the Mining Association of BC (MABC) as positive step to address competitiveness.
- The Climate Action Secretariat implemented the CleanBC Industrial Incentive Program to support industrial emissions reductions and minimizes carbon leakage by supporting industrial competitiveness. This program will be replaced by the OBPS in April 2024.
- The CleanBC Industry Fund (CIF) invests a portion of carbon tax revenues into businesses working on emission reduction projects, including mining companies. Approximately \$90 million of funding was invested in all CIF projects for 2022/23. Funding allocations to mining have been substantive, with a combined total of

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

approximately \$14.9 million invested across nine projects in 2022/23 (Attachment 1).

ESG

- EMLI is working to position BC as a leading jurisdiction to attract ESG investment capital that has been valued at over \$100 trillion globally through branding efforts and a digital platform to surface relevant ESG data in a verifiable way.
 - The Mines Digital Trust pilot is underway in partnership with the Ministry of Citizen Services.
 - Through StrongerBC, the ESG Centre of Excellence is being established to provide support to BC businesses to develop, promote and market their goods and services under a provincial ESG brand.

Critical Minerals

- In Budget 2023, EMLI was given \$6 million over three years to conduct First Nations and public engagement, geoscience and economic analysis and establish a Critical Minerals Advisory Committee, to inform strategy development.
- On January 22, 2024, the Premier announced Phase 1 of the BC Critical Minerals Strategy at the annual Roundup conference.
- These actions begin to address the barriers to critical-mineral project development and create the conditions to enable project advancement. They also align with the Province's commitments to the UN Declaration on the Rights of Indigenous Peoples and BC's Declaration Act, and other government priorities such as land use planning, conservation commitments, CleanBC and StrongerBC.
- Phase 2 of the Strategy that will build on these actions is expected to be announced ^{Advice/Recommendations}

2023 Investment in mining and mineral exploration in BC

- 2023 saw investment of \$7.1 billion in mines and advanced projects.
- Exploration expenditures in BC totalled an estimated \$643.5M in 2023 which was down from \$740.4M in 2022. This is the fourth highest amount on record for the province. Approximately 69 percent of these expenditures were made in northwest BC.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Attachments: Attachment 1 – CleanBC CIF Funded Mining Projects in 2022/23

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Appendix 1 – CleanBC CIF Funded Mining Projects in 2022/23

Company	Mining Project	Project Name	Project Description	Funding (CAD\$)
Copper Mountain Mine Ltd.	Copper Mountain Mine	Fuel Switching	Replace a diesel mining shovel with an electric mining shovel including associated support equipment.	\$2,650,000
Copper Mountain Mine Ltd.	Copper Mountain Mine	Fuel Switching	Replace a diesel mining drill with an electric mining drill including associated support equipment.	\$1,000,000
Coeur Silvertip Holdings Ltd.	Silvertip Mine	Fuel Switching	Will replace site diesel generators and propane heaters with equipment that runs on natural gas.	\$407,000
Teck Metals Ltd.	Teck's Trail Operations	CO ₂ Utilization and Storage Pilot Project	To investigate CO ₂ utilization and storage opportunities to sequester emissions from metallurgical processing.	\$10,060,000
Teck Metals Ltd.	Teck's Trail Operations	Microwave Drying	The study will investigate the feasibility of electrifying solids drying processes with a microwave system powered by hydroelectricity.	\$72,600
Barkerville Gold Mines Ltd.	Cariboo Gold Mine	Cariboo Gold Mine Electrification Project	The study will assess the feasibility of building and operating all-electric large scale underground mining operations.	\$290,464
Teck Resources Ltd.	Teck's Trail Operations	Trolley Assist Study	This study will evaluate the feasibility of a Trolley Assist system in order to reduce carbon emissions from the existing diesel electric truck fleet.	\$150,000
Taseko Mines Ltd.	Gibraltar Mine	Feasibility of adaptation of the Biosalix mine reclamation process to produce a carbon neutral biomass feedstock.	The study will focus on alternative mine reclamation using process by-products (residuals) from Cariboo Pulp and Paper's Quesnel mill at the Taseko Gibraltar copper mine.	\$142,125
Teck Metals Ltd.	Teck's Trail Operations	Electrification of Molten Pot Heating	The study will investigate the feasibility of converting existing natural gas heated molten metal pots to hydroelectric powered induction heating.	\$114,000

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne
Title: Critical Minerals Strategy

Drafted/Revised: March 26, 2024

Issue: Update on the BC Critical Minerals Strategy

Response:

- British Columbia's (BC) mining sector provides many of the critical minerals and metals needed to fight climate change, like the integral components of technologies such as electric cars, wind turbines and solar power.
- Global demand for critical minerals is growing substantially and BC has the potential to be a supplier of choice for many of these minerals.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) has announced Phase 1 of the BC Critical Minerals Strategy to capitalize on this opportunity.
- Phase 1 takes impactful actions focussed on unlocking critical minerals opportunities throughout the value chain. EMLI will build on this momentum by releasing Phase 2 of the Strategy in the coming months. Phase 1 is centred on a made-in-BC approach that incorporates input from an expert advisory committee, rightsholder and stakeholder engagement, and economic and geoscience analysis.
- Phase 1 builds on the foundation of and aligns with related government priorities including *Declaration Act* commitments, land-use planning and conservation, Mineral Tenure Act reform, CleanBC and StrongerBC.

Status:

- In Budget 2023, EMLI was given six million over three years to conduct First Nations and public engagement, geoscience and economic analysis and establish a Critical Minerals Advisory Committee, to inform strategy development.
- On January 22, 2024, the Premier announced Phase 1 of the BC Critical Minerals Strategy (Attachment 1).
- Phase 1 includes 11 actions (Attachment 2) that will be impactful first steps to support the development and growth of the critical minerals sector, attract investment, and ensure a stable workforce in a competitive jurisdiction.
- These actions begin to address the barriers to critical-mineral project development, as well as the conditions to enable development. They also align with the Province's commitments to the UN Declaration on the Rights of Indigenous Peoples and BC's Declaration Act, and other government priorities such as land use planning, conservation commitments, CleanBC and StrongerBC.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Phase 2 of the Strategy is expected to be announced by the end of 2024. To inform Phase 2, EMLI will be continuing engagement with rightsholders, economic and geoscience analysis and continued input from the Critical Minerals Advisory Committee.
- Phase 1 actions are a starting point to build strong partnerships and unlock critical mineral opportunities throughout the value chain, and we will continue this momentum through Phase 2 of the BC Critical Minerals Strategy in the coming months.
- Phase 1 includes a commitment to align the BC Strategy with the First Nations Critical Minerals Strategy, which was released by the First Nations Energy and Mining Council in March 2024. This work will take place over the next several months.

Background:

- The International Energy Agency estimates that demand for critical minerals is projected to increase by 6x by 2050 to meet increased demand for green technologies and infrastructure.
- BC hosts at least 16 of the 31 identified critical minerals in the Canadian Critical Minerals List. Of these, copper, molybdenum, and magnesium are already being produced at nine of BC's operating mines, and there is significant potential in the further development of these and other critical minerals, such as nickel and cobalt.
- BC has substantial potential to produce additional critical minerals and develop greater critical mineral processing, manufacturing, and recycling capacity.
- Canada announced \$3.8 billion over eight years (commencing in 2022-23) in Budget 2022 to implement Canada's first Critical Minerals Strategy to capitalize on the growing need for these minerals. The Strategy was launched in December 2022.
- EMLI sees the BC Critical Minerals Strategy as complementary to the federal strategy while advancing provincial interests. EMLI is exploring BC is engaging with federal counterparts to explore opportunities for collaboration and to secure federal funding for BC projects and priorities.
- Critical minerals are a key area of focus for the recently initiated Regional Energy and Resources Table (RERT) between BC and Canada to seize on economic opportunities enabled by the global low-carbon transition.

Attachments: Attachment 1 – Phase 1 BC Critical Minerals Strategy
Attachment 2 – Phase 1 Actions

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

Tania Demchuk	Assistant Deputy Minister	Responsible Mining and Competitiveness Division	250-818-6426
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PHASE
1

B.C.'S CRITICAL MINERALS STRATEGY

UNLOCKING A GENERATIONAL OPPORTUNITY

Critical minerals like copper, cobalt, and nickel are vital building blocks for green technologies needed to decarbonize our economy and achieve net-zero emissions by 2050. British Columbia is a world-class mining jurisdiction with **16 of Canada's 31 critical minerals** and is Canada's largest copper and only molybdenum producer.

A FOCUS ON BRITISH COLUMBIANS:

The B.C. Critical Minerals Strategy will support a sustainable economy to deliver the jobs, opportunities and services that people need to build good lives and support their families.

B.C. MINING REPRESENTS:



35,000+
Rural & urban jobs...

... with an average salary of
\$129,500


\$7.3 BILLION
to provincial GDP

28%
of B.C.'s
export value

Approximately
\$1 BILLION
in provincial government
revenue to support services



Ministry of
Energy, Mines and
Low Carbon Innovation



The B.C. Critical Minerals Strategy lays the foundations for strong partnerships between First Nations, government and industry that will encourage investment and sustainable economic growth that advances climate action. **This is a generational opportunity to strengthen our critical minerals sector, access global markets, and secure new jobs across the province.**



WORLD-CLASS GEOSCIENCE

- New investment in the BC Geological Survey will ensure world-class geoscience data is current and available, including B.C.'s Critical Minerals Atlas.



INVESTING IN THE FUTURE

- Existing B.C. programs such as the BC Mining Exploration Tax Credit, Innovative Clean Energy Fund and CleanBC Industry Fund will help to support a competitive and innovative sector.
- In partnership with the Province, lithium-ion battery company E-One Moli Energy is investing in Maple Ridge, B.C., for its new \$1.05 billion manufacturing plant.



A WORLD LEADER IN ESG

- The establishment of an ESG Centre of Excellence will support B.C. businesses to build and promote their environmental and social credentials and help the province attract global ESG-focused investment.
- A global leader in climate action, B.C. implemented North America's first carbon tax and is committed to achieving net-zero emissions by 2050.



MEANINGFUL PARTNERSHIPS WITH FIRST NATIONS

- B.C. has a legislated framework for Indigenous reconciliation that aligns with the UN Declaration on the Rights of Indigenous Peoples. This includes negotiating consent-based decision-making agreements with First Nations for mining projects in B.C.

OUR NATURAL BUSINESS ADVANTAGES:

- ✓ **Access to fully integrated port, rail and road transportation systems**
- ✓ **Strong collaboration across all levels of government, including First Nations partners**
- ✓ **Our energy comes from 98% renewable sources**
- ✓ **Competitive taxes and strong fiscal incentives**
- ✓ **Diverse, skilled, highly educated and multilingual workforce**

PHASE 1 OF A MADE-IN-B.C. STRATEGY

VISION:

Responsible critical minerals development drives B.C.'s clean economy, delivering jobs and benefits for all British Columbians, while advancing reconciliation goals.



The B.C. Critical Minerals Strategy has three overarching goals:

GOAL 1:

Expand First Nations partnerships, shared decision making and reconciliation.

GOAL 2:

Increase business certainty to attract investment.

GOAL 3:

Establish funding partnerships to advance critical mineral projects.

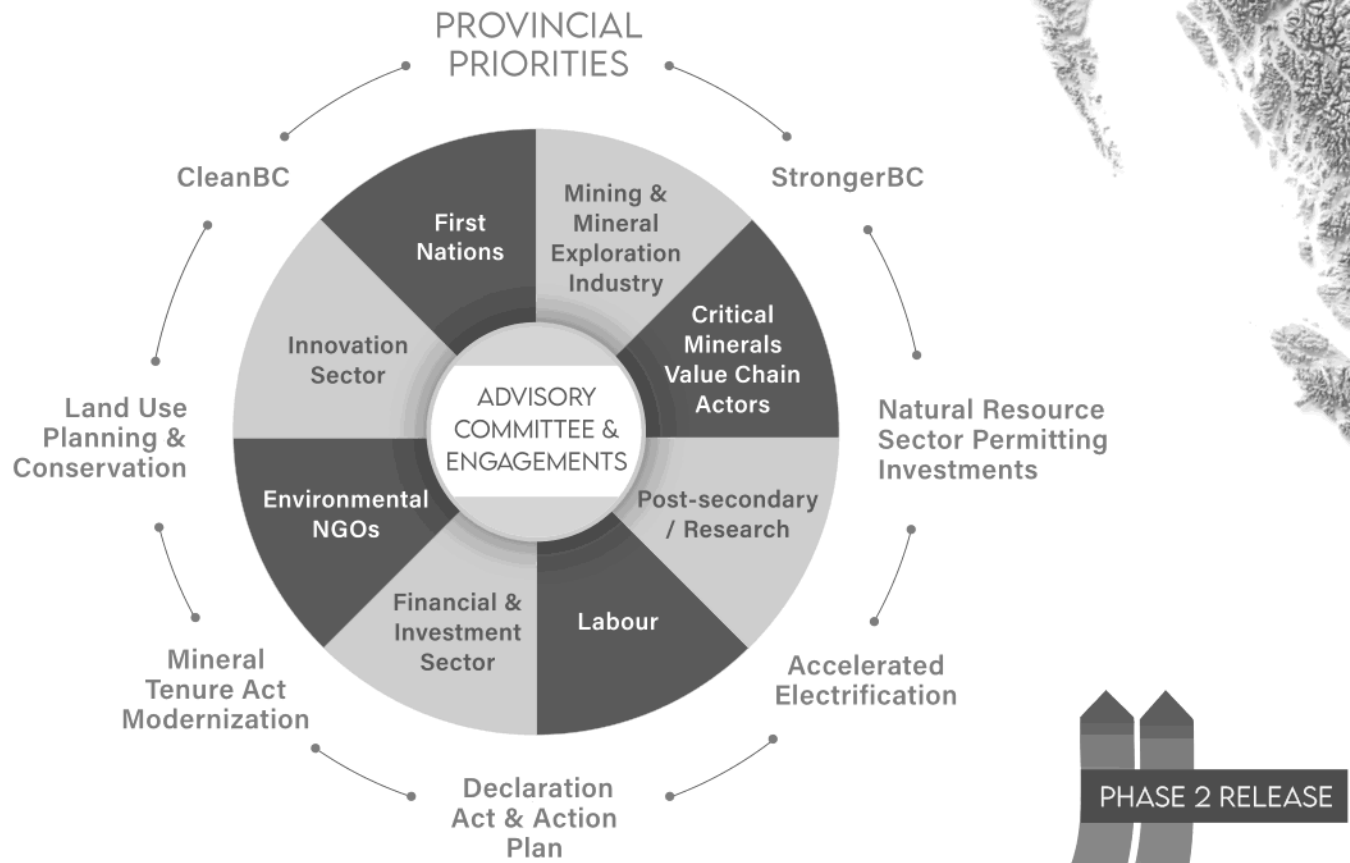
B.C. TAKING ACTION

- **Critical Minerals Project Advancement Office** – dedicated staff to prioritize critical minerals project advancement.
- **Dedicated Permitting Resources** – to ensure efficient permit processing to bolster business certainty, reduce development times and attract long-term investment.
- **Critical Minerals Atlas** – evaluates B.C.'s critical mineral endowment and builds awareness about opportunities for industry, First Nations and the public.
- **Work with First Nations on Critical Minerals** – continue to engage with First Nations and align B.C.'s Strategy with the First Nations Energy and Mining Council's First Nations Critical Minerals Strategy.
- **Mineral Tenure Act Modernization** – in cooperation and collaboration with First Nations and First Nations organizations.
- **Energy & Mines Digital Trust** – promotes B.C.'s ESG advantage and provides greater transparency for investors through B.C. government supported digital certificates.
- **Infrastructure & Electrification Gap Assessment** – to identify and develop business cases to address infrastructure gaps and barriers to critical mineral value chain development.
- **Critical Minerals Infrastructure Partnership Development** – partner with the federal government and First Nations to identify and advance high priority regional infrastructure projects.
- **Invest in Strategic Regional Critical Minerals Projects** – leverage federal funding to enable critical minerals processing, manufacturing, and circular economy projects.
- **Fiscal Environment Assessment and Targeted Incentive Programs** – to drive investment throughout the value chain, incent production, and maintain competitiveness.
- **StrongerBC: Future Ready Action Plan Skills Training & Workforce Development** – optimize programs to meet workers and critical minerals sector skills and training needs.

COLLABORATIVE APPROACH

B.C.'s Critical Minerals Strategy is being developed through an inclusive, collaborative and data-driven approach informed by First Nations engagement, public engagement, economic analysis and the work of a multi-sectoral Critical Minerals Advisory Committee.

B.C.'s Critical Minerals Strategy was developed in alignment with the Province's long-term priorities, which are foundational to achieving our goals.



NEXT STEPS

PHASE 1 RELEASE

CONTINUING FIRST NATIONS ENGAGEMENT

ONGOING ANALYSIS & DEVELOPMENT



Ministry of Energy, Mines and Low Carbon Innovation

Email: critical.minerals@gov.bc.ca

Website: <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/criticalminerals>

Attachment 2: Phase 1 Actions

The 11 key Phase 1 actions of the B.C. Critical Minerals Strategy are:

Critical Minerals Project Advancement Office:

The Critical Minerals Project Advancement Office is a foundational strategy action to support prioritization of critical-minerals projects in B.C. It is being put in place to centralize and expedite the advancement of priority critical-minerals projects, and lead the assessment of B.C.'s fiscal environment to ensure that B.C. leverages critical-mineral federal-funding opportunities like the Critical Mineral Infrastructure Fund and Strategic Innovation Fund's critical-minerals offering. The office will feature:

- a concierge service for critical-minerals projects with support for issues resolution, funding opportunities and regulatory processes;
- project management support on permitting and regulatory processes, including federal processes; and
- dedicated First Nations negotiators to help develop agreements, and advise and guide project proponents.

Investments in geoscience:

New investments in the B.C. geological survey will build provincial geoscience capacity to better support exploration and land-use planning efforts, including direct outreach with First Nations to share geoscience data and expertise. B.C. is committed to engaging First Nations and seeking partnership opportunities in geoscience activities.

The Province is investing \$3.9 million to advance critical-mineral geoscience over four years, starting fiscal year 2022-23.

As British Columbia continues to pursue the generational economic growth and jobs opportunities that critical minerals present, it is more important than ever that the mineral exploration sector and First Nations have current, accessible and ongoing access to world-class geoscience. The first-ever B.C. Critical Minerals Atlas provides a comprehensive overview of the types of minerals found in B.C. and in what quantities. The atlas is ready to be shared with mining professionals in B.C., whose work demands that they have convenient access to comprehensive and user-friendly critical-mineral data.

The atlas supports the CleanBC Roadmap to 2030 as a key step in evaluating the critical-mineral endowment of the province, and building awareness of critical-mineral opportunities for the mineral-exploration industry and First Nations.

Promotion of B.C.'s ESG advantage:

British Columbia is already recognized globally as a hub of mining expertise and innovation, and a global leader in ESG standards. The Province is committed to achieving a globally recognized standard of ESG and has established an ESG Centre of Excellence. The centre is supporting B.C. businesses and entrepreneurs to promote, develop and market environmentally friendly and socially responsible goods, resources and services.

Under this strategy action, the Province will increase investment attraction and promote B.C. businesses through a new Energy and Mines Digital Trust project (EMDT). The EMDT provides a transparent platform to manage companies' credentials for ESG strengths. These credentials, which cannot be forged, prove where the product originated and how it was produced. This allows companies to demonstrate to investors that their products meet the highest global standards, meaning increased awareness of B.C.'s ESG strengths and traceability of B.C. critical minerals throughout the critical-minerals lifecycle.

If widely adopted, this technology has the potential to improve regulatory efficiency and transparency, leading to new market opportunities for B.C.'s natural-resource industry.

Priority critical-mineral infrastructure:

To secure critical-minerals growth in northwest British Columbia, the Province will partner with the federal government and First Nations to advance and identify funding for high-priority strategic regional infrastructure projects. These projects are essential to critical-mineral growth and meeting CleanBC goals such as clean-energy projects, roads, port upgrades and the North Coast Transmission Line. B.C. is preparing funding for these projects, including the recently announced BC Hydro 10-year capital plan.

This strategy action will support and build on an existing process to secure federal co-funding and First Nations equity opportunities in the North Coast Transmission Line, and to advance line construction that will enable critical-minerals growth in northwest B.C.

Invest in strategic regional critical-minerals projects:

In 2023, the Province announced a \$1.05-billion partnership between E-One Moli and the governments of B.C. and Canada to bring lithium-ion battery cell production to Maple Ridge and create 450 high-quality, permanent jobs that are key to growing the province's clean economy.

This strategy action will build on this approach to advance opportunities to leverage federal funding to enable critical-minerals processing, manufacturing, and circular-economy projects.

Infrastructure and electrification gap assessment:

To reach its CleanBC net zero by 2050 goals, the Province must make the transition to cleaner technologies and energy usage. This means ramping up the development of critical minerals to meet supply needs. This strategy action is a detailed provincewide assessment, that will identify and make plans to address infrastructure gaps that are barriers to critical-mineral development. The assessment will focus heavily on opportunities along the entire value spectrum of critical minerals, from extraction to processing, manufacturing and recycling.

First Nations partners and industry are anticipated to participate in the assessment. This action will complement government's \$36-billion investment through the BC Hydro 10-year capital plan for community and regional infrastructure projects, that will deliver clean, affordable electricity to people and businesses in the future.

Commitment to First Nations on continued critical-minerals development:

B.C.'s Critical Minerals Strategy will serve the mining and mineral exploration sectors, First Nations and people in British Columbia with an evergreen approach, with further development and implementation based on ongoing analysis and engagement with First Nations and First Nations organizations.

Engagement with rights holders is vital to informing strategy development and ensuring that a wide range of perspectives are reflected. First Nations engagement will be taking place throughout 2024, as the Province builds the next phase of the strategy.

This strategy action also includes a plan to work together with the B.C. First Nations Energy and Mining Council (FNEMC) to identify synergies between Phase 1 strategy actions and FNEMC's B.C. First Nations Critical Mineral Strategy, as part of an evergreen approach to B.C.'s strategy implementation.

Continued commitment to reform Mineral Tenure Act:

Ongoing initiatives, such as Mineral Tenure Act (MTA) reform, are foundational to the success of the strategy. Collaboration between the Province and First Nations, and engagement with industry stakeholders is underway to modernize the MTA in alignment with the UN Declaration on the Rights of Indigenous Peoples.

This work will continue over the next 15 months with a goal of implementing the new act in spring 2025. The Province is building on the collaboration it has already undertaken, ensuring transparent and consistent communication, and cooperation between B.C., First Nations rights and title holders, and the First Nations Leadership Council. MTA reform will help continue to build a responsible and healthy mining sector that upholds and respects First Nations rights and title, and creates best practices that improve certainty for all.

Fiscal environment assessment:

The Province will conduct a business case analysis to assess the need for targeted incentive programs, that can drive investment throughout the critical-mineral lifecycle, incentivize production and maintain competitiveness. This work will identify barriers to attracting investment and recommends next steps to mitigate those barriers, as well as potential fiscal measures.

StrongerBC: Future Ready Action Plan skills training and workforce development:

The ministries of Energy, Mines and Low Carbon Innovation, and Post-Secondary Education and Future Skills, will partner to optimize programs to meet workers and critical-minerals sector skills and training needs. This work includes assessing existing programming and identifying and addressing gaps, including engagement with First Nations regarding specific training-program needs to build expertise necessary in critical-minerals exploration, mining and throughout the value chain.

Alignment of B.C. and First Nations Energy and Mining Council Critical Mineral Strategies, and continued engagement with First Nations.

<p>ESTIMATES NOTE (2024) Confidential</p> <p>Ministry of Environment and Climate Change Strategy Strategic Services Division</p> <p>March 2024</p>	<p>International Joint Commission for the Kootenay Watershed</p>
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KEY FACTS

Joint Reference:

- **Canada, the United States, and Ktunaxa government officials have developed a joint proposal for the role of the International Joint Commission (IJC) announced via joint ambassador statement on March 11, 2024.**
- **The purpose is to reduce and mitigate the impacts of water pollution in the Kootenay watershed, as committed to in the Joint Statement of President Biden and Prime Minister Trudeau on March 24, 2023.**
- **The Province is encouraged by the possibilities of the IJC as a neutral facilitator in strengthening crucial relationships and trust across this important international watershed.**
- **We see this as an opportunity to build upon existing work and enhance information sharing and transparency to the benefit of the region. A fulsome review of existing science through an IJC Study Board will be valuable to support actions B.C. is taking and ensure that all agencies are working with the same information.**
- **B.C. is committed to a competitive mining sector that grows the economy and creates good jobs, supports environmental stewardship, and advances reconciliation with Indigenous peoples.**
- **We want to ensure that B.C. remains a leader in mining regulation and oversight, while enhancing responsible resource development and strengthening First Nations involvement in the mining sector.**
- **Using our regulatory tools the Province has required Teck to address water quality impacts. Teck has already invested over \$1.4 billion dollars in enhanced water treatment for mine-influenced water in the Elk Valley since 2014, and will make further investments to add an additional six new and expanded treatment facilities between now and 2027.**
- **The IJC process will respect the respective legal responsibilities and jurisdictions of each Government, including the role that B.C. plays as the primary regulator of the mining sector, and B.C. has been assured the IJC Governance Body will not seek to replace or override existing regulatory processes.**

Background:

- **There have been numerous calls for an IJC reference in the Kootenay watershed from U.S. agencies, Tribes and Ktunaxa Nation Council Society. Primary**

concerns have been related to impacts from coal mining operations reducing water quality (specifically selenium).

- Historically, B.C. has not been supportive of an IJC referral due to concerns about duplication, delay, or diversion of resources away from the Province's regulatory actions and other initiatives currently underway.
- On March 24 2023, Prime Minister Trudeau and President Biden committed to reaching an agreement in principle to mitigate water pollution in the watershed, in partnership with Indigenous peoples.
- In the spring of 2023, B.C. Deputy Ministers met with IJC Commissioners to better understand the potential role and perceived benefits of the IJC reference.
 - During this meeting, the IJC provided assurances that a reference would recognize, and not seek to duplicate, existing efforts, and nor would it make a determination around the future of mining in the Elk Valley.
 - Following the meeting with the IJC, B.C. drafted a proposal and Ministers Heyman and Osborne submitted to Canada in July 2023.
- The final joint proposal is based on commonalities across the three proposals Global Affairs Canada received from B.C., the U.S., and Ktunaxa during summer 2023.
- The joint proposal, like B.C.'s proposal, includes a two-tiered approach with a governance table (Governance Body) and technical forum (Study Board).
- Canada and the United States, in partnership with Ktunaxa, are asking the IJC through a joint reference to assist governments in the establishment of a formal governance structure (Governance Body) by June 30, 2024.
 - The proposal defers most implementation decisions to the Terms of Reference (TOR) discussions, including decision-making models, membership, and areas of focus. Deferring these decisions may lead to potential uncertainty and differing expectations of what the IJC can accomplish.
- Canada and the United States are also asking the IJC to establish a two-year Study Board to convene experts and knowledge holders, with the aim to support a common understanding of pollution in the Kootenai/y watershed.
 - The purpose is to review existing science, identify gaps, assumptions and uncertainties, and present recommendations to the Governance Body.
 - Participants will be appointed as experts and not to represent organizational interests.
 - The Study Board will not undertake new studies in the watershed.
 - Any recommendations from the Study Board will be considered by the Governance Body and decided on by the governments and not the IJC.
- The IJC reference is specific to the unique circumstances in the Elk Valley and Kootenay watershed. At this time, B.C. is not supportive of IJC involvement in any other watershed and will continue to work collaboratively with neighboring states and transboundary First Nations and Tribes.

Next Steps/Intergovernmental Considerations

- **The next steps in the IJC process are:**
 - A joint Canada-U.S. Ambassador statement stating the agreement in principle has been reached was released on March 11th. Notifications in advance of the statement were sent to local governments and First Nations on March 8th.
 - The Province released a joint Ministerial statement in response (Attachment 1) and key messages and Q & As have been prepared to support staff (Attachment 2).
 - Canada and the U.S. separately submitted the final proposal to the IJC via transmittal letters.
 - The IJC will respond with a plan of work and proposed budget. GAC and U.S. Department of State are responsible for funding an approved budget on a 50/50 basis.
 - All engaged governments including B.C. are expected to participate in the process through 'in-kind' contributions, i.e. by making available provincial staff to support the process.
 - Terms of Reference (TOR) for the Governance Body are to be developed by June 30, 2024 and the Study Board will be established within six months of the proposal transmittal.

Cross Reference: SE Coal Initiatives note.

Attachment: 1. Joint Ministerial Statement
2. KMs and Q&As for the IJC announcement

Contact: Lisa Paquin, Executive Director, Strategic Policy
Strategic Services Division, 778-698-4419

JOINT STATEMENT

For Immediate Release
2024ENV0012-000323
March 11, 2024

Ministry of Environment and Climate Change Strategy
Ministry of Energy, Mines and Low Carbon Innovation
Ministry of Indigenous Relations and Reconciliation
Ministry of Water, Land and Resource Stewardship

Joint statement on the Elk-Kootenay/Kootenai watershed

VICTORIA – George Heyman, Minister of Environment and Climate Change Strategy; Josie Osborne, Minister of Energy, Mines and Low Carbon Innovation; Murray Rankin, Minister of Indigenous Relations and Reconciliation; and Nathan Cullen, Minister of Water, Land and Resource Stewardship; have released the following joint statement in response to Canada and the United States writing to the International Joint Commission with a plan for the Elk-Kootenay/Kootenai watershed:

“Improving and protecting water quality has always been a key priority for British Columbia. To date, more than \$1.4 billion has been invested in implementing the Elk Valley Water Quality Plan, with continued significant investments planned that will roughly double the amount of water-treatment capacity in the Elk Valley by the end of 2027. Through our regulatory activities, we continue to undertake and oversee projects to improve and protect water quality in the Elk-Kootenay/Kootenai watershed.

“B.C. supports the commitment made by Prime Minister Justin Trudeau and President Joe Biden in March 2023. We welcome the joint statement today by the Canadian and American ambassadors that acknowledges the particular complexity of pollution concerns in this watershed and asks the International Joint Commission to convene experts and knowledge holders to conduct transparent and co-ordinated transboundary data and knowledge sharing.

“We have reviewed the proposal for a reference to the International Joint Commission and British Columbia is committed to fully engage in this process. In its proposed role as a neutral facilitator, the International Joint Commission is uniquely positioned to assist in building crucial relationships and trust across this key international watershed. We look forward to collaborating with governments, First Nations and community partners, as we work together to accelerate our joint efforts to enhance and protect water quality in the Elk-Kootenay/Kootenai watershed.

“We welcome the creation of a process that brings together representatives to share progress, validate issues and facts, and gather information in a way that is respectful and inclusive of Indigenous knowledge.

“We have been working with our partners to take a holistic view of this ecosystem and what we need to do to keep it safe. This includes working with First Nations, industry and local governments.

“We see this as an opportunity to build upon existing work and enhance information sharing

and transparency to the benefit of the region's people and ecologically responsible resource development."

Contact:

Ministry of Environment and Climate Change
Strategy
Media Relations
envmedia@gov.bc.ca

Connect with the Province of B.C. at: news.gov.bc.ca/connect

Key Messages

- **Addressing water quality is a key priority for British Columbia. Through our regulatory activities, we continue to undertake and oversee projects to mitigate water quality impacts in the Elk and Kootenay/ai watersheds.**
- **Using our regulatory tools the Province has required Teck to address water quality impacts. Teck has already invested over \$1.4 billion dollars in enhanced water treatment for mine-influenced water in the Elk Valley since 2014, and will make further investments to add an additional six new and expanded treatment facilities between now and 2027.**
- **We are encouraged by the possibilities of the International Joint Commission (IJC) as a neutral facilitator in strengthening crucial relationships and trust across this important international watershed.**
- **We see this as an opportunity to build upon existing work and enhance information sharing and transparency to the benefit of the region. A fulsome review of existing science through an IJC Study Board will be valuable to support actions B.C. is taking and ensure that all agencies are working with the same information.**
- **We want to ensure that B.C. remains a leader in mining regulation and oversight, while supporting responsible resource development and strengthening First Nations involvement in the mining sector.**
- **B.C. is committed to a competitive mining sector that continues to contribute to the economy via taxes and royalties, capital expenditures and employment, supports environmental stewardship, and advances reconciliation with Indigenous peoples.**
- **B.C. will maintain ongoing engagement with industry as the regulatory authority, ensuring transparency in the permitting process and Environmental Assessments throughout the IJC process.**
- **We understand that the IJC Study Board is expected to seek opportunities for public engagement, provide regular update**

reports, and make its reports available in a transparent, publicly available format.

Q&As for the IJC announcement

1. What is the IJC, and what is an IJC reference?

Canada and the United States created the International Joint Commission (IJC) because they recognized that each country is affected by the other's actions in lake and river systems along the border. The two countries cooperate to manage these waters and to protect them for the benefit of today's citizens and future generations.

The IJC is guided by the Boundary Waters Treaty, signed by Canada and the United States in 1909. The IJC studies and recommends solutions to transboundary issues when asked to do so by the national governments. When the IJC receives a government request, called a reference, it appoints a board with equal numbers of experts from each country. Board members are chosen for their professional abilities, not as representatives of a particular organization or region.

References to the IJC have focused mostly on water and air quality and on the development and use of shared water resources. IJC reference recommendations are not binding and take into account the needs of a wide range of water uses, including drinking water, commercial shipping, hydroelectric power generation, agriculture, ecosystem health, industry, fishing, recreational boating and shoreline property.

2. What is the reference for the Elk-Kootenay watershed?

Canada and the United States, in partnership with Tribal Nations and Indigenous Peoples have asked the International Joint Commission (IJC), through a joint reference, to assist governments in the establishment of a formal governance structure (Governance Body) by June 30, 2024, to support information sharing and co-development of options for future action.

Canada and the United States have also asked the IJC to establish a two-year Study Board to convene experts and knowledge holders to conduct transparent and coordinated transboundary data and knowledge sharing.

The geographic scope of the reference is defined as the Kootenai/y watershed which includes the Kootenai/y River flowing through Canada and the United States to its confluence with the Columbia River downstream in Canada, the Elk Subbasin, Koocanusa Reservoir, and Kootenay Lake.

3. What is the timeline for the IJC process?

Canada and the United States have now submitted the proposal to the IJC. The IJC is expected to convene governments to develop the Terms of Reference for the Governance Table by June 30, 2024. The IJC is expected to establish the Study Board within six months for a duration of two years.

4. How will B.C. be participating in the reference?

Canada, the United States, and Ktunaxa government officials developed the joint proposal for the role of the IJC. B.C. was not at the negotiating table but has been engaged by the Government of

Canada as the agreement was finalized. B.C. intends to fully participate in the Governance Body and provide information and expertise to support the IJC Study Board.

We see this as an opportunity to build upon existing work and enhance information sharing and transparency for the benefit of the region.

5. Which organizations will be part of the Study Board?

Experts will be appointed to the Study Board by the IJC. These experts will be neutral and independent rather than representatives of organizations or governments.

6. Is B.C. committed to acting on the recommendations that may come out of the IJC process?

The IJC will act as a trusted third-party to review existing science and data on the Elk-Kootenay/ai watershed and may provide non-binding recommendations to the Governance Body. The governments will decide on the recommendations not the IJC.

B.C. has maintained that if, once all parties are fully aware of our efforts, and any significant and relevant gaps are identified then we are open to considering additions or changes to our monitoring and assessment programs or other regulatory efforts.

7. The reference does not appear to specifically mention selenium and mining pollution. Will the reference address these concerns?

The reference takes a holistic view of the watershed and all potential sources of water pollution to better understand overall ecosystem health and the level and extent of other interacting pressures on the watershed. We anticipate that mining contaminants including selenium will be considered by the IJC Study Board but ultimately it is up to the IJC to design and implement the study within the two-year timeframe.

8. How can others interested parties participate in the process?

The IJC reference has been drafted by Canada, the U.S. and Ktunaxa and questions are better directed to the federal government. It is B.C.'s understanding that when the IJC receives a government request, called a reference, it will prepare a plan of study to outline for governments how it intends to act on the request. This would include a plan for engagement with representatives from the relevant federal, provincial, state, First Nation, Tribal, industry and other basin stakeholders, as appropriate. The Study Board is expected to seek opportunities for public engagement, provide regular update reports, and make its reports available in a transparent, publicly available format.

9. Will there be impacts to B.C.'s regulatory process for mining? How will this affect proposed new projects or expansions?

The IJC process will respect the respective legal responsibilities and jurisdictions of each Government, including the role that B.C. plays as the primary regulator of the mining sector, and B.C. has been assured the IJC Governance Body will not seek to replace or override existing

regulatory processes. The Province will continue to ensure there is transparency as it relates to permitting and Environmental Assessments throughout the IJC process. Canada and the United States expect the Governance Body to respect the respective legal responsibilities and jurisdictions of each Government and allow regulatory agencies to continue to review authorizations for existing, proposed new projects and expansions.

10 Why is B.C. continuing to receive and review applications and make decisions for new and expanded mines while the IJC is doing its work, instead of waiting for the outcome?

Canada and the United States expect the Governance Body to respect the respective legal responsibilities and jurisdictions of each Government. As an administratively fair regulator, agencies in B.C. responsible for mining authorizations must continue to accept and review applications for new and expanded mines. Authorizations will continue to be prioritized based on the input received from companies, following the standard process pathways in accordance with each application. We will consider any new information coming forward through the IJC process, or any other process, to inform our ongoing decision making.

11 How does this interact with the Columbia River Treaty negotiations?

The proposal clearly states that any work will respect legal and jurisdictional authorities, which would include matters addressed through international treaties.

12 Will there be IJC references for other transboundary regions?

The IJC reference is specific to the unique circumstances in the Elk Valley and Kootenay watershed. At this time, B.C. is not supportive of IJC involvement in any other watershed and will continue to work collaboratively with neighboring states and transboundary First Nations and Tribes.

To date there have been no exceedances in Alaska water quality standards downstream of the BC-AK border.

13 When will the water quality improve?

Teck is working quickly to implement water treatment and other strategies to improve water quality and water treatment facilities are now removing record amounts of selenium from the watershed. The B.C. government is prioritizing the review of permit applications for these facilities to ensure they can be implemented as quickly as possible and operated safely.

As of the end of 2023, Teck has spent more than \$1.4 billion implementing the Elk Valley Water Quality Plan. This includes investments in water treatment and Research and Development to achieve 77.5 million liters per day of constructed water treatment capacity. In 2024, Teck plans to spend between \$150M and \$250M in water treatment capital primarily towards expanding treatment at both Fording River and Line Creek Operations. This expansion of, and investment in, treatment will continue through 2025, 2026 and 2027 as Teck progresses towards the next major milestone of roughly doubling constructed water treatment capacity to 150 million liters per day by the end of 2027; furthering protecting the watershed.

International Joint Commission for Kootenay Watershed
Key messages and QAs for launch to support BC staff in responding to inquiries.
February 2024.

The Province regulates a transparent, area-based management plan for the Elk River watershed. We are actively improving this plan and we provide near-real-time information on water quality and status of water treatment facility performance. See: <https://elkvalleywaterquality.gov.bc.ca/>

The B.C. Ministry of Environment and Climate Change Strategy has a dedicated team of environmental professionals, made up of Engineers, Biologists, Hydrologists and Hydrogeologists, that are working exclusively to improve and protect water quality in the Elk Valley.

14 When will BC release the Water Quality Objective for selenium in Kooacanusa Reservoir?

We recognize there has been a significant investment by BC, Ktunaxa Nation Council and other parties to compile and evaluate science around selenium in Kooacanusa Reservoir. Although this science hasn't yet been formally published as a WQO, we are aware of its existence, and it will be considered by ENV staff in evaluating risks and effects to water quality.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Placer and Jade Mining in BC

Drafted/Revised: March 26, 2024

Issue: Initiatives related to placer and jade mining in British Columbia

Response:

- The cumulative impacts of jade mining within the Tahltan and Kaska Dena territory is causing harmful effects to sensitive alpine environments and creating significant regulatory challenges for permitting, compliance and enforcement.
- Jade mining generates minimal economic revenue for the Province with regulatory costs far exceeding mineral tax revenue.
- First Nations have repeatedly identified jade mining as being inconsistent with their environmental and cultural values.
- In response, the Province established an Order in Council (OIC) under section 7 of the *Environment and Land Use Act*, deferring jade permitting decisions in Northern British Columbia (BC). The OIC has been extended until May 11, 2024.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is working with Tahltan Central Government (TCG) and Kaska Dena to establish a long-term solution to jade mining in their territories.

Background/Status:

- The cumulative impacts of jade mining within the Tahltan and Kaska Dena territory is causing harmful effects to sensitive alpine environments and creating significant regulatory challenges for permitting, compliance and enforcement. Jade mining generates minimal economic revenue for the Province with regulatory costs far exceeding mineral tax revenue.
- First Nations, specifically the TCG and Kaska Dena have repeatedly identified jade mining as being inconsistent with their environmental and cultural values.
- As a first step to addressing these concerns, on May 11, 2020, the Province enacted an OIC under section 7 of the *Environment and Land Use Act*, deferring jade permitting decisions in Northern BC for 24 months.
- The OIC has since been extended until May 11, 2024, to create space for EMLI, TCG, and Kaska Dena to develop recommendations for the jade sector through the Placer Jade Collaborative Working Group.
- EMLI is working with TCG and Kaska Dena to establish a long-term solution to jade mining in their territories.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Completed Placer and Jade Initiatives:

- EMLI captured satellite imagery of mining disturbance in the Northwest to better understand the mining disturbance and inform future reclamation work.
- EMLI released a Placer Revenue Discussion Paper and Intentions Paper, outlining EMLI's intention to update placer gold permit fees, inspection fees, and the mineral tax rate.
- A socio-economic study on placer and jade mining was commissioned to better understand the economic impacts of placer mining.
- The Placer Mine Waste Control Regulation was amended to remove the exemption for placer mines to discharge into certain creeks.
- A set of Placer Notice of Work Application Requirements was developed, outlining the required information to make the requirements readily available and transparent.
- Regional *Mines Act* permit conditions, including placer, have been standardized to improve enforceability.
- A regional Reclamation Bond Calculator has been implemented to better assess liability and ensure sites are sufficiently bonded.

Placer and Jade Initiatives in Progress:

- EMLI is working with TCG and Kaska Dena to establish a long-term solution to jade mining in their territories.
- Regional Operations have digitized the satellite imagery in the Northwest and are conducting analysis to inform future reclamation work.

Contact:

Tania Demchuk	Assistant Deputy Minister	Responsible Mining and Competitiveness Division	250-818-6426
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mineral Tenure Act (MTA) Reform

Drafted/Revised: March 13, 2024

Issue: Reforming the MTA in consultation and collaboration with First Nations and First Nation organizations

Response:

- Reforming the *Mineral Tenure Act* (MTA) is a longstanding priority shared by First Nations, First Nations organizations, and the Province.
- British Columbia's (BC) *Declaration Act* Action Plan includes a commitment to work in consultation and co-operation with First Nations and First Nations organizations to align the MTA with the UN Declaration on the Rights of Indigenous Peoples (UN Declaration).
- We are working with First Nations and First Nations organizations to develop the vision and process for MTA reform.
- Direct input from First Nations rights and title holders is critical in shaping MTA reform including legislative, policy and operational changes.
- There will also be engagement with industry and stakeholders, including the mineral exploration and mining sector and environmental non-governmental organizations.
- This vital work is an opportunity to advance the social, environmental, and economic priorities of First Nations, the Province, and industry – and to support a healthy, responsible, and progressive mineral exploration and mining sector in BC.
- BC welcomes business and companies that share our commitment to respecting and upholding First Nations right and title.
- The recent BC Supreme Court ruling on the MTA is an important decision for First Nations rights and provides important context and timeline for this work.
- Legislative reform is targeted by Spring 2025 to address the court ruling.
- MTA reform is about more than responding to a court decision – it is a key step toward aligning BC's laws with the UN Declaration.
- Our work over the next several months will build on the collaboration to date between the Province, First Nations, and First Nations organizations.

Background/Status:

- The MTA and the Mineral Tenure Act Regulation (MTAR) establish BC's mineral tenure framework - which is the system for registering and maintaining mineral titles (i.e., claims and leases).

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Under the current mineral tenure system, claims are registered automatically through Mineral Titles Online without First Nations consultation.
- In the March 2022 Declaration Act Action Plan, the Ministry of Energy, Mines and Low Carbon Innovation (EMLI) committed to working in consultation and cooperation with First Nations and First Nations Organizations to reform the MTA in alignment with the UN Declaration.
- In addition to UN Declaration alignment, MTA reform is also expected to address important issues such as
 - 1) adding clarity and predictability in mineral tenure decision-making and regulatory processes including responding to the BC court case; and,
 - 2) changing economics and realities including responsible mining and global interest in critical minerals; and
 - 3) new approaches to land use planning, environmental stewardship and management.
- Current collaborative work between BC, First Nations, and First Nations organizations such as the First Nations Leadership Council (FNLC) includes:
 - 1) developing a reform vision (e.g., establishing reform scope, priorities, and approach, etc.),
 - 2) reviewing the BC Supreme Court’s decision in *Gitxaala v. British Columbia* and how to incorporate it into MTA reform, and
 - 3) establishing an engagement plan.
 - 4) Legislative reforms are targeted for Spring 2025.
- At this stage, reforms are focused on the MTA – however, any feedback and learnings related to other areas for reform within the mining space will be considered for future initiatives.

Gitxaala v. British Columbia:

- On September 26, 2023, the BC Supreme Court (BCSC) released its decision in *Gitxaala v. British Columbia*, brought by the Ehattesaht and Gitxaala First Nations (the petitioners).
- The BCSC found that the duty to consult is triggered because automatic mineral claim registration causes adverse impacts on First Nations’ areas of significant cultural and spiritual importance, and their right to “own, and achieve the financial benefit from, the minerals on their asserted territories.”
- The BCSC suspended the decision for 18 months (by Spring 2025) to allow time to address the ruling.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- EMLI is monitoring claim registration and maintaining open dialogue with First Nations in the interim to help address their concerns on a rights holder's basis.
- On March 7th 2024, Environment and Land Use Orders were put in place for Ehattesaht and parts of Gitxaala territories which suspend mineral claim registrations and mining activities.
- The interim measures follow an agreement between BC and the two Nations after an appeal was filed following the failure of the court to quash specific tenures and prevent new claim registrations until a consultation regime is in place.
- The agreements reached between BC and the two Nations do not address the petitioners appeal related to the ruling on the application of the *Declaration on the Rights of Indigenous Peoples Act* or the UN Declaration to the laws of BC.

Cross Reference: Yellow Giant Mine (Banks Island)

Contact:

Tania Demchuk	Assistant Deputy Minister	Responsible Mining and Competitiveness Division	250 818-6426
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mineral Tenure Compensation Framework

Drafted/Revised: February 16, 2024

Issue: Policy and process guidance related to mineral tenure compensation

Response:

- The Province is committed to responsible use of public funds, including in relation to mineral tenure compensation.
- Provincial commitments to protect and conserve of 30 percent of provincial lands and waters by 2030 are expected to include the provision, where appropriate, of associated compensation for impacted mineral tenures.
- Legal requirements related to mineral tenure compensation are enshrined in the *Mineral Tenure Act* (MTA) and associated regulations. The Province has committed to modernizing the MTA in consultation and cooperation with First Nations and First Nations organizations.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) has identified key gaps and challenges associated with mineral tenure compensation in relation to land use initiatives, that can be addressed through the MTA reform process.
- The Mineral Tenure Compensation Framework (Framework) is a suite of proposed policies, as well as process guidance to support increased utility and effectiveness of regulatory tools. The Framework is intended to guide and clarify existing processes, develop regulatory recommendations, and ultimately align with legislative amendments that will come by way of the MTA amendment process.
- Policy and process guidance developed as part of the Framework are intended to balance multiple Provincial interests and priorities. These include maintaining mining competitiveness and investment certainty, supporting land conservation in appropriate areas, supporting critical mineral development in appropriate areas, ensuring administrative fairness, and responsible use of public funds.

Background/Status:

- The Province has limited legislative, regulatory and policy tools to address mineral tenure expropriation¹ and compensation² in response to increasing land protection initiatives.

¹ 'Expropriation' refers to an action taken by the Province to take property or rights from their owner through the use of legislative tools, including potentially without that owner's consent.

² 'Compensation' refers to provision of something – often money – to counterbalance or make recompense for the loss of (or injury to) something of value. It can be provided on a willing basis.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Tools in need of development range from codified process guidance (i.e. step-by-step instructions written down for staff use to avoid inefficiency or duplicated efforts) to legislative/regulatory mechanisms (i.e. legal tools that can be used to achieve a specific desired effect or outcome).

Advice/Recommendations

- Updates to the Framework will include consideration of both landbase-wide factors (with the intent of limiting future expropriation and compensation exposure at a macro level) and factors relevant to individual tenure transactions (which may inform or affect the approach to, and cost of, compensation for individual tenure transactions).

Advice/Recommendations

Alignment with MTA Modernization:

- In September 2023, the Supreme Court of British Columbia issued a decision with respect to *Gitxaala v. British Columbia (Chief Gold Commissioner)* holding that the issuance of mineral tenures triggers the duty to consult. The court provided 18 months for the Province to develop and implement a new consultation process.
- MTA Modernization is targeting completion within the next 14 months, at which time legislative changes to the provincial compensation and expropriation regime can be undertaken.
- Policy development under the Framework is anticipated to inform and support the upcoming MTA amendments. This is expected to include the identification of proposed regulatory changes to key MTA regulations related to compensation, such as the Mining Rights Compensation Regulation and Mineral Tenure Act Regulation.
- It is anticipated that regulatory amendments identified will go forward as part of legislative amendments to the MTA

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

Tania Demchuk	Assistant Deputy Minister	Responsible Mining and Competitiveness Division	250-818-6426
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mining Oversight

Drafted/Revised: January 30, 2024

Issue: Ministry actions to improve mining oversight

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation has prioritized, and made substantial progress on actions to improve mining oversight since the 2016 B.C. Auditor General Report on mining compliance and enforcement.
- Supported by a \$20 million investment in 2019, the Ministry restructured to create two mining divisions: one focused on competitiveness and permitting, and the other focused on compliance and enforcement.
- Amendments to the *Mines Act*, brought into force in August 2020, strengthened and modernized mining oversight in BC by creating the roles of Chief Permitting Officer and Chief Auditor. The creation of these statutory positions has enabled the separation and independence of the permitting, compliance and enforcement, and auditing functions.
- A standing Code Review process is in place to modernize the Health, Safety and Reclamation Code for Mines in BC, to keep workers safe and ensure mining regulations address the changing needs of industry, and expectations of the Public.
- The Ministry continues to invest in the development and implementation of digital systems to help improve data collection, storage and analysis of mining oversight information.
- The Ministry's actions to support a competitive mining sector with strong regulatory oversight have been informed by ongoing engagement with industry, labour, and First Nations.
- The Auditor General released an audit in June 2022 which concluded that the Ministry is adequately addressing the risks identified in the 2016 audit.
- In the 2022 audit, the Auditor General made five recommendations, which have all been accepted by the Ministry. The Ministry has completed three of the five recommendations, with work well underway toward completing the remaining two recommendations.

Background/Status:

- The Ministry received a nearly \$20 million budget increase between 2019 and 2022 (up to 65 FTEs) to support strengthened oversight and restructuring of the mining team onto two divisions: Responsible Mining and Competitiveness Division, and Mines Health, Safety and Enforcement Division.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- 2195 mine inspections were completed in FY 2022/23, which exceeded the target of 1600 by approximately 30%. As of January 26, 2023, 1671 mine inspections were completed in FY 2023/24, which already exceeds the target of 1600. The Ministry will have a detailed break-down for FY 2023/24 by the end of April 2024.
- *Mines Act* amendments brought into force on August 14, 2020, support robust mining oversight and a competitive sector by:
 - creating the role of Chief Permitting Officer, responsible for making permitting decisions and improving the mine permitting process and competitiveness.
 - modernizing and enhancing compliance and enforcement provisions to improve the tools needed to hold mines accountable,
 - Creating the role of Chief Auditor, responsible for evaluating the effectiveness of mining regulation in BC; and
 - supporting efforts to increase Indigenous engagement in compliance by introducing the authority for inspectors to be jointed by representatives of First Nations on inspections.
- Additional Ministry actions to improve mining oversight include:
 - The Mine Audits Unit has four audits currently underway and is in the process of developing the FY 2024/25 Annual Audit Plan. To date, the Mine Audits Unit has published two audit reports focused on (1) requirements for tailings storage facilities and (2) worker protection in mobile equipment near water. Combined, these audits resulted in 10 recommendations for the Ministry of Energy, Mines and Low Carbon Innovation (the Ministry).
 - The Ministry accepted all recommendations from the two audits and developed 15 actions in response. The Ministry has completed 11 of the 15 actions, as publicly reported in its FY 2022/23 annual progress update to the Chief Auditor (December 2023).
 - Creation of a 12-member Code Review Committee, with equal representation from labour unions, First Nations, and Industry to ensure that mining regulations remain relevant and able to address the changing needs of the industry, the environment, First Nations and all British Columbians.
 - Continued enforcement activities through the Mines Investigation Unit resulting in three successful prosecutions since 2019.
 - Imposing 29 administrative monetary penalties totalling more than \$1.2M.
 - Continually increasing the amount of reclamation security held by EMLI. As of March 31, 2023, EMLI held \$3.7B (up from 2.6B in 2022).
 - Investment in the development and implementation of improved digital systems, to allow for more effective planning, reporting, and follow-up.
- The Auditor General released a mining compliance and enforcement audit in June 2022 concluding that the ministry had developed adequate policies and procedures to address risks identified in the Auditor General's 2016 audit.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- The Ministry has accepted and actioned all five recommendations from this follow-up audit. The Ministry has completed three of the five recommendations, with work well underway toward completing the remaining two recommendations.

Attachment(s): 1.1 Recent Complaints to OCIM

Cross Reference: Code Review (MHSE)
Health and Safety of BC Mines (MHSE)
Mine Audits Unit (MHSE)
Mines Investigation (MHSE)

Contact:

George Warnock	Assistant Deputy Minister	Mines Health, Safety & Enforcement Division	778-675-5228
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2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: Summary of recent complaints to the Office of the Chief Inspector of Mines

- **Complainants that have contacted local MLA's**
 - ***Cemetery Pit-0700094 - dust from mine affecting community on Kettle Valley Road (Hope , BC) (PC23072)***
 - Concerns from local neighbourhood regarding heavy trucks causing dust on haulage road impacting nearby residences.
 - This is a multi jurisdictional issue.
 - EMLI – Permitted area and haulage road.
 - Municipality,
 - public road connecting to haulage road.
 - public road used as a staging area for haul trucks.
 - EMLI has engaged with the local municipality to address the issue.
 - MHSE is working with RMCD on avenues to mitigate concerns.
 - ***Bamberton Quarry-0800407 (Cowichan Valley Regional District):***
 - Blasting at mine shook house and noise from mine in the early mornings (PC23025/026)
 - Inspector followed up with the mine and confirmed that blasting was in compliance with blasting regulations.
 - Noise complaint (PC23019)
 - Inspectors confirmed noise was unrelated to the permitted mine site.
 - ***Parmenter Road Quarry-1610026 - gravel fines appearing in Hatchery/Sweltzer Creek (downstream from mine) (Cultus Lake, BC) (RMU file)***
 - Regional neighbourhood association and Fraser Valley Regional District Director raised concerns with respect to fines and sediment entering a nearby tributary to the Chilliwack River (aka Vedder)
 - Complainants suspected mining operations contributed to sedimentation and forwarded their observations to the Ministry for response.
 - EMLI engaged with MOTI, DFO and ENV

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Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

- EMLI inspected the mine on April 17, 2023 and issued a Section 18 order that has since been complied with, and resulted in a visible reduction in the amount of sediment entering Hatchery/Sweltzer Creek.
- ***Porter's Rock Quarry – 1610508 (Cowichan Valley Regional District): Blasting Concerns PC23189.***
 - Inspector requested blasting reports and engineering plans for review. The mine operator has agreed to conduct smaller blasts. The complainants have been notified and are satisfied with the outcome.
- **Mines with 5 or more complaints/concerns since Jan 1, 2023:**
 - ***Quadling Quarry-0700412***
 - Frequent concerns from nearby residences regarding blasting or suspected operations occurring outside of permitted hours.
 - EMLI follow up to date has not found the complaints to be substantiated.
 - EMLI conducted several calls with complainants to review the Health, Safety and Reclamation Code for Mines in British Columbia.
 - ***Gilley's Quarry Road (4892)-0700033***
 - Frequent concerns with respect to noise, dust, and pit operations
 - Recent inspection conducted, contraventions related to dust identified and currently being actioned through compliance tools.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Standing Code Review Committee

Drafted/Revised: February 12, 2024

Issue: Updates to the Health, Safety and Reclamation Code for Mines in BC

Response:

- The Health, Safety and Reclamation Code for Mines in BC (Code) provides the basis for the regulation for all aspects of mining and mineral exploration in BC.
- The standing Code Review process is in place to modernize the Code, keep workers safe and ensure mining regulations address the changing needs of the industry, the environment, and First Nations.
- The 12-member Code Review Committee (Committee) is comprised of equal representation from labour unions, First Nations, and industry.
- The Committee's first eight changes to the Code were brought into force through an OIC in April 2021.
- Additional changes to the Code were published on November 30, 2022 and included incident reporting, autonomous equipment and gender-neutral language.
- A UN Declaration sub-committee, struck in April 2022, is co-chaired by the Ministry and the First Nations Energy and Mining Council to ensure future Code changes align with the United Nations Declaration on the Rights of Indigenous Peoples (UN Declaration) and the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act).
- Current work is focused on enabling the use of mining equipment with emerging technology at mine sites; addressing Chief Auditor recommendations related to tailings storage facilities; safety of workers on mobile equipment near/on the water; revising occupational health provisions; and updating requirements for safeguarding of machinery.

●Cabinet Confidences; Legal Information

Background/Status:

- The Minister appoints members to the Committee under section 34 of the *Mines Act*. The Chief Inspector of Mines (or delegate) chairs the Committee and is responsible for making recommendations for amendments. The *Mines Act* is unique in setting a committee process to create and amend the Code.
- In September 2022, the Chair of the Committee was changed from Tania Demchuk to Jorge Freitas.

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: Code Review Committee Membership List

	Code Review Committee Members
Labour	Rob Foskett, Union of Operating Engineers
	Ed Kent, United Steelworkers Union
	Dean Lott, United Steelworkers Union
	Dave Williams, UniFor, Myra Falls
First Nations	Charlie Allison, Upper Similkameen Indian Band
	Nalaine Morin, Tahltan First Nation, Arrowblade Consulting
	Kyle Penner, Tahltan First Nation, BCIT mining engineering student
	Tamlyn Botel, Citxw Nlaka'pamux Assembly
Exploration	Kim Bittman, consultant, Association for Mineral Exploration
Sand and Gravel	David Rogalsky, Woodbrook Aggregates
Major Mines	Sean Masse, Brucejack Mine, Pretivm Resources
	Don Sander, Elkview Coal Operations (Teck)

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: 2.2 Current Sub-Committees and Activities

- *The Part 10 – Permitting, Reclamation, and Closure -sub-committee* has completed its work to address the recommendations of the Tailings Storage Facility audit released by the Chief Auditor in June 2021. The reviews recommended by the sub-committee will be included in the 2024 version of the Code. It is expected that the Part 10 Sub-committee will continue their reviews to address other items included in part 10 for the next few years.
- *The UN Declaration sub-committee* is co-chaired with the First Nations Energy and Mining Council to improve alignment of the Code with the UN Declaration. The sub-committee has been working with various technical sub-committees to provide feedback that aligns the revisions with the UN Declaration and Declaration Act. Members of the sub-committee may change, but the group will continue to perform their reviews to ensure that the work of technical sub-committees is in alignment with the UN Declaration.
- *The Occupational Health sub-committee* has completed the reviews planned for the 2024 version of the Code, which will include updates on workplace contaminants/Maximum Allowable Exposures. Considering the number of items included in this part of the Code, it is expected that this sub-committee will continue their reviews for the next few years.
- *The Emerging Technology and Automation sub-committee* has completed its work to address gaps in the Code related to the use of mining equipment with emerging technology/alternative energy at mine sites. Recommendations from the sub-committee will be included in the 2024 version of the Code.
- A task group was assembled in May 2023 and has completed its work to address the recommendations of the Worker Protection in Mobile Equipment near Water audit released by the Chief Auditor in April 2022. The Task Group's Recommendations will be included in the 2024 version of the Code.
- The Safeguarding of Machinery Task Group was assembled in November 2023 and has completed its reviews on requirements for safeguarding moving parts of machinery. The Task Group's recommendations will be included in the 2024 version of the Code.
- The Code Review Committee is currently working on future potential updates to the Code to include requirements related to Pre-Permitting Engagement with First Nations. This review is being performed by the main committee, and this work is at an early stage.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Health and Safety of BC Mines

Drafted/Revised: Feb 2, 2024

Issue: Ministry Actions to ensure BC remains a leader in mining regulation

Response:

- Mining remains one of the safest heavy industries in BC through the cooperative efforts of mine employers and employees, associations, unions, and the regulator. The Ministry is dedicated to building upon this crucial work, further strengthening safety standards and practices.
- Supported by a \$20 million investment in 2019, the Ministry increased the Mine Inspectors workforce with a focus on health, safety, and compliance oversight.
- The Ministry has worked to further support compliance and enforcement by restructuring the Mines Divisions to consolidate all compliance functions into the Office of the Chief Inspector.
- Mine Inspectors take a variety of actions to ensure safety on mine sites, including pro-active/reactive inspections, compliance promotion, training, certifications, and evaluation of mine emergency response plans to promote emergency readiness.
- The Office of the Chief Inspector is committed to engaging First Nations in compliance activities through enhancing mines inspectors' understanding of First Nations interests, values and experiences related to compliance; and by conducting accompanied inspections with First Nations.

Background/Status:

- Mine Inspectors oversee all aspects of the mining cycle: from exploration to operations to final reclamation and are responsible for assessing compliance with the *Mines Act*, the Health Safety and Reclamation Code for Mines in British Columbia and permit conditions.
- While WorkSafeBC does not regulate health and safety on mine sites, they oversee the claim system for injured workers and compile official injury statistics. Injury rates for 2023 will not be available until summer 2024, but the table below provides injury rates from previous years, with a comparison of mining to other heavy industries. See Attachment: 3.1 Injuries by Subsector, Weighted Average
- Two mining-related fatalities occurred in 2023. An employee was fatally injured underground at the Brucejack mine by a shotcrete robotic arm. This incident remains under investigation. A second fatality occurred when an all-terrain vehicle went off a mine access road fatally injuring the operator and seriously injuring two passengers north of Stewart. This incident did not occur on a mine site and is being investigated by WorkSafeBC.

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: 3.1 Injuries by Subsector, Weighted Average

	Injuries by subsector, weighted average (# of claims per 100 person-years)										
Sub-sector	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Mining (Metal, Coal & Quarries)	1.4	1.1	1.2	1.0	1.1	1.2	1.3	1.2	1.4	1.4	1.3
Heavy Construction	3.6	3.4	3.3	2.9	3.1	3.2	3.1	2.3	1.7	1.4	2.3
Forestry	4.8	5.2	5	4.8	4.8	4.5	4.6	4.3	4.0	3.8	4.8
General Construction	4.4	4.1	4.2	4.2	4.2	3.9	4.1	3.7	3.4	3.5	3.1
Oil & Gas or Mineral Resources	1.4	1.1	1.1	1.1	1.1	1.1	1.3	1.2	1.4	1.6	1.5
Road Construction or Maintenance	2.9	2.7	2.6	2.7	2.6	2.7	2.7	2.6	2.5	2.8	2.2
Wood and Paper	3.4	3.1	3.1	3.2	3	2.9	2.7	2.7	2.8	2.8	2.8
Provincial	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.4

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Abandoned Mines program

Drafted/Revised: February 12, 2024

Issue: Management of abandoned mines in British Columbia

Response:

- In 2019, the Ministry of Energy, Mines and Low Carbon Innovation established the Abandoned Mines Branch (AMB) to address public safety and environmental concerns at abandoned mines in BC.
- Many of these sites are mines that predate reclamation legislation enacted in 1969. Many abandoned mines carry residual safety and environmental risks.
- The long-term goal of the AMB is to advance public safety and reduce environmental risks associated with abandoned mines to as low as reasonably practicable and minimize long-term monitoring and maintenance requirements.
- The AMB implements a risk-based approach to identifying and prioritizing abandoned mines that present the highest risks.
- The AMB contracts qualified professionals to conduct inspections and assessments at tailings storage facilities at four abandoned sites with the long-term goal of reducing risks and long-term monitoring and maintenance.
- The AMB works closely with the Crown Contaminated Sites Program (CCSP) in the Ministry of Water, Lands and Resource Stewardship to ensure effective and coordinated use of provincial resources.

Background/Status:

- Mining has been central to the provincial economy for over 150 years as an important source of jobs, government revenues, and regional development. While the regulation of the mining industry has evolved and improved over time, the long history of mining in the province has resulted in abandoned mines that may pose a risk to public safety or the environment.
- The authority for AMB activity on abandoned mines is from section 17 of the *Mines Act*, where the Chief Inspector of Mines considers that work may be necessary in, on or about a closed or abandoned mine in order to prevent danger to persons or property or to abate pollution of land and watercourses.
- The AMB works collaboratively with the Crown Contaminated Sites Program (CCSP) in the Ministry of Water, Land and Resource Stewardship to ensure effective and coordinated use of provincial resources. The CCSP focuses primarily on the remediation of contaminated sites but does not address physical public safety hazards.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Funding for the branch activities comes from two main sources:
 - Mine Owners - confiscated security deposits provided under a *Mines Act* Permit (if applicable).
 - The province - assumed liability for the remediation work where there is no longer an owner.
- See Attachment: 4.1 Activities Completed by the AMB
- The AMB is currently planning site-specific projects for the 2024 field season.
- In addition to project-specific work, field assessments will continue to inventory and assess abandoned sites across the province to support risk-based planning for future reclamation work.

Attachment(s): 4.1 Activities Completed by the AMB

Cross Reference:

Contact:

George Warnock	Assistant Deputy Minister	Mines Health, Safety & Enforcement Division
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2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: Activities Completed by the AMB

- The AMB continues to use qualified geotechnical engineers to complete dam safety inspections for five tailings storage facilities at four sites: two facilities at Red Mountain (Coxey) and one each for Northair, Lawyers and Mt. Copeland. Planned activities for 2024 includes addressing recommendations by the contract engineer for each of these sites.
- To date, the AMB has completed the following reclamation activities:
 - Red Mountain (Coxey) (Rossland BC):
 - Activities in 2022 included removing debris and vegetation from spillways and removing vegetation from dams.
 - Candorado (near Hedley BC):
 - The AMB is collaborating with the Upper Similkameen Indian Band (USIB) and industry to develop closure options for the Hedley tailing sites.
 - In 2021, the AMB repaired the effluent ponds that capture discharge to add capacity and safely retain effluent on the mine site.
 - Northair Mine (near Whistler BC)
 - In 2021, AMB identified publicly accessible mine openings that pose a significant public safety risk. In 2023, AMB installed a temporary cover over a large mine opening until it can be closed permanently in 2024.
 - Ruth Vermont
 - In 2022, old dynamite was discovered in the underground workings at the abandoned Ruth Vermont mine and posted to YouTube. In addition, a new tailings storage facility (TSF) was identified. AMB hired a contractor to destroy the explosives and close two mine openings. More work is planned for 2024 to close the mine openings permanently. Contract engineers conducted a geotechnical inspection of the TSF and vegetation was removed from 3 dams.
 - Churchill
 - Contract engineers conducted a geotechnical inspection of the TSF. The next steps depend on inspection results.
 - Strawberry Flats

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

- AMB closed two vertical openings from historical mining in collaboration with the Friends of Rossland Range non-profit society. The area is a popular area for hiking and cross-country skiing.
- o Suquash
 - AMB closed two vertical openings and installed signage.
- o Signage
 - Signage was installed at 12 abandoned mines to warn the public of the dangers they present. Additional remediation work is planned for 2024.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mine Audits Unit

Drafted/Revised: February 05, 2024

Issue: Current priorities of the Mine Audits Unit

Response:

- The Audit Unit's mandate is to evaluate the effectiveness of mining regulation in BC and to provide recommendations to government for continuous improvement.
- The Audit Unit has four audits currently underway related to:
 - financial security for exploration activities,
 - major mine closure,
 - occupational health and safety committees, and
 - confined spaces.
- The Audit Unit recently published its 2023/24 Annual Audit Plan and is in the process of developing the 2024/25 Annual Audit Plan, which is expected to be released in May 2024.
- The 2023/24 Annual Audit Plan focused on completing ongoing projects. New projects will be introduced in the 2024/25 Annual Audit Plan once audit topics are prioritized and selected.
- The Audit Unit and the Ministry continue to collaborate with the First Nations Energy and Mining Council (the FNEMC) to ensure that First Nations perspectives are incorporated into all audit work.

Background/Status:

- The Mine Audits Unit (the Audit Unit) was established in mid-2019 to conduct audits to evaluate the effectiveness of mining regulation and is an important component of the mining regulatory framework in B.C.
- In August 2020, the Mines Act (the Act) was amended to establish the statutory role of the Chief Auditor. The Audit Unit operates under the authority of the Chief Auditor, thereby formalizing the independence of their work.
- Each audit focuses on an area of mining regulated by the Ministry and generally considers current regulatory requirements, government policies and actions, and mining sector compliance and outcomes.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- After completing an audit, the Chief Auditor must provide a final report to the Minister outlining the audit's findings, conclusion, and any recommendations. This report must also be published on the Audit Unit's website.
- Pursuant to a Memorandum of Understanding (MOU) between the Chief Auditor and the Ministry, the Ministry is committed to providing the Chief Auditor with a response to each audit as well as annual progress updates, both of which are posted on the Chief Auditor's website. The Ministry has an internal team responsible for coordinating audit responses and progress updates.
- The Audit Unit and the Ministry have a MOU with the FNEMC that sets out collaboration points in audits to help ensure Indigenous interests are meaningfully considered. The FNEMC's collaboration under the MOU has had a positive impact on audits and has contributed to integrating Indigenous perspectives and interests into the audit process.
- As a new program area in 2019, the Audit Unit completed substantial work to develop the program's policies and procedures and fill staff positions. The Audit Unit is now a fully developed program that has been externally recognized for its work and innovative practices.
- To date, the Audit Unit has published two audit reports focused on (1) requirements for tailings storage facilities and (2) worker protection in mobile equipment near water. Combined, these audits resulted in 10 recommendations for the Ministry of Energy, Mines and Low Carbon Innovation (the Ministry).
- The Ministry accepted all recommendations from the two audits and developed 15 actions in response. The Ministry has completed eleven actions, as publicly reported in its FY 2022/23 annual progress update (December 2023). Progress on the remaining four (4) actions will be reported in the annual progress update for 2023/24, which will be released in 2024.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mine Investigations

Drafted/Revised: January 31, 2024

Issue: Overview of mine investigation activities pursuant to the *Mines Act*

Response:

- The *Mines Act* provides authority for the Chief Inspector of Mines (CIM) to direct an inspector to investigate incidents resulting in, or having potential to cause, serious injuries, loss of life, property or environmental damage, or alleged contraventions of the *Mines Act*, Health, Safety and Reclamation Code and permit conditions.
- Formed in 2017, the 11-person team of specialized investigators reports to the CIM in the Mines Health, Safety and Enforcement Division.
- Prior to 2017, the Ministry did not have formally trained investigative capacity and the last known prosecution under the *Mines Act* was in 1999.
- Three of five cases investigated by the MIU and referred to Crown Counsel have resulted in successful prosecutions under the *Mines Act*.
- Thirty administrative investigations referred to a statutory decision maker have resulted in the levying of Administrative Monetary Penalties (AMPs).
- Results of successful prosecutions and AMPs are published on the BC Mine Information website.

Background/Status:

- Led by the Director, Mines Investigations, the MIU was formed in 2017 in response to recommendations from the Chief Inspector of Mines' Mount Polley Investigation Report and the 2016 audit from the Auditor General.
- The MIU undertakes investigations pursuant to Section 7 and Section 14 of the *Mines Act* on behalf of the Chief Inspector of Mines, as well as other investigations in relation to non-compliances with the *Mines Act*, the Health Safety and Reclamation Code or permit conditions.
- In fatality and serious injury cases, the MIU is the point of operational liaison with police, the coroner, WorkSafeBC, other enforcement groups and Crown Counsel.
- The MIU also provides direction and training to mines inspectors who may be tasked to investigate less serious incidents.
- Investigations aim to heighten operational learning; determine what happened and why, and how future incidents can be prevented.
- The results of investigations may be presented to:

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- the CIM, with recommendations for prevention including publication of an industry hazard alert and executive summary of the investigation outcome;
- a delegate of the CIM for consideration for Administrative Monetary Penalty or administrative sanctions; or
- Crown Counsel for consideration of the prosecution of *Mines Act* charges.
- Recommendations from MIU have resulted in issuance of 30 administrative monetary penalties totaling more than \$1.4M.
- The MIU has three fatality investigations in progress, as well as several investigations related to safety incidents and environmental impacts at mines.
- Since its inception in 2017, MIU has referred five cases to the BC Prosecution Service Crown Counsel. Each case met the standard for charge approval:
 - Banks Island Gold Mine (near Prince Rupert): On March 06, 2019 the court decided the evidence did not support the conviction of a mine manager accused of obstructing an inspector and acquitted the accused.
 - Swansea Quarry (near Cranbrook): On March 13, 2019 the court awarded a \$20,000 fine and a \$50,000 donation to a charitable organization for *Mines Act* charges in relation to a double fatality in 2014. This represented the first successful prosecution under the *Mines Act* in over two decades.
 - Polar Jade Mine (near Dease Lake): On September 6, 2019 the court awarded a fine of \$20,000 for *Mines Act* charges in relation to a 2015 fatality. The court's ruling took into account the fact that the accused also donated \$50,000 to the deceased's family.
 - Big Nugget Mine (northeast of Hixon): On March 13, 2020 the court awarded a fine of \$7,500 in relation to a 2016 injury sustained by an underage worker.
 - Keithly Creek Placer Mine (near Likely): In 2018, parallel investigations were conducted alongside Natural Resource Officers investigating violations under the *Mines Act* and the *Water Sustainability Act*. Charges were laid under the *Mines Act* for failing to submit reports, however, the charges were later stayed due to the death of the accused.
- Administrative monetary penalty decisions and summaries of court decisions are made public on the BC Mine Information website.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mines Digital Services

Drafted/Revised: February 5, 2024

Issue: Development of digital tools to support mine permitting and oversight in British Columbia

Response:

- Ministry of Energy, Mines and Low Carbon Innovation (EMLI) continues to invest in digital transformation to improve transparency and efficiency in mine regulatory oversight and permit application processes.
- Digital development for EMLI is led by an in-house Mines Digital Services (MDS) team that has launched three key products (Core – an internal platform, MineSpace – a proponent application and BC Mine Information (BCMI) – a public website).
- The current phase of digital development is focused on Major Mines with funding provided through a 4-year \$6.6M capital investment that concludes in fiscal 2024/25. The project remains on track for deliverables and budget.

Background/Status:

- MDS manages, maintains and/or provides operational support for the integrated digital products used in mining oversight and in improving transparency with indigenous groups, the public and other stakeholders:
 - Core is a central internal information management system that supports efficiency in the key regulatory functions for both EMLI Mines Divisions.
 - MineSpace allows mining proponents to submit documents directly to EMLI, view their compliance history, and review information about their mine, such as permit data and incident history. This portal significantly improves the flow and consistency of information between EMLI and mining operators.
 - The BCMI website improves transparency and public access to major mine information from EMLI, the Environmental Assessment Office (EAO), and the Ministry of Environment and Climate Change Strategy (ENV).
- The ongoing development work by MDS contributes to streamlining business processes, supporting data-informed decision-making, and continuously improving transparency and mining oversight. For example:
 - By consolidating and centralizing data, staff can make decisions with all relevant information in one web-based platform.
 - Regional exploration permitting is managed through Core, with process consistency and data collection helping to support robust and timely permitting decisions.

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Approximately 500 Mining Proponents use MineSpace to submit regulatory reports directly through this portal. To date, over 2400 compliance related documents have been received from mines via this portal, which provides Ministry staff instant access to compliance status. Before MineSpace, this took weeks to manually compile from various email in-boxes.
- In Fall 2022 MDS launched the intake of major mine applications through MineSpace and has since received 24 Major Mine Applications.
- BCMI was launched in February 2017 and represents the first time mine related information from EMLI, EAO and ENV was made publicly available online in one place.
- Currently, BCMI publicly posts authorizations, annual reclamation reports, and compliance reports such as Dam Safety Inspections and Dam Safety Reviews, for 78 mines. In 2023 EMLI began posting project application documents to BCMI for mine projects of heightened public interest and comment. To date: Bamberton Quarry, Caribou Gold, Goldwedge and Midnight Mine/Record Ridge.
- MDS system development is funded using minor capital funding through the Office of the Chief Information Officer (OCIO). From fiscal year 2015/16 to 2021/22 \$8.8M was invested in mines IT systems. In March 2021, \$6.6 million was approved through the OCIO to expand existing products to focus on Major Mines over four years to directly support Mining Regulatory Excellence. By the end of fiscal year 2024/25 the total investment in IT systems will be \$15.4M

Cross Reference: Permitting Regional Mines (RMCD)
Major Mines Permitting Timelines (RMCD)

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2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Bankruptcy/Insolvency

Drafted/Revised: February 2, 2024

Issue: EMLI Mines approach to bankrupt/insolvent mining companies

Response:

- When a mining company operating in BC becomes insolvent, the Province is at risk of becoming responsible for health, safety, and environmental management, which could include the need for emergency work.
- Insolvency proceedings can create uncertainty with respect to the Province's ability to regulate the insolvent entity during those proceedings.
- This uncertainty arises since insolvency is federal jurisdiction and federal insolvency statutes (the *Bankruptcy and Insolvency Act* (BIA) and the *Companies' Creditors Arrangement Act* (CCAA)) take precedence over Provincial statutes in cases of conflict. This can present challenges for sites with environmental and/or health and safety risks.
- Financial security can help to cover costs associated with maintaining sites when mining companies become insolvent and are no longer able to meet their obligations at site. Where security funds are insufficient to cover these costs, section 17 of the *Mines Act* allows emergency work to be funded through the Consolidated Revenue Fund (with a TB Submission) but does not give authority for the expenditure of full reclamation costs.
- Two initiatives are underway to decrease liability and ensure adequate reclamation securities are in place for sites affected by insolvency moving forward: (1) implementation of the Major Mines Reclamation Security Policy (Interim) and (2) the Public Interest Bonding Strategy led by Ministry of Environment and Climate Change Strategy.
- There are currently seven major mines in some form of insolvency proceeding or in financial distress (Quinsam, Yellow Giant, Tulsequah, Myra Falls, Zip Mill, Lexington-Grenoble, and May Mac), as well as several regional scale sites.

Background/Status:

Definitions:

- **Insolvent:** unable to pay debts owed or liabilities exceed assets.

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- **Bankruptcy:** a legal process governed by the *Bankruptcy and Insolvency Act*, wherein an insolvent entity's assets, subject to the rights of secured creditors, are liquidated by a trustee for the benefit of unsecured creditors.
- **Trustee:** acts for the general benefit of the unsecured creditors, takes legal ownership of assets with the aim of selling to repay outstanding unsecured debts.
- **Receiver:** often appointed by the courts, acts for the secured creditor, takes control of assets collateral, to sell or liquidate the collateral to repay outstanding secured debts.
- **Receivership:** a remedy that is available to secured creditors with the aim of recovering an outstanding sum under a secured loan should a company default on loan payments.
 - See Attachment: 8.1 Types of Insolvency
 - See Attachment: 8.2 Mines in Insolvency

Ministry Actions:

- As each of these mines and insolvency situations are unique, BC is taking action appropriate to each scenario to mitigate impacts to public health and safety, impacts to the environment, and fiscal impacts to the Province.
- EMLI is prepared to use any available regulatory tools to hold previous mine owners accountable for outstanding liabilities at these sites.
- Implementation of the Major Mines Reclamation Security Policy (Interim) and the Public Interest Bonding Strategy led by the Ministry of Environment and Climate Change Strategy will help to reduce liability and ensure adequate reclamation securities are in place for sites affected by insolvency moving forward.

Attachment(s): 8.1 Types of Insolvency
8.2 Mines in Insolvency

Cross Reference: Quinsam Coal Receivership
Yellow Giant Mine (Banks Island)
CanXgold
Tulsequah Chief Mine
Myra Falls

Contact:

George Warnock	Assistant Deputy Minister	Mines Health, Safety & Enforcement Division	778-675-5228
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2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: Types of Insolvency

- Bankruptcy under the federal *Bankruptcy and Insolvency Act* (BIA). Bankruptcy may be voluntary or involuntary. In a bankruptcy the insolvent company's assets vest in the trustee who is then responsible for liquidating the bankrupt's assets to recover value for unsecured creditors. A company only escapes bankruptcy if it pays all of its creditors in full, which is rare.
- Another type of insolvency proceeding is a receivership. In a receivership a secured creditor seeks the appointment of a receiver (often through a court order) to liquidate the collateral provided by the debtor. A receiver may be appointed under the BIA. A secured creditor has priority over an unsecured creditor, which means that a receiver will have priority over a bankruptcy trustee.
- A third type of insolvency proceeding is a proposal proceeding under the BIA. In this proceeding a company will put a proposal to its creditors to compromise its debts. The creditors have an opportunity to vote on the proposal. If the proposal is successfully implemented, the company usually continues in business, although this will depend on the terms of the proposal.
- A fourth type of insolvency proceeding is a court proceeding under the federal *Companies' Creditor Arrangement Act* (CCAA). The CCAA is only available to companies who have over \$5.0M in debts. If approved, the court sets out a framework for restructuring, reorganizing, or liquidating the company and supervises the implementation of whichever path is chosen.

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Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: Mines in Insolvency

- Quinsam Coal Corporation filed for bankruptcy in 2019 and has been under the care and control of a receiver since. The sales process closed in 2021, and EMLI is working with the receiver to address the highest health, safety, and environmental risks.
- Tulsequah Chief Mine is currently owned by Chieftain Metals Inc., who became insolvent in 2016. Chieftain's primary secured creditor at the time, West Face Capital, applied to the Ontario Superior Court for the appointment of a receiver over Chieftain and its parent company, Chieftain Metals Corp. In 2020, the primary secured creditor applied to have the Receiver discharged, which was granted by the courts. On September 21, 2022, the Ministry was advised that the creditor had assigned its interests in Chieftain to Armex Mining Ltd. as of September 20, 2022.
- Yellow Giant was owned by Banks Island Gold Ltd. (BIG), who filed for bankruptcy and went into receivership in 2016. The company's capital assets, mineral claims and titles were purchased by MCC Canadian Gold Ventures in 2019, however they did not have the existing permit transferred to their name. BIG was dissolved by the corporate registry on August 15, 2022, for failing to file its annual reports.
- Myra Falls, owned by Myra Falls Mine Ltd., has filed for protection under the *Companies' Creditors Arrangement Act* ("CCAA"). Myra Falls has been granted interim financing which should provide sufficient liquidity to manage the site during the sales process. The court-ordered CCAA stay of proceedings against creditors and others expires on Feb 29, 2024, although Myra Falls is expected to seek an extension of the stay of proceedings to give it further time to develop and execute a sales/restructuring plan.
- The Zip Mill, Lexington-Grenoble, and May Mac mines are owned by CanXgold and its subsidiaries, which are currently in court ordered receivership.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Quinsam Coal Receivership

Drafted/Revised: February 12, 2024

Issue: Quinsam Coal Receivership and plans to de-risk the mine site.

Response:

- Quinsam Coal Corporation, the owner of the Quinsam Coal Mine (the Mine), filed for bankruptcy on July 3, 2019.
- The bankruptcy trustee abandoned the Mine on July 31, 2019. On September 20, 2019, on the Province's application, the BC Supreme Court appointed a receiver over the Mine. The receiver is managing the Mine to ensure safety, and environmental protection remains a priority at the site.
- A buyer for the Mine was not found through the receivership process. The financial security for the Mine, collected under the *Mines Act*, has been fully expended to fund the receivership proceedings, thus enhancing environmental protection and human safety at the site.
- The receiver has taken steps to ensure public health and safety are not put at risk at the site, for example, by maintaining power at the site and ensuring the continued operation of critical de-watering and ventilation infrastructure.
- Advice/Recommendations; Cabinet Confidences
- In March 2024, EMLI will propose works to eliminate the risks that the receiver was appointed to manage so that the receiver can be discharged.
- Once the receiver is discharged, care of the site will transfer to EMLI's Abandoned Mines Branch.
- The proposed plan will aim to significantly reduce ongoing annual costs to the Province.

Background/Status:

- Quinsam Coal Corporation (Quinsam) owned and operated a thermal coal mine roughly 20km southwest of Campbell River and leased the Middle Point Barge Terminal from the We Wai Kai Nation, roughly 10km north of Campbell River.
- The Mine stopped operating on June 12, 2019, and entered into bankruptcy on July 3, 2019, choosing PricewaterhouseCoopers Inc. to act as the Trustee.
- The secured creditor did not adequately fund the Trustee, and as a result, on July 30, 2019, the Trustee notified the Province on July 31, 2019, that it would be abandoning the Mine pursuant to the *Bankruptcy and Insolvency Act* but maintaining their obligations at Middle Point.

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Minister Responsible: Josie Osborne

- To address immediate health, safety and environmental concerns presented by the Trustee's abandonment of the Mine, the Ministry retained the Bowra Group Inc./MNP (Bowra) as a contractor. In September 2019, Bowra was appointed receiver over the Mine and all of Quinsam's assets.
- The Province seized the \$7.28 million reclamation security held in relation to the Mine. The costs paid to the receiver to keep the Mine in care and maintenance are approximately \$300,000 a month and were paid by security until the security was exhausted in July 2021. By May 2024, ~\$17M will have been spent funding the receiver to manage HSE risks.
- The receiver undertook a sales process from December 2019 to November 2021, which included advertising in national and international publications and direct outreach to unions and potentially interested parties. A suitable buyer for the Mine was not found through this process.

Care, Maintenance and Closure

- Through Bowra, the Ministry has taken steps to keep the Mine in care and maintenance status to ensure public health and safety are not put at risk.
- The Ministry contracted an engineering firm, SRK Consulting, to assess reclamation and closure costs, estimated at \$35.6 million. Costs to eliminate only the highest risks are ~\$17M.

Legal Information

- The Ministry is evaluating the next steps for the receivership and mine closure.
- These next steps will include updated cost estimates and scope revisions and will be presented in March 2024.
- The proposed plan will aim to eliminate the risks that the receiver was put in place to manage, thereby significantly reducing annual costs to the Province.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: CanXGold Insolvency

Drafted/Revised: February 2, 2024

Issue: CanXGold is in receivership and has outstanding reclamation liabilities on multiple mine sites.

Response:

- CanXgold Mining Corp. (CanX) and its subsidiaries (Kettle River Resources Ltd., Golden Dawn Minerals Inc., Golden Dawn Exploration Ltd., 1083659 BC Ltd., and 6891667 BC Ltd.) are the permit holders of three major mine permits and seven regional mineral exploration permits.
- The major mines that are owned by CanX companies are Lexington-Grenoble, Zip Mill and May Mac.
- CanX entered a court appointed receivership, initiated by its secured creditor Rivi Opportunity Fund LP (Rivi), on November 20, 2023. The appointed receiver is PricewaterhouseCoopers Inc. (PwC).
- The Province holds a total of approximately \$610,000 across the ten permits held by the companies.
- The Ministry (EMLI) is actively working with the appointed receiver to mitigate impacts to public health and safety, impacts to the environment, and fiscal impacts to the Province.
- EMLI is prepared to use any available regulatory tools to hold current and previous mine owners accountable for outstanding liabilities at these sites.
- Known liabilities include two tailings storage facilities, a mill facility, underground mine openings, and mining related surface disturbances.

Background/Status:

- CanX is also the holder of 136 mineral claims, 101 crown grants, and 2 mining leases.
- The subject projects are located in the Southeast region of the Province, between Midway and Grand Forks BC, and include 5 past producing mines.
- EMLI has been actively inspecting the mine permits related to CanX and has been pursuing escalated enforcement on matters relating to the appointment of a Mine Manager, TSF related reporting, and reclamation.
- The Province holds a total of approximately \$610,000 across the ten permits held by the companies. The Province anticipates that the existing reclamation liabilities on the sites will exceed this amount, and require further assessment.

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Minister Responsible: Josie Osborne

- On October 25, 2023, the Province was made aware that all Directors and Management of CanX had resigned from the company on October 3, 2023.
- On November 20, 2023, CanX entered a court appointed receivership, initiated by its secured creditor Rivi Opportunity Fund LP (Rivi). The appointed receiver is PricewaterhouseCoopers Inc. (PwC).
- PwC is currently undertaking a sales process for the assets and property of CanX, which is projected to conclude in April 2024.

Cross Reference: Bankruptcy/Insolvency (MHSE)

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Myra Falls Mine entering Care and Maintenance

Drafted/Revised: February 15, 2024

Issue: Myra Falls enters creditor protection and into care and maintenance

Response:

- On December 18, 2023, Myra Falls Mine Ltd. (Myra Falls) announced it was placing the Myra Falls Mine (Mine) into Care and Maintenance due to low metal prices, high operating costs and severe liquidity risk.
- Since the announcement, 176 employees have been laid off, with 48 staff remaining split between union and non-union employees. The final employee count will be 32.
- It is understood that contributing factors leading to the Mine's insolvency are:
 - Rising operating expenses, and
 - Falling zinc prices
- The current estimated liability for the Mine is ~\$143M, with ~\$132M bonded for and held by the Province through a surety bond.

Legal Information

- Myra Falls has court approval for a \$21M loan facility, which will provide sufficient liquidity for Care and Maintenance activities during restructuring.
- Myra Falls is presenting a sales and solicitation process to the Court in February, which will outline the steps to market and potentially to sell the Mine.

Legal Information

- EMLI is working with Myra Falls to ensure the Mine, including the TSF and water treatment facility, is properly monitored and maintained during Care and Maintenance.
- EMLI staff are working with staff from the Ministry of Jobs, Economic Development and Innovation (JEDI) as they initiate community transition services to support communities following the loss of a major employer.

Background/Status:

- Myra Falls is a wholly owned subsidiary of Trafigura, the world's third largest commodity trading company, which is based in Singapore. The Mine is an

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Tulsequah Chief Mine

Revised: February 2, 2024

Issue: Remediation of ongoing acid rock drainage from legacy mining into the Tulsequah River and transboundary watershed

Response:

- Between 1951-1957, underground mining activities at Tulsequah Chief Mine (the Mine) left a legacy of acid rock drainage in the Tulsequah River.
- The Province remains committed to holding past and present owners of the Mine accountable for addressing acid rock drainage and reclaiming the Mine.
- The Province is committed to continuing to work in collaboration with the Taku River Tlingit First Nation (TRTFN) and to engage with interested stakeholders regarding the long-term reclamation of the site.
- Since 2020, the Province, in collaboration with the TRTFN and the Atlin Taku Economic Limited Partnership, the economic arm of the TRTFN, has carried out interim reclamation activities at the Mine, including improving site accessibility and ongoing monitoring of water quality.
- To date, Teck has provided a total of \$3.26 million to the Province on a voluntary basis to support interim reclamation works in 2021 and 2022. This is in addition to the \$1.2M security that the Province seized and spent.
- The receivership over Chieftain Metals Inc. concluded in August 2022.
- The dissolution proceedings of Chieftain were postponed by the courts until October 2022; however, the Ontario Corporate Registry has not yet completed the dissolution process.
- In January 2023, the TRTFN self-declared an area of almost 2 million hectares as an Indigenous Protected and Conserved Area (IPCA), which includes the Tulsequah site. Although the mine site is located within the IPCA, the Province does not expect this to impact current and future reclamation work at the site.
 - The Province and Teck meet regularly and are jointly working through the critical elements that have been identified to ensure successful reclamation.
 - The Province continues to work with Alaska to identify ways to continue to transparently share information with the State, Tribes, and ENGOs and address concerns from Alaska state lawmakers.
 - To underline BC's commitment to reclaiming the Tulsequah Chief Mine, the Province has appointed an Executive Director, whose primary responsibility is to work with Teck and Taku River Tlingit First Nation to ensure the successful reclamation of the Tulsequah Chief Mine, in a timely manner.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Background/Status:

- The Mine is located south of Atlin and northeast of Juneau Alaska, in the traditional territory of Taku River Tlingit First Nation (TRTFN).
- Underground copper/lead/zinc mining activities were carried out at the Mine between 1951 to 1957 by Consolidated Mining and Smelting Company of Canada Ltd. (Cominco), left a legacy of acid rock drainage, raising concerns amongst First Nations and stakeholders, including Alaska.
- Cominco, through corporate amalgamation, is now Teck Metals Corp., a subsidiary of Teck Resources Ltd. The Mine has not operated since the late 1950's, but Teck carried out exploration activities at the Mine in the 1980's and 1990's before selling its interests to Redfern Resources Inc. ("Redfern").
- Redfern became insolvent, and the Mine was acquired by Chieftain Metals Inc. ("Chieftain").
- The Mine is currently owned by Chieftain, a company incorporated in Ontario.
 - Chieftain became insolvent in 2016.
 - In September 2016, Chieftain's primary secured creditor, West Face Capital Inc. (West Face), applied to the Ontario Superior Court for the appointment of a receiver over Chieftain and its parent company, Chieftain Metals Corp.
 - In fall 2016, the Chief Inspector of Mines confiscated the \$1.2 million security bond provided by Chieftain, which has been used to secure areas of the site, address immediate issues, and fund the development of a conceptual closure and reclamation plan.
 - In 2020, West Face applied to have the Receiver discharged without limiting the ability of having a receiver reappointed within two years in the receivership proceedings.
 - The court granted the discharge of the Receiver, and West Face had until August 11, 2022 to apply to reappoint a receiver. No such application was made, and the Province considers that the receivership process is concluded.
- Chieftain continues to retain its assets and interests, though the company does not have any corporate directors.
- On September 21, 2022, the Ministry was advised that West Face had "assigned its investments in Chieftain to Armex Mining Ltd. ("Armex") as of September 20, 2022". It is not clear whether Armex purchased the shares of Chieftain or whether Armex has replaced West Face as secured creditor.
- In January 2023, the Chief Inspector of Mines ordered Chieftain to submit plans to address outstanding compliance issues. If Chieftain failed to comply with the order, its Mines Act permit was to be canceled. After discussions with Armex, The Chief Inspector extended the deadline until December 31, 2023. Prior to the

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Withheld pursuant to/removed as

Legal Information

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

Attachment: 12.2 Reclamation Activities

Interim Reclamation Activities (2020-2022):

- Reclamation efforts to date have involved the development of a conceptual reclamation and closure plan (the Conceptual Plan) for the Mine, which included input from the TRTFN, the State of Alaska and Teck. Further work is needed to address information gaps and inform a final detailed reclamation plan.
- The Ministry, with cooperation and funding from Teck, has been carrying out early work identified in the Conceptual Plan to improve site stability and accessibility and to undertake the water and aquatic effects monitoring required to inform a final reclamation plan. These interim activities have been conducted in collaboration with the TRTFN through the Atlin Taku Economic Limited Partnership, the economic arm of the TRTFN.
- Completed work includes:
 - building and repairing 17 stream crossings and bridges;
 - airstrip erosion protection;
 - continuation of an annual water quality monitoring program at site; and
 - implementing year 3 of a 5-year water quality and aquatic effects monitoring program in the Tulsequah River, which will support and inform further reclamation planning at the Mine.

Transition to long-term closure planning (2023 – 2024):

- 2023 marked the transition from interim and preliminary work to more focussed long-term reclamation planning work at Tulsequah:
 - Teck has initiated relationship-building and reclamation planning discussions directly with TRTFN with the intent of ensuring TRT's fulsome input and involvement in the development of the long-term reclamation plan.
 - BC is working closely with TRT to ensure all work conducted in their territory includes full consideration of their interests and occurs in alignment with BC and TRT laws.
 - Teck provided BC with a draft, conceptual schedule for the development of a long-term reclamation plan for Tulsequah Chief Mine in June 2023. This schedule will be adapted and updated regularly to reflect new information gained from site work, engagement and other activities.

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- o In August 2023, Teck and TRT representatives undertook a joint site visit to Tulsequah Chief Mine. This visit was critical for ensuring Teck's familiarity with current site conditions and site logistics, potential health and safety hazards, and to review the site with a view to understanding potential closure objectives.
BC and Teck continue to meet regularly to work through some of the critical elements identified as necessary to ensure successful reclamation outcomes at the site. Most recently, BC and Teck provided an overview at the BC-Alaska Bilateral Working Group meeting in January 2024 to provide an update of work to date and what Teck hopes to accomplish at the site in the upcoming 2024 field season.

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Attachment: United States and International Interests

- The Province and Alaska signed a Memorandum of Understanding and Cooperation (MOU) in 2015. The MOU is being implemented through a Statement of Cooperation (SoC) on the Protection of Transboundary Waters. B.C.'s relationship with its Alaskan counterparts (Commissioners) is strong, transparent, and cooperative.
- Provincial staff will continue to be in regular contact with the State of Alaska, Tribes in Alaska, ENGOs, and other interested parties regarding the continuation of interim reclamation work at the site during the 2024 field season.
- Bilateral working group meetings were held between B.C. and Alaska in June 2023 and January 2024 to share information with Alaska Commissioners.
- Following a March 2023 visit to Alaska by EMLI and ENV senior executive for the Juneau Mining Forum, a press conference was held where Alaska state legislators and Alaska Tribal Leaders expressed concern and urgency surrounding Tulsequah Chief and other northwest B.C. mines.
- A March 9, 2023, letter from Alaska state legislators to the U.S. government requested a pause on mine permitting and exploration in B.C. and renewed calls for the International Joint Commission (IJC) to intervene. This approach appears to be supported by ENGOs and Alaska Tribes and Tribal organizations.

Intergovernmental Communications

- B.C. is working with its Alaskan counterparts through the MOU to identify ways to continue to transparently share information with the State, Tribes, and ENGOs. B.C.'s position remains that an IJC reference is not needed, given the actions BC is taking and the strong working relationship with Alaska.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Yellow Giant Mine (Banks Island)

Drafted/Revised: January 30, 2024

Issue: Reclamation of Yellow Giant Mine on Banks Island, Northwest BC

Response:

- Banks Island Gold Ltd (BIG), former owner of Yellow Giant mine (the Mine) located on Banks Island 105 kilometers southwest of Prince Rupert, BC, filed for bankruptcy and went into receivership in 2016.
- The Province conducted remedial work at the Mine under section 17 of the *Mines Act*, using confiscated securities to remove hazardous materials in 2017.
- The Mine is located in the asserted territory of Gitxaala Nation (Gitxaala) and Kitselas First Nation
- BIG's capital assets, mineral claims and titles were purchased by MCC Canadian Gold Ventures (MCGV) in 2019. BIG was dissolved by the corporate registry on August 15, 2022, for failing to file its annual reports.
- In 2021, Gitxaala Nation expressed concerns about the state of the mine site, particularly as it relates to reclamation, and commenced a legal challenge to the *Mineral Tenure Act*, citing issues related to the Mine as examples of impacts to right and title. The Province acknowledges concerns related to outstanding reclamation, and is working with Gitxaala on options to address.

Intergovernmental Communications

- The Province is committed to working closely with Gitxaala to confirm a desired approach to addressing the reclamation of the site through collaborative efforts.
- The Province is committed to the modernization of the Mineral Tenure Act.

Intergovernmental Communications

Background/Status:

- The Mine comprises three separate exploration sites and one permitted mine, including a modular processing plant.
- In 2016, BIG filed for bankruptcy and went into receivership. EMLI confiscated financial securities, totaling \$420,000, and used \$200,000 to remove high risk hazardous materials from the site in 2017.

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- In 2017, EMLI participated in a joint site visit with Gitxaala and the Ministry of Environment and Climate Change Strategy to assess the site following the removal of the hazardous materials.
- In 2019, the mineral claims were acquired by MCGV, the major creditor to BIG. This purchase was approved in December 2018 as part of BIG's receivership.
- Although BIG is bankrupt, it remained the permittee under the *Mines Act* as MCGV did not transfer the permit. However, due to BIG's failure to file its annual reports with the corporate registry, BIG was dissolved on August 15, 2022.
- Gitxaala has voiced concerns about the state of the Yellow Giant site and, in October 2021, requested "clear confirmation that BC is committed to promptly ensure full and complete remediation is conducted at the Yellow Giant site, and that this remediation will not be in any way contingent on permitting further mining to occur at the site".
- The Province has built a positive relationship with Gitxaala in relation to this site through open and transparent dialogue and information sharing, and is in discussions regarding next steps and opportunities for collaboration. On September 13, 2023, EMLI and Gitxaala Nation Territorial Management Agency (GTMA) conducted a joint site visit at the Mine with IFP funding supports.
- In June 2022, MCGV wrote to Gitxaala and offered to provide an update on MCGV's environmental activities to Gitxaala. EMLI later learned through a conversation with GTMA that they met in October 2022, though specific plans and future intentions were not discussed.
- In February 2023, MCGV provided a proposal for clean-up activities to EMLI and Gitxaala. Gitxaala and EMLI are working closely on the next steps for engagement with MCGV on the proposal.

Intergovernmental Communications

Cross Reference: Mineral Tenure Act Reform/Modernization (RMCD)

Contact:

George Warnock	Assistant Deputy Minister	Mines Health, Safety & Enforcement Division	778-675-5228
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2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Energy Resources Division Overview

Drafted/Revised: February 20, 2024

Issue: An overview of the Energy Resources Division

Response:

- The Energy Resources Division (Division) leads the transformation and management of British Columbia's energy resources to advance reconciliation and an economically secure, environmentally sustainable future.
- The Division plays a leading role in assisting the Province in achieving its environmental and emissions reduction goals, such as the near elimination of methane emissions by 2035.
- The Division is government's primary liaison with the independent regulator for the oil and gas and clean energy industry - the BC Energy Regulator.
- The Division has and continues to play a key role in the development of the regulatory emissions cap for the oil and gas sector in collaboration with the Ministry of Environment and exploring equity ownership opportunities for Nations in collaboration with the Ministry of Finance.
- The new Clean Energy and Major Projects Office (CEMPO) is a part of the Energy Resources Division.

Background/Status:

- The Energy Resources Division (Division) develops and implements programs, policies, regulations and best practices to ensure that British Columbia's energy resources are developed in a way that aligns with government's strategic priorities and delivers maximum economic benefits to British Columbians.
- The Division works closely with other natural resource agencies in the Public Service to deliver on its mandate.
- The Division is responsible for the issuance, administration and access to oil and gas subsurface tenures, facilitating the implementation of interprovincial pipelines and related infrastructure projects, oversight of oil and gas royalties, design of stringent and competitive regulatory and policy frameworks for oil and gas, analyzing current and future oil and gas market trends, revenue and activity

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Minister Responsible: Josie Osborne

forecasting, and profiling opportunities for development of projects that could bring additional value to the province's oil and gas resources.

- The Division plays a leading role in assisting the Province in achieving its environmental and emissions reduction goals, such as the near elimination of methane emissions by 2035 and ensuring that all other commitments under CleanBC and the Roadmap to 2030 for the oil and natural gas sector are met.
- The Division includes the Clean Energy and Major Projects Office (CEMPO), which is working across government to help clean energy projects, including hydrogen; carbon capture, utilization, and storage; biofuels; and renewable natural gas, reach final investment decisions and support tangible benefits to B.C. and Indigenous communities.
- Branches within the Division include:
 - Infrastructure and Strategic Initiatives
 - Energy Economics and Royalties
 - Policy, Programs and Legislations
 - Tenure and Resource Stewardship
 - Clean Energy and Major Projects Office
- Key projects that the Division is working on include:
 - Implementation of the New Royalty Framework
 - Collaborating with Ministry of Environment on the proposed regulatory emissions cap for the oil and gas sector
 - Implementation of Treaty 8 Agreements
 - Land use Development Planning
 - Implementation of the BC Hydrogen Strategy, including the development of hydrogen hubs
 - Supporting clean energy project proponents throughout their lifecycle, including the tracking more than 50 clean energy projects, of which approximately 20 commercial-scale projects
 - Priority LNG projects, including in Cedar LNG which will be the largest First Nations majority owned energy project in Canada.
 - Advancing carbon capture and storage
 - ESG and Digital Trust
- With the recent addition of CEMPO, the division currently has 94 equivalent (FTEs)

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Minister Responsible: Josie Osborne

Contact:

Nathaniel Amann-Blake ADM Energy Resources 250-889-1990
Division

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Petroleum and Natural Gas Sector Emissions and Initiatives

Drafted/Revised: January 31, 2024

Issue: British Columbia is advancing climate action initiatives to reduce emissions from the oil and gas sector.

Response:

- Initiatives from the CleanBC Roadmap to 2030 (the Roadmap) and the New Energy Action Framework (NEAF) are underway to reduce greenhouse gas (GHG) emissions produced by the oil and gas sector in line with provincial climate targets.
- We are driving delivery of our government's commitments and actions under the Roadmap and the NEAF to ensure we meet our legislated climate goals and the oil and gas sectoral target of 33 to 38 percent reductions from 2007 levels by 2030.
- We are working closely with the Ministry of Environment and Climate Change Strategy (ENV) to develop supporting policies and regulations.

Background/Status:

- According to the Provincial Inventory of Greenhouse Gas Emissions, British Columbia's (BC) oil and gas sectoral emissions totaled 12.4 million tonnes of carbon dioxide equivalent (tCO_{2e}) in 2021 which is almost 2 million tCO_{2e} lower than what was recorded in 2007 (despite more than double the production). The oil and gas sector is currently responsible for around 50 percent of industrial emissions and 20 percent of BC's total emissions.
- In March 2021, BC became the first province in Canada to set sectoral targets covering emissions across the economy. The sectoral target for oil and gas aims to reduce emissions 33 to 38 percent below 2007 levels by 2030.
- In October 2021, the CleanBC Roadmap to 2030 committed the Province to implementing policies and programs to ensure the oil and gas sector meets its sectoral targets. The Province followed this commitment in March 2023 by announcing a NEAF that seeks to ensure that oil and gas sector projects fit within BC's climate commitments.
- BC is engaging with partners and stakeholders to move forward successful GHG and methane emissions reduction policies for the oil and gas sector. The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is responsible for many supportive programs and regulatory policy and is active on several provincial policy initiatives relevant to the oil and gas sector.

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EMLI CleanBC Actions to Support GHG Reductions in the Oil and Gas Sector

- Supporting BC Energy Regulator's (BCER) development of amendments to the *Energy Resource Activities Act* Drilling and Production Regulation to reduce methane emissions by 75 percent, from 2014 levels, by 2030 and progress towards near elimination of methane emissions by 2035.
- Advancing a provincial approach for carbon capture, utilization and storage, including funding geoscience research of storage potential across BC and ensuring a robust regulatory framework is in place, such as the 2023 amendments to improve the clarity of storage reservoir licence issuance.
- Integrating emissions reductions into the review of the oil and gas royalty framework to ensure the system supports provincial emission reduction targets.
- Establishment in 2023 of the Clean Energy and Major Project Office to fast-track investment in clean energy.
- Creation in 2023 of the BC Hydro task force to accelerate the electrification of BC's economy including the oil and gas sector.
- Developing a regulatory emissions cap for the oil and gas industry to ensure BC meets its 2030 emissions-reduction target for the sector and working with federal government to avoid regulatory duplication.

Provincial Initiatives to Lower Emissions in the Oil and Gas Sector

- BCER is progressing the Roadmap commitment to clean up 100 percent of orphan wells in BC (from 2021 inventory) by 2030.
- Legislation, regulatory development, and guidance on net-zero requirements for new large industrial projects is underway. This will include requirements for all proposed liquified natural gas (LNG) facilities in or entering the environmental assessment process to have a credible plan to be net zero by 2030.
- Transitioning to an output-based carbon pricing system in 2024 that will follow the federal carbon price path and encourage emissions reductions for all industries, while also providing flexible options to meet compliance obligations.

Cross Reference: Methane Regulations
Carbon Capture and Storage

Contact:

Nathaniel Amann-Blake	Assistant Deputy Minister	Energy Resources Division	250 889-1990
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Carbon Capture and Storage

Drafted/Revised: January 31, 2024

Issue: The Province is advancing carbon capture, utilization and storage (CCUS) as an important greenhouse gas emissions mitigation tool for industrial emissions.

Response:

- The CleanBC: Roadmap to 2030 acknowledges that full decarbonization of British Columbia's (BC) emitting industries will require the use of carbon, capture, utilization and storage – especially for industries with hard to abate emissions.
- Our government has put in place a robust regulatory framework that governs project tenure, acquisition and permitting, providing certainty to industry stakeholders.
- As part of our government's work to advance a provincial approach to CCUS, we are partnering in research and development to improve our knowledge of BC's storage potential, advance CCUS technologies and support project deployment.
- CCUS has the potential to play an integral role in supporting BC to meet its emissions reduction targets, including net zero.

Background/Status:

- The Province has put in place a robust regulatory framework that provides certainty to industry stakeholders by establishing rules governing project tenure acquisition and permitting.
- The BC Energy Regulator (BCER) provides regulatory oversight for subsurface storage projects and has done so since 1996 in the form of acid gas disposal. To date there is collectively stored over 2.7 million tonnes of carbon dioxide (CO₂).
- The Government of Canada has determined that BC, along with Alberta and Saskatchewan, is a prescribed jurisdiction for the proposed federal Carbon Capture, Utilization, and Storage Investment Tax Credit (CCUS-ITC). The decision to acknowledge BC's eligibility under the tax credit was confirmed after an in-depth review on BC's regulatory framework was undertaken by Environment and Climate Change Canada (ECCC) in collaboration with the Ministry of Energy, Mines and Low Carbon Innovation (EMLI).
- BC is advancing essential knowledge of storage capacity to create opportunity for hydrogen hubs and corridors, support the advancement of CCUS

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technologies and facilitate the decarbonization of heavy emitting industries, like oil and gas and cement. The mining sector is also looking at the potential for CCUS to reduce its emissions.

Supporting Geoscience Research and Industry Innovation

- Currently, Northeast BC (NEBC) is attracting initial investment interest for carbon capture and storage (CCS) projects due to suitable geological conditions, the presence of oil and gas activities, and associated existing infrastructure.
- In January 2023, the NEBC Geological CCS Atlas was published to support industry's interest in the area. The atlas estimates a potential CO₂ storage capacity of 4.2 gigatonnes (billion tonnes) in depleted oil and gas fields and deep saline aquifers.
- Over the past two years BC has committed \$1.2 million for new geoscience research in the Western Canada Sedimentary, Nechako and Geogia basins. This builds upon the previously funded work of the NEBC Geological CCS Atlas.
- Research projects are being led by Geoscience BC Society, Tu-Deh-Kah Geothermal of the Fort Nelson First Nations, and Simon Fraser University (SFU). Results will be made public and are expected between December 2024 and January 2029.
- BC is home to established companies and start-ups that are developing technologies that represent significant contributions to advancing CCUS.
- The Province is supporting individual projects with funding offered through three industry programs: Clean Growth Infrastructure Royalty Program (CGIRP), CleanBC Industry Fund (CIF), and Innovative Clean Energy (ICE) Fund and since 2017, has allocated over \$50 million to CCUS initiatives.
- BC has an active CCUS-related research and development sector engaged in developing specific aspects of the value chain, including capture and conversion, and in advancing the adoption of known technologies. Dedicated carbon management institutions that are advancing research and development initiatives in the province include the BC Centre for Innovation and Clean Energy (CICE), BC Research Inc. which host Carbon Management Canada and, CarbMin Lab at the University of British Columbia.

Cross Reference: n/a

Contact:

Nathaniel Amann-Blake	Assistant Deputy Minister	Energy Resources Division	250 889-1990
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Methane Regulations

Drafted: January 31, 2024

Issue: Oil and gas sector methane emissions reduction targets, regulatory development and federal-provincial equivalency.

Response:

- Methane regulations are a key policy instrument for achieving our oil and gas sector methane reduction targets.
- BC is on track to exceed our CleanBC oil and gas sector methane emissions reduction target of 45% below 2014 levels by 2025. The 2021 provincial inventory shows sectoral methane emissions have decreased by 47 percent below 2014 levels and more recent data shows methane emissions continuing to decrease.
- BC's natural gas production has one of the lowest methane emissions intensities in the world.
- We have consulted with First Nations and engaged with stakeholders on new stronger methane regulations that will get us to our 75 percent reduction target by 2030 and ensure ongoing equivalency with the federal government's proposed methane regulations.
- BC is working with experts, industry, non-profits and environmental groups to make sure we have an accurate picture of methane emissions in the oil and gas sector.
- Examples of this work include collaborative research partnerships and the use of advanced methane detection technologies.
- This work adds insight that is essential for effective regulatory development and achieving BC's methane reduction targets.

Background/Status:

- Through CleanBC, BC has committed to reducing oil and gas sector methane emissions by 45 percent below 2014 levels by 2025, 75 percent below 2014 levels by 2030 and near elimination of industrial methane emissions by 2035.
- BC is on track to meet provincial methane emissions reduction targets for 2025.
- BC's oil and gas sector methane emissions reductions contribute to the 2030 oil and gas sector greenhouse gas (GHG) reduction target of 33 to 38 percent below 2007 levels, as well as the provincewide GHG reduction targets.

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Regulatory Development

- In April 2020, BC signed an equivalency agreement with the federal government as a result of their determination that provincial methane regulations would achieve greater reductions than the national regulations. The agreement, the first for any province, is for five years (2020 to 2025).
- A regulatory review was conducted in 2022 to assess the effectiveness of BC's methane regulation requirements. This resulted in updates to the Drilling and Production Regulation and the Oil and Gas Processing Facility Regulation which came into effect January 1 of this year.
- In 2023 the Ministries of Energy, Mines and Low Carbon Innovation and Environment and Climate Change Strategy worked in collaboration with the British Columbia Energy Regulator (BCER) to develop enhanced methane regulations. Proposed changes are designed to: achieve the province's 2030 target; build towards near elimination by 2035; and achieve reductions aligned with federal regulations so that continued equivalency can be determined.
- Pending approval by the BCER Board, the enhanced methane regulations will come into effect in 2025 and set industry on track to meeting provincial methane reduction targets for 2030 and beyond.
- BC's methane regulations are developed within a suite of complementary policies that drive GHG reductions and support progress to near elimination of methane emissions by 2035 (e.g., increasing carbon price).

Methane Emissions Intensity

- In April 2023, the Energy and Emissions Research Laboratory at Carleton University published a journal article that found the methane emissions intensity of produced natural gas in BC to be less than 0.5 percent in 2021. This emissions intensity compares favourably to other North American producing areas and jurisdictions where research has found intensities ranging from 0.6 percent to 5.6 percent.
- BC's methane emissions intensity is one of the lowest in the world. This is evident when comparing BC's 2021 methane emissions intensity to the countries included in the International Energy Agency's Global Methane Tracker 2023.
- As additional policy is implemented to achieve the 2030 methane target, BC is modeled to have a methane emissions intensity of approximately 0.1 percent.

Improving Understanding of Methane Emissions Inventory

- BC is working with experts, industry, non-profits and environmental groups to make sure we have an accurate picture of methane emissions in the oil and gas sector. Examples of funded initiatives include:

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- Research, publications and information sharing through the BC Methane Emissions Research Collaborative.
- Ongoing aerial surveys to advance world leading measurement research done through Carleton University, co-funded with the United Nations Environment Programme International Methane Emissions Observatory.
- A research project to monitor provincial methane emissions and detect any large methane sources with satellites.

Cross Reference: Petroleum and Natural Gas Sector Emissions and Initiatives

Contact:

Nathaniel Amann-Blake ADM Energy Resources Division 250 889-1990

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Clean Energy and Major Projects Office Overview

Drafted/Revised: February 05, 2024

Issue: An overview of the Clean Energy and Major Projects Office

Response:

- The Clean Energy and Major Projects Office (CEMPO) supports clean energy project proponents throughout their lifecycle.
- The CEMPO is working across government to help clean energy projects, including hydrogen; carbon capture, utilization, and storage; biofuels; and renewable natural gas, reach final investment decisions and support tangible benefits to B.C. and Indigenous communities.
- The CEMPO coordinates inside and outside government to ensure projects are meeting the Province's priorities and objectives, including CleanBC and the *Declaration on the Rights of Indigenous Peoples Act*.
- The CEMPO has two key objectives:
 - Support B.C. as a desirable place for clean energy investment, including working with internal and external partners to identify opportunities and challenges; and
 - Provide specific project management support for projects that need to interface with the government, including ensuring projects are aligned with the Province's objectives and monitoring them to ensure they result in tangible benefits to B.C.
- The CEMPO is tracking more than 50 clean energy projects, of which approximately 20 commercial-scale projects represent more than \$15 billion in potential investment.
- As the CEMPO continues to support projects through key milestones, the estimated value of the projects will continue to be adjusted.
- The CEMPO is actively supporting close to 20 priority projects, including a proposed hydrogen project by Chilliwack-based Teralta Hydrogen Solutions. The project is set to create sustainable jobs while driving down emissions and helping solidify Prince George as a hub for hydrogen investment in BC.
- The CEMPO has also played a pivotal role in supporting HTEC, Canada's leading clean hydrogen solutions company, in breaking ground for its green hydrogen production facility that will help decarbonize our economy and accelerate our energy transition.

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Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
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Background/Status:

- On March 14, 2023, the Government of British Columbia announced a new Clean Energy and Major Projects Office (CEMPO) as a major component of the New Energy Action Framework.
- The CEMPO combines the expertise of the former BC Hydrogen Office, LNG Canada Implementation Secretariat, and Woodfibre Implementation Group.
- The CEMPO consists of a team of 19 FTEs that provide project management support with existing resources to new and existing major clean energy project proponents throughout the full project lifecycle.
- The CEMPO now has the mandate to implement the BC Hydrogen Strategy.
- The Clean Energy and Major Projects Office (CEMPO) is tracking more than 50 hydrogen projects, of which approximately 20 commercial-scale projects represent more than \$15 billion in potential investment.
- The total estimated value was \$4.8 billion in 2022 and \$7 billion in 2023, noting that these numbers are based on proponent estimates and have not been verified by government.
- The CEMPO is looking to support the development of a wide range of new clean energy projects beyond hydrogen, including carbon capture, utilization and storage, renewable fuels, including sustainable aviation fuel, renewable natural gas, and emerging energy storage technologies.
- CEMPO prioritizes the advancement of First Nations interests and First Nations-led clean energy projects, including facilitating partnerships with and benefits for First Nations, such as business opportunities and skills training.

Attachments: None

Cross Reference: BC Hydrogen Strategy

Contact:

Nathaniel Amann-Blake	Assistant Deputy Minister	Energy Resources Division	250 889-1990
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Hydrogen Projects in BC

Drafted/Revised: February 9, 2024

Issue: Overview of hydrogen projects in BC

Response:

- Large-scale deployment of renewable and low-carbon hydrogen is a key pathway to meeting our CleanBC climate targets.
- Global demand for hydrogen products, such as methanol and ammonia, continued to expand in 2023 and these clean energy products are expected to continue to play a significant role reducing global emissions.
- We launched the Clean Energy and Major Projects Office (CEMPO) in March 2023 to provide dedicated support to clean energy projects, including in the emerging hydrogen economy.
- CEMPO currently supports over 50 proposed hydrogen projects across B.C.
- These projects range from large-scale production facilities to hydrogen fueling stations and heavy-duty trucking pilots, and that represent billions in potential new investment.
- Through CEMPO, B.C. has helped to accelerate the development of hydrogen projects, including recent announcements for the Teralta's \$36 million hydrogen project in Prince George and HTEC's heavy duty hydrogen truck pilot project that represents an important first step in helping to decarbonize the commercial transportation sector in B.C.

Background/Status:

The former BC Hydrogen Office is housed within CEMPO and serves as the primary government liaison for hydrogen projects, with responsibility for working across government to help accelerate the development of hydrogen projects by helping companies navigate regulatory processes, access provincial programs, and reach final investment decision.

CEMPO is currently tracking over 50 hydrogen projects, including 20 commercial-scale projects, that have been proposed or are under construction. These projects represent a diverse range of production methods, scale, and end use (i.e., export or domestic).

A subset of these priority projects is highlighted below, including the largest, most complex projects, as well as those that have recently reached important milestones or made public announcements.

Appendix 1 provides a summary of 17 publicly announced hydrogen projects in B.C but not the full list of projects as many have not yet been publicly announced.

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Key updates for major projects are found below:

Fortescue – Project Coyote

- Fortescue is proposing to build a \$2.6B, 1 GW green hydrogen and ammonia production facility in Prince George using electricity from BC Hydro.
- Project Coyote is estimated to have production capacity of 140,000 tonnes per year of green hydrogen, and 700,000 tonnes per year of green ammonia, primarily for export through Prince Rupert to Asian markets.
- According to Fortescue, the project would create 800 to 1,000 jobs during the 2 to 3-year construction phase, and 200 direct jobs over the 25-year lifespan of the facility.
- The proposed project would be located within the Traditional Territory of the Lheidli-Tenneh First Nation (LTFN) at the Willow Cane Industrial Park, in Prince George, B.C.
- Project Coyote commenced its provincial environmental assessment process in September 2023 with the acceptance of an initial project description.

Tse'khene Energy Transmission Hub (TETH) - Straddle Plant and Hydrogen Facility

- The McLeod Lake Indian Band (MLIB) and the Province of British Columbia have signed a memorandum of understanding that strengthens their relationship and lays the foundation for a proposed Tse'khene energy transition hub, supporting economic reconciliation and development for the region through the production of low-carbon energy.
- McLeod Lake Indian Band (MLIB), and Mitsubishi Power Americas are proposing a \$7B hydrogen and ammonia production facility on Kerry Lake Indian Reserve #9 near Prince George.
- The TETH hydrogen production facility aims to produce green and blue hydrogen and ammonia for domestic use and export to Asia via Prince Rupert.
- MLIB and AltaGas are also proposing to build a straddle plant that would reduce carbon emissions by extracting high-value natural gas liquids that would otherwise be burned as by-product in the gas distribution system.

Hydrogen Technology Energy Corporation (HTEC)

CEMPO is supporting several projects that HTEC is developing across the full hydrogen value chain including:

- HTEC – ERCO: 15 tonnes per day byproduct hydrogen capture and liquefaction project in North Vancouver for use in HTEC fueling stations.
- HTEC – Ports Project: Heavy-duty hydrogen fueling station and demonstration of four fuel-cell electric yard trucks, and two Class 8 drayage trucks.
- HTEC – Pilot: With \$16.5 million in funding from the Province's Innovative Clean Energy Fund, HTEC will procure six different heavy-duty fuel-cell trucks and

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complete upgrades to a hydrogen-fueling station in Tsawwassen and a maintenance facility in Abbotsford.

- HTEC – Harmac: HTEC's project will operate a renewable hydrogen production facility at the Harmac Pacific Pulp Mill, producing clean hydrogen by electrolysis. With a \$10-million contribution through the Innovation in Forest Industry Transformation program, this hydrogen will be used as clean fuel for transportation and heating to decarbonize mill operations.
- HTEC – Trapp Ave: A 1 tonne per day electrolytic hydrogen production facility in Burnaby to support HTEC fueling stations.

Teralta Hydrogen Project

- On January 16, 2024, Teralta Hydrogen Solutions (Teralta) announced a proposed partnership with Chemtrade Logistics Inc. (Chemtrade), Canfor, and FortisBC (Fortis) to develop a \$36 million project in Prince George.
- Premier David Eby; Lheidli T'enneh First Nation Chief, Dolleen Logan; and Prince George Mayor, Simon Yu spoke at the announcement with project partners.
- The Teralta-led project will capture by-product hydrogen from Chemtrade's sodium chlorate production facility to displace an estimated 500,000 gigajoules, or 25%, of the natural gas used in Canfor's pulp mill operations, located adjacently.

Hydra Energy Corporation Project

- Hydra Energy Canada Corporation, a Delta-based company, offers commercial fleet operators the ability to reduce emissions by converting existing semi-trucks with a hydrogen-diesel co-combustion system (with no up-front investment) in exchange for long-term fuel contracts.
- In September 2023, Hydra announced that it broke ground on a green hydrogen production facility and large-scale hydrogen refueling station in Prince George, BC.
- Hydra's proposed Prince George refueling station and hydrogen production will produce 3,250 kilograms of hydrogen per day and can refuel up to 24 converted trucks each hour across four bays.
- The station's low-carbon hydrogen is being produced from two on-site, 5 megawatt electrolyzers with electricity expected to be provided by BC Hydro.
- Hydra's production and refueling infrastructure will support its heavy-duty fleet operator client's adoption of hydrogen as a decarbonization solution.

Advice/Recommendations; Business Information

Business Information; Intergovernmental Communications

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Business Information; Intergovernmental Communications

HTEC H2 Gateway

- HTEC is developing a \$600M H2 Gateway hydrogen project in B.C. that, when complete in 2026, will deploy 100 heavy-duty hydrogen fuel cell trucks, 16 hydrogen fuelling stations, three hydrogen production facilities, and one hydrogen liquefaction plant to enable the transportation sector's transition to a low carbon future.
- The Province's \$16.5 million in funding for HTEC's heavy duty truck pilot project, which was announced in November 2023, represents an important first step towards building out the H2 Gateway.

Business Information; Intergovernmental Communications

Attachments: Appendix 1 – List of B.C. Hydrogen Projects

Cross Reference: BC Hydrogen Strategy

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

Nathaniel Amman-Blake	Assistant Deputy Minister	Energy Resources Division	250 889-1990
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Proposed Hydrogen Projects in British Columbia

The Clean Energy and Major Projects (CEMPO) is tracking over 50 hydrogen Projects, including 20 that are commercial scale. **Not all of these projects are public.**

The table below outlines 17 publicly announced proposed hydrogen projects in British Columbia. Any questions or inquiries about the projects, or investing in British Columbia's hydrogen economy, should be directed to the BC Clean Energy and Major Projects Office (CEMPO) at CEMPO@gov.bc.ca.

Project Name	Primary Proponent(s)	Region (Location)	Project Type	Hydrogen Production	Other Production	Capital Cost	Description of Proposed Project	Links
Project Coyote	Fortescue Canada	Central BC (Prince George)	Production	140,000 tonnes per year	700,000 tonnes per year	Not public	Green hydrogen and ammonia production facility which will leverage 1,000MW of BC's hydroelectricity.	Fact Sheet
Tse'khene Energy Transmission Hub (TETH) - Straddle Plant	McLeod Lake Indian Band (MLIB)	Central BC (Kerry Lake Indian Reserve)	Production	N/A	N/A	\$2B	Straddle plant which would reduce carbon emissions by extracting high-value natural gas liquids which would otherwise be burned as by-product in the gas distribution system.	News Article (Prince George Citizen)
TETH - Hydrogen Facility	MLIB & Mitsubishi Power	Central BC (Kerry Lake Indian Reserve)	Other	Not public	Not public	\$5B	Hydrogen production facility which would help to reduce emissions in industries that are hard to decarbonize.	BC Gov News Release
Tumbler Ridge Methanol Facility	Renewable Hydrogen Canada	Northeast BC (Tumbler Ridge)	Production	N/A	1.75 million tonnes per year (methanol)	Not public	Production facility for green methanol and low-carbon blue methanol near Tumbler Ridge for export from Prince Rupert to Asian markets.	Website

Berth 2 Beyond Carbon (B2BC)	Trigon Terminals	North Coast (Prince Rupert)	Export Facility	N/A	N/A	\$71M	Canada's first purpose-built infrastructure handling low-carbon energy exports, such as ammonia and hydrogen for fuel use.	New Release
HTEC - Trapp	HTEC	Lower Mainland	Production	1 tonnes per day	N/A	Not public	Hydrogen production and liquefaction facility to support HTEC fueling stations	News Release
HTEC - ERCO	HTEC	Lower Mainland	Production	15 tonnes per day	N/A	Not public	Byproduct hydrogen capture for use in HTEC fueling stations	News Release
HTEC - Ports	HTEC	Lower Mainland	End-use	N/A	N/A	Not public	Heavy-duty hydrogen fueling station and demonstration of four fuel-cell electric yard trucks, and two Class 8 drayage trucks that HTEC will lease to fleet operators.	News Release
HTEC - Pilot	HTEC	Lower Mainland	End-use	N/A	N/A	Not public	With \$16.5 million in funding from the Province for the pilot, HTEC will procure six different heavy-duty fuel-cell trucks and complete upgrades to a hydrogen-fuelling station in Tsawwassen and a maintenance facility in Abbotsford.	News Release
HTEC - Harmac	HTEC	Vancouver Island (Nanaimo)	Full value chain	N/A	N/A	Not public	HTEC's project will operate a renewable hydrogen production facility at the Harmac Pacific Pulp Mill, producing clean hydrogen by electrolysis. With a \$10-million contribution through the Innovation in Forest Industry Transformation program, this hydrogen will be used as clean fuel for transportation and heating and will help the mill decarbonize its operations.	News Release

Hydra	Hydra Energy	Central BC (Prince George)	Full value chain	3 tonnes per day	N/A	Not public	Hydrogen re-fueling station and hydrogen production facility, with capacity to produce 3,250 kilograms of hydrogen a day and can refuel as quickly as diesel and up to 24 Hydra-converted trucks each hour across four bays. The station's low-carbon hydrogen is being produced from two on-site, 5-megawatt electrolyzers.	News Release
Geazone Eco-courier	Geazone	Vancouver Island/Lower Mainland	End-use	N/A	N/A	Not public	With \$72,000 in rebates from the CleanBC Go Electric Hydrogen Fleet program, Geazone Eco-Courier has purchased nine Toyota Mirai FCEVs to expand its fleet to 20 Mirai and plans to continue expanding this fleet in the coming months.	News Release
Salish Elements	Salish Elements	BC-wide	Full value chain	9 tonnes per day	N/A	Not public	Indigenous-owned development company pursuing electrolytic hydrogen production in Lillooet, heavy-duty hydrogen commercial vehicle commercialization, and displacing diesel used for power generation in remote communities.	Community Presentation Website
Hazer-Fortis	Hazer/Fortis	Lower Mainland	Production	7 tonnes per day	N/A	Not public	Using an innovative methane pyrolysis technology for the first time in North America, the project would produce hydrogen while storing the carbon byproduct as solid synthetic graphite that can be sold on the open market for manufacturing or industrial use.	News Release

UBC Smart Hydrogen Energy District	University of British Columbia (UBC)	Lower Mainland	Full value chain	N/A	N/A	\$23M	A new \$23 million renewable energy hub will transform an entire city block at UBC into a smart energy district, including the province's first-ever hydrogen refuelling station for light- and heavy-duty vehicles. It will also include adding a solar array and intelligent charging infrastructure for electric vehicles.	News Release
Teralta	Teralta	Prince George (central BC)	Full value chain	12 tonnes per day	N/A	N/A	Clean hydrogen system will reduce natural gas use at Canfor's pulp mill by 25%. The system collects byproduct hydrogen from Chemtrade Logistics' sodium chlorate production facility, purifying and compressing it for use in Canfor's adjacent pulp mill.	New Release
Geothermal Hydrogen Project	Meager Creek Development Corp.	Lower Mainland (Meager Creek)	Production	Not public	N/A	Not public	Geothermal power is being utilized to produce green hydrogen for sale in the Lower Mainland.	Website

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: B.C. Hydrogen Strategy

Drafted/Revised: January 29, 2024

Issue: B.C. Hydrogen Strategy Implementation

Response:

- In 2021 British Columbia (B.C.) released its Hydrogen Strategy outlining government's actions to accelerate the development of B.C.'s hydrogen sector.
- Hydrogen is expected to play a key role in helping the Province achieve net-zero greenhouse gas emissions by 2050, as it is one of the only practical replacements for fossil fuels in the hardest-to-abate sectors and applications, including, transportation, natural gas, and industry.
- The strategy includes 63 actions to undertake over the short term (2020-2025), medium term (2025-2030) and long term (2030-beyond). B.C. has already delivered on several key actions since the strategies release, including:
 - partnering with the B.C. Center for Innovation and Clean Energy to publish the BC Hydrogen Regulatory Mapping Study;
 - providing support to the City of Prince George to develop a Central B.C. Hydrogen Hub;
 - expanding the B.C. Energy Regulator's mandate to include regulation of hydrogen, ammonia, and methanol production; and
 - standing up the Clean Energy and Major Projects Office to accelerate the development of hydrogen projects across B.C.

Background/Status:

- The Strategy builds upon B.C.'s globally recognized hydrogen and fuel cell leadership, and its abundant clean energy resources.
- The Strategy includes 63 policy actions that clarify how the Province will support and promote the production, use and export of hydrogen in B.C. over the next 10 years and beyond.
- B.C. has already delivered on several key actions since the strategies release, including:
 - partnering with the B.C. Center for Innovation and Clean Energy to publish the BC Hydrogen Regulatory Mapping Study;
 - providing support to the City of Prince George to develop a Central B.C. Hydrogen Hub;

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Minister Responsible: Josie Osborne

- supporting Indigenous Nations through partnerships such as the Indigenous Clean Energy Opportunities (ICEO);
- expanding the B.C. Energy Regulator's mandate to include regulation of hydrogen, ammonia, and methanol production;
- standing up the Clean Energy and Major Projects Office to accelerate the development of hydrogen projects across B.C;
- expanding the use of hydrogen in the transportation sector, including:
 - \$4 million to support the BC Hydrogen Ports Project that will use hydrogen and fuel cells in the shipping and transportation sectors
 - \$16.5 million in funding to support the deployment of hydrogen-powered heavy-duty trucks in the lower mainland.
- making a regulatory change to allow natural gas utilities to acquire hydrogen to replace fossil fuels, such as the recently announced Teralta's proposed project that will collect byproduct hydrogen from Chemtrade Logistics' sodium chlorate production facility, purifying and compressing it for use in Canfor's adjacent pulp mill.

B.C. Hydrogen Strategy Implementation, 2023/24:

- In 2023/24, B.C. collaborated with the Fraser Basin Council and City of Prince George to utilize the second year of Strategy implementation spending and progress priorities, including:
 - Developing hydrogen educational, marketing, and safety materials to inform the public;
 - Study the use of hydrogen in communities at the end of the electricity transmission line;
 - Complete a gap analysis to identify resources for hydrogen labour and skills development in B.C.; and,
 - Continue to develop hydrogen hubs alongside industry, interested stakeholders, regional governments, and Indigenous partners.
- B.C. is also committed to working with Indigenous Nations through partnerships such as the ICEO. This is an initiative fostering the collaboration between the First Nations Leadership Council, FNEMC, and EMLI. FNEMC has developed a B.C. First Nations Hydrogen Strategy to identify opportunities for First Nations to participate in the B.C. hydrogen sector. This work was developed using input from ICEO workshops.
- In September 2023, the BC Energy Regulator's role expanded to include the regulatory authority for the manufacturing, storage and distribution of hydrogen, methanol and ammonia.

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- In June 2022, Natural Resources Canada announced the first phase of the Regional Energy and Resource Tables (RERT) as part of a collaborative initiative focused on ensuring provinces and territories are prepared to seize the economic opportunities enabled by the global move towards a low carbon future.
 - EMLI is participating in the Clean Fuels Working Group, within the RERT, to identify key hydrogen projects with high strategic value that warrant Federal and Provincial support.
 - This includes a regulatory efficiency exercise to identify challenges and opportunities for improvements in regulatory coordination and efficiency in priority geographic areas and sectors through focused case studies.

B.C. Hydrogen Strategy Implementation, 2024/25 Priorities:

- In 2024/25, B.C. will utilize the final \$1M of Strategy implementation spending and continue to make progress on priorities that are key to growing B.C.'s hydrogen sector. These priorities include:
 - expanding support for the development of regional hydrogen hubs in strategically important regions (e.g. the North Coast, Lower Mainland, Northeast B.C., Interior B.C., Vancouver Island, and the Pacific Northwest including the Cascadia Corridor).
 - addressing policy barriers to development;
 - ensuring the necessary policy and efficient regulatory frameworks are in place to accelerate the development of hydrogen; and
 - engaging in community outreach, education, and engagement on the potential for hydrogen to support B.C.'s transition to a clean economy (in the regional hydrogen hubs identified above).
- Through the execution of Shared Cost Arrangements, EMLI will collaborate with project partners to achieve the priorities listed above. Project partners include City of Prince Rupert, Foresight, the Pacific Northwest Economic Region, and the Canadian Hydrogen and Fuel Cell Association.

Cross Reference:

- B.C. Hydrogen Projects
- BC Innovative Clean Energy (ICE) Fund
- DRIPA Action Plan/Indigenous Clean Energy Opportunities Process

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Energy and Mines Digital Trust

Drafted/Revised: February 16, 2024

Issue: Digital Innovation for B.C.'s Mining and Natural Gas Sectors

Response:

- In December 2023, Energy & Mines Digital Trust went live with the ability for EMLI's Chief Permitting Officer to issue proof of permit status to B.C. major mines in the form of digital credentials, increasing trust and efficiency in their business processes.
- Digital credentials are the digital equivalent of physical credentials, such as permits or driver's licenses. They enable users to share data online with trust, security, and efficiency.
- Through collective efforts with multiple project partners, B.C. major mines can also prove sustainability performance using digital credentials as a step towards differentiating their products in global markets. Partners include Teck Resources, HudBay, PwC, EnviroChem and the Mining Association of Canada.
- Since successfully achieving this milestone, the project is focussing on broad adoption and scaling, including exploring collaboration with the U.S. Customs Border Protection agency which is testing digital credentials for exchanging metals and natural gas supply chain data.

Background/Status:

- The demand for sustainably sourced critical minerals and natural gas is rising - meeting this need responsibly will create new jobs and support the clean energy transition. The global climate crisis is driving stricter sustainability regulation worldwide. These policies encourage responsible practices but don't prevent bad actors from reporting misleading information.
- Energy & Mines Digital Trust (EMDT) seeks to address this problem, providing digital tools that empower mines and natural gas operators to share authoritative data worldwide in the form of digital credentials.
- Similar to e-mail being the electronic version of physical mail, digital credentials are the electronic equivalent to physical credentials, with greatly improved security. EMDT partners leverage a collaborative, open-source approach to enable broader technical compatibility and accelerated adoption of digital trust technology.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- To date, EMDT has focused on foundational credentials that prove provenance and sustainability performance of B.C. major mines. The next phase of work will focus on broad adoption so that these credentials can be shared by all B.C. major mines with multiple audiences, such as potential investors and purchasers. The true value of digital trust technologies is seen at scale when diverse organizations share information through a digital trust ecosystem.
- Long-term success of the project would see EMLI as one of many ecosystem participants, with B.C. mining and natural gas operators enabled to differentiate themselves in markets that favour sustainably sourced products.
- To scale adoption, EMDT is focusing on the use of digital credentials to enable cross-border trade of responsibly sourced goods and supply chain transparency. EMDT is collaborating with the United States Customs and Border Protection (CBP) agency, which is updating their trade single window using digital credentials for exchanging supply chain data for steel and natural gas. The CBP sees value in receiving B.C. government-issued credentials, which anchors trust in the data being shared. For B.C. producers, this is an opportunity to proactively influence CBP's adoption of technology to meet their increasingly stringent supply chain transparency rules.
- EMDT is leveraging international interest in the project to build support and encourage broad adoption. At the invitation of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), EMLI is leading a joint project on Critical Raw Materials (CRM) supply chain traceability and sustainability. Project deliverables are being tested along 3 value chains: copper from B.C., lithium from Australia, and cobalt from DRC. Through these efforts, B.C.'s approach to digital trust technology is being demonstrated as a means of sharing critical ESG data along CRM supply chains.
- EMDT was funded through the Strategic Investment Fund, established as part of the Province's Telecommunications Deal with TELUS. The Province's Telecommunications Deal with TELUS, including the Strategic Investment Fund, is managed by the Ministry of Citizens' Services.
- Questions regarding SIF funding can be directed to the Ministry of Citizens' Services

Cross Reference: Not applicable

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Petroleum and Natural Gas Sector Overview

Drafted/Revised: February 12, 2024

Issue: British Columbia's natural gas industry plays a key role both for the province's economy and as a reliable and affordable source of energy

Response:

- British Columbia is Canada's second largest producer of natural gas and plays a key role in meeting demand domestically, in neighbouring jurisdictions, and across Canada.
- British Columbia's natural gas industry plays a significant role in British Columbia's economy, regularly investing between \$5 and \$9 billion annually.

Background/Status:

- British Columbia produces crude oil, natural gas, natural gas liquids (e.g. ethane, propane, butane, etc.) and condensate.
- British Columbia is Canada's second largest producer of natural gas and if viewed independently is the world's thirteenth largest natural gas producing jurisdiction ahead of Egypt and the United Arab Emirates.
- In 2023, BC produced 6.7 billion cubic feet per day (Bcf/d) of marketable natural gas. About 10 per cent of production is consumed domestically, with the remainder exported through pipelines to other regions of Canada or to the United States.
- Natural gas is produced in the northeastern part of British Columbia, predominantly from the Montney Formation. Development of tight gas in the Montney Formation is the primary factor behind British Columbia's gas production more than doubling from 2010, when production averaged 2.9 Bcf/d.
- Provincial revenues (royalties along with bonus bids, rents on drilling rights and leases) from oil and natural gas development totaled \$2.35 billion in 2022/23. Due to lower expected prices, revenues are currently projected to decrease in 2023/24 and remain at a lower level in 2024/25.
- Several pipelines transport natural gas produced in British Columbia including Enbridge's Westcoast Pipeline (also referred to as the Enbridge BC Pipeline) and pipelines operated by FortisBC and Pacific Northern Gas (PNG). FortisBC and PNG supply natural gas to most of the domestic, commercial, and industrial

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Minister Responsible: Josie Osborne

users in the province and are regulated by the British Columbia Utilities Commission. The Coastal GasLink pipeline, which will supply gas to LNG Canada, achieved mechanical completion in late 2023.

- FortisBC operates two smaller scale LNG facilities: Tilbury LNG, on Tilbury Island near Vancouver, and Mt. Hayes, near Ladysmith on Vancouver Island.
- Nearly 30 per cent of the energy used in British Columbia comes from natural gas, according to the Canada Energy Regulator (CER). FortisBC supplies natural gas to about 1.2 million customers (households & businesses), with PNG supplying another 39,100 in northwest BC. The FortisBC system supports British Columbia's energy security with the capability of providing nearly twice the energy than BC Hydro to meet peak energy demand during cold days.
- According to Statistics Canada, British Columbia's oil and natural gas sector directly employed over 52,000 individuals in 2022. Many of these (over 44,000) are classified as oil and gas engineering construction and are primarily engaged in the construction of oil and gas lines, mains, refineries, and storage tanks.
- In 2022, the oil and gas sector contributed \$14.1 Billion (2017 dollars) directly to British Columbia's gross domestic product. Companies in British Columbia's oil and gas sector regularly invest between \$5 and \$9 billion in new developments (capital expenditures) and on-going operations (operating expenditures) in the province, according to an annual survey conducted by Statistics Canada.
- According to the *Provincial Inventory of Greenhouse Gas Emissions*, emissions from British Columbia's oil and gas sector totaled 11.8 million tonnes in 2021 which is nearly 1.7 million tonnes, or 13 per cent, lower than emissions in 2007 (despite more than double the production). In the *CleanBC Roadmap to 2030*, the Province made a commitment to reduce emissions from oil and gas by 33-38 per cent by 2030, compared to 2007 levels.
- Other climate actions designed to reduce emissions in the oil and gas sector include British Columbia's Output-Based Pricing System, which takes effect April 2024, and the new Energy Action Framework that will implement a regulatory emissions cap for the oil and gas industry and require all proposed LNG facilities to achieve net zero emissions by 2030.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Petroleum and Natural Gas Tenuring and Disposition

Revised: February 6, 2024

Issue: Petroleum and natural gas tenure issuance and management of Crown-owned subsurface resources.

Response:

- The Government owns most of the petroleum and natural gas (PNG) resources in British Columbia (BC) and grants rights for their use through issuance of PNG tenure under the *Petroleum and Natural Gas Act*.
- There are two types of PNG tenure that are routinely issued by the Ministry of Energy, Mines and Low Carbon Innovation (Ministry): leases and drilling licences.
- Industry requests for PNG tenure is acquired through a competitive public tender process (Crown sales) held monthly.
- The Ministry paused Crown sales in response to *Yahey v BC* in July 2021.

Background/Status:

- The Ministry is responsible for issuing and managing PNG tenures on behalf of the province, ensuring that Crown-owned PNG resources are managed in a responsible and sustainable manner to benefit all British Columbians. Additional information regarding the processes in disposing and managing PNG tenure can be found in Appendix 1.
- A PNG tenure grants the right to use Crown-owned subsurface resources under terms and conditions.
- Once PNG tenure has been issued through a Crown sale process, the tenure holder must apply to the BC Energy Regulator to conduct surface related activities that support the exploration and development to access the PNG tenure.
- The Ministry paused the Crown sale process in July 2021, as a result of *Yahey v BC*.
- In January 2023, negotiated the Blueberry River First Nations Implementation Agreement with Blueberry River First Nations and consensus agreements with the seven other Treaty 8 First Nations.
- The Crown sale process remains paused while the Ministry takes steps to engage Treaty 8 First Nations to align an updated tenuring process with negotiated commitments.

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Minister Responsible: Josie Osborne

Types of Tenure:

- There are two types of PNG tenure that are routinely issued by the Ministry under the *Petroleum and Natural Gas Act*. They are:
 - **Drilling licence** - a drilling licence provides the exclusive right to explore for PNG resources by drilling wells. Drilling licenses are acquired at Crown dispositions and are issued under terms of three, four or five years depending on geographic location.
 - **Lease** - a lease provides the exclusive right to produce PNG resources and a right to dispose of or store natural gas, water and other substances associated with oil and gas activities. They are acquired at Crown dispositions or selected from drilling licenses. Lease terms are five or ten years, depending on geographic location.
- Each type of tenure grants a specific set of rights and sets out the obligations of the tenure holder and the circumstances under which the tenure can be extended or converted to another type of tenure.
- Occasionally PNG tenure is issued by the Minister under special terms and for the price approved by the Lieutenant Governor in Council. This process is sometimes used for unique situations to support First Nations initiatives or company specific interests where different tenure terms are needed or where a competitive public tender process is not appropriate.

Tenure by the Numbers

- As of February 6, 2024, there are 11,200 leases and 68 drilling licenses, covering approximately 5.8 million hectares.
- Over the past ten years the amount of tenured land has been steadily decreasing. This is likely due to oil and gas companies surrendering lands to seek more viable economic resource plays elsewhere and reducing operating costs during times of uncertainty as a result of litigation (e.g., *Yahey v BC*).
- Most of the province's PNG resources occur in the Western Canada Sedimentary Basin that underlies northeast BC. Natural gas, not oil, is the province's predominant form of hydrocarbon resource being produced.

Cross Reference: Petroleum and Natural Gas Tenure Revenue, Petroleum and Natural Gas Direct Tenure Awards.

Contact:

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

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2024/25 Estimates Note

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Petroleum and Natural Gas Tenure Revenue

Revised: February 12, 2024

Issue: Petroleum and natural gas tenure revenue update and forecast.

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (Ministry) manages subsurface petroleum and natural gas (PNG) tenures and the associated revenue.
- PNG tenure revenue is in the form of rental payments and administrative fees issued on existing tenure, including bonus bids, i.e., what industry pays at a Crown PNG tenure sale over and above rentals when initially acquiring PNG tenure.
- All PNG tenure revenue is accounted for in the Public Accounts.
- The Ministry paused the Crown sale process in July 2021 as a result of the June 2021 B.C. Supreme Court Decision in *Yahey v. BC* (Yahey).

Background/Status:

- On an annual basis, the Ministry publishes the number of hectares of PNG tenure disposed, total bonus bids received and average tenure price on a per hectare basis (Appendix 1, Table 1).
- Bonus bid revenue generated from disposed tenure via Crown sales is deferred over time as it allows for better financial planning and streamlines the Public Accounts by spreading the revenue across several years to avoid spikes in the Province's revenue stream.
- A comprehensive analysis is conducted by the Auditor Generals' Office (OAG) and the Office of the Comptroller General (OCG) at the end of each fiscal year to determine the bonus bid deferral period. The deferral period was changed from nine years to ten years effective 2018/19 and remains the same today.
- The Public Accounts reports Crown sale tenure bonus and rental revenue on a deferred basis for both actual revenues collected and forecasted. However, due to changes in revenue reporting standards effective July 2023, the Province will no longer report Crown sale tenure bonus on a deferred basis going forward.
- On a cash basis, bonus bid actual revenues in fiscal 2023/24 was \$0 (Appendix 1, Table 1), however, on a deferral basis the result is approximately \$40 million (Appendix 1, Table 2). Fees and rentals received in fiscal 2023/24 totaled approximately \$44 million (Appendix 1, Table 2).

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
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- In consideration of the June 2021 Yahey decision, the Ministry paused Crown PNG tenure sales in July 2021 until further notice. Resumption of Crown PNG tenure sales is expected to occur in fiscal 2024/25 to align with Provincial commitments in signed agreements with Blueberry River First Nations and seven other Treaty 8 First Nations.

Cross Reference: Petroleum and Nature Gas Tenuring and Disposition

Attachments: Appendix 1 - Petroleum and Natural Gas Tenure Revenue

Contact:

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Appendix 1 – Petroleum and Natural Gas Tenure Revenue

Table 1: Bonus bid revenue for each fiscal year from 1978 to 2024

Fiscal Year	Hectares Disposed	Total Tender Bonus	Average Price (\$/ha)
1978-1979	525,919	\$136,353,878.50	\$259.27
1979-1980	506,006	\$206,474,454.69	\$408.05
1980-1981	313,924	\$129,955,601.38	\$413.97
1981-1982	623,760	\$53,982,370.63	\$86.54
1982-1983	151,970	\$17,025,074.03	\$112.03
1983-1984	122,202	\$33,292,304.42	\$272.44
1984-1985	273,409	\$59,583,349.35	\$217.93
1985-1986	386,785	\$89,170,448.47	\$230.54
1986-1987	210,250	\$25,896,026.49	\$123.17
1987-1988	315,834	\$59,420,094.84	\$188.14
1988-1989	524,777	\$112,302,592.61	\$214.00
1989-1990	428,227	\$86,701,338.77	\$202.47
1990-1991	494,980	\$121,214,108.92	\$244.89
1991-1992	346,036	\$55,022,701.42	\$159.01
1992-1993	202,485	\$35,322,638.02	\$174.45
1993-1994	680,241	\$184,786,092.78	\$271.65
1994-1995	678,490	\$187,108,587.13	\$275.77
1995-1996	737,934	\$133,718,316.06	\$181.21
1996-1997	617,281	\$170,621,056.00	\$276.41
1997-1998	683,028	\$175,513,891.51	\$256.96
1998-1999	344,363	\$67,265,539.82	\$195.33
1999-2000	809,775	\$206,928,360.11	\$255.54
2000-2001	907,335	\$418,006,044.29	\$460.70
2001-2002	686,413	\$312,170,642.18	\$454.79
2002-2003	828,144	\$279,945,821.89	\$338.04
2003-2004	705,519	\$625,662,664.63	\$886.81
2004-2005	552,151	\$280,184,531.50	\$507.44
2005-2006	605,984	\$555,643,094.49	\$916.93
2006-2007	616,740	\$607,070,149.31	\$984.32
2007-2008	655,897	\$1,222,303,262.97	\$1,863.56
2008-2009	653,509	\$2,424,577,402.13	\$3,710.09
2009-2010	379,077	\$896,436,856.41	\$2,364.79
2010-2011	376,431	\$817,954,200.86	\$2,172.92
2011-2012	216,768	\$286,611,897.52	\$1,322.21
2012-2013	104,281	\$115,240,077.25	\$1,105.09
2013-2014	118,588	\$220,535,910.71	\$1,859.68
2014-2015	131,597	\$334,804,215.11	\$2,544.16
2015-2016	58,735	\$15,930,804.57	\$271.23
2016-2017	112,107	\$61,229,320.02	\$546.17
2017-2018	103,292	\$140,930,898.56	\$1,364.39
2018-2019	25,786	\$50,331,994.69	\$1,951.91
2019-2020	20,330	\$12,779,852.54	\$628.62
2020-2021	269	\$807.00	\$3.00
2021-2022	5729	\$3,782,616.79	\$660.26
2022-2023	0	\$0.00	\$0.00
2023-2024	0	\$0.00	\$0.00
As of February 9, 2024			
5 yr. avg. (2018/19 – 2023/24)	8,686	\$11,149,211.84	\$540.63
10 yr. avg. (2013/14 – 2023/24)	52,403	\$76,393,310.91	\$893.58
15 yr. avg. (2008/09 – 2023/24)	144,156	\$336,321,678.39	\$1,281.53
20 yr. avg. (2003/04 – 2023/24)	259,180	\$412,952,883.67	\$1,222.08

Table 2: PNG tenure revenue forecast.

PNG Tenure Revenue	Actual	2023	Current	Advice/Recommendations; Government Financial Information
	(\$ million)	Budget Forecast (\$ million)	Forecast (\$ million)	
	23/24	23/24	24/25	
Bonus Bids (cash basis)	-	-	4	
Bonus Bids (deferred basis)	40	-	-	
Fees and Rentals	44	38	36	

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Direct Award of Petroleum and Natural Gas Tenure

Drafted/Revised: February 11, 2024

Issue: Direct award of petroleum and natural gas tenure to Treaty 8 First Nations

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (Ministry) can issue petroleum and natural gas (PNG) tenure through a monthly Crown sale process or by an alternative process known as a direct award.
- Signed agreements between the Province and Treaty 8 First Nations commit the parties to work collaboratively to determine options for direct awarding PNG tenure to Treaty 8 First Nations.
- The Ministry is currently working with several Treaty 8 First Nations to advance government commitments to direct award PNG tenure.

Background/Status:

- Under s.72 of the *Petroleum and Natural Gas Act* (PNGA) and subject to the approval of the Lieutenant Governor in Council, the Ministry can issue PNG tenure by an alternate disposition process known as a direct award.
- This method is used sometimes to address unique situations that support First Nations initiatives or company-specific interests where a different price and terms are needed, or where a competitive public tender process under s.71 of the PNGA is not appropriate.
- Under agreements with Treaty 8 First Nations, the Province committed to facilitate Treaty 8 First Nations meaningful involvement and partnership in oil and gas development through the direct award of PNG tenure at no cost, i.e., \$0.
- The direct award of PNG tenure to Treaty 8 First Nations allows government to advance reconciliation efforts, provides opportunities for Treaty 8 First Nations to build the necessary business-to-business relationships with private sector companies to develop the tenure, and provide longer-term economic benefits for Treaty 8 communities.
- As a tenure holder, Treaty 8 First Nations will have the same rights and responsibilities afforded to other oil and gas tenure holders, i.e., paying rent and if the tenure is developed, royalties to the Province.
- The Ministry is currently working with Blueberry River First Nations, Halfway River First Nation and Saulteau First Nations to direct award PNG tenure. Other

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Treaty 8 First Nations have also expressed an interest to work with the Ministry to advance direct ward PNG tenure.

Attachments: None

Cross Reference: None

Contact:

Nathaniel Amann- Blake	Assistant Deputy Minister	Energy Resource Division	250 889-1990
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2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Petroleum and Natural Gas Royalty Revenue

Drafted/Revised: February 12, 2024

Issue: Overview of B.C.'s annual royalty revenues from petroleum and natural gas.

Response:

- The Province collects royalties on oil and gas production. These royalties support British Columbia's economic prosperity while ensuring that producers receive a fair return on their investments.
- The Province announced a new oil and gas royalty framework in May 2022 that balances B.C.'s goals for economic development, a fair return on natural resources and environmental protection. This new framework will take effect September 1, 2024.
- Royalty rates in B.C. vary from month to month, and depend on many factors including prices, well production, well vintage, the fluid produced, well classification, cost allowances and more.
- Even though the production of natural gas has continued to increase, the decline in Canadian natural gas prices throughout 2023/24 has resulted in a decrease in the overall royalties collected by the Province.

Background/Status:

- The existing royalty system has been in place for more than 30 years. The way natural gas is produced has changed significantly over this time period, as have market conditions, drilling technology and costs, and global climate change concerns.
- Administration of the royalty system is currently shared among three agencies: the Ministries of Energy, Mines, and Low Carbon Innovation (EMLI) and Finance (FIN), and the BC Energy Regulator (BCER). EMLI is the lead in setting royalty policy. FIN operationalizes the policy set by EMLI, and BCER is the regulator and provides volumetric data for royalty billing.
- Royalty payments are calculated and paid each month. Numerous stages are needed to calculate the royalty payable to the government, with component parts reflecting the primary product determination, royalty rate structure for gross royalty rates, and eligibility for allowances, credits and deductions based on well classification. Combined, these stages determine the effective net royalty rate and amount payable.

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Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Royalties are payable across products — natural gas (methane), natural gas liquids (ethane, propane, butane, and pentane), gas condensates, and oil.
- Royalties are price sensitive.
- Natural gas royalty revenues (including sulphur) for 2023/24 are estimated at \$684 million, down from \$2,267 million in 2022/23.
- Realized prices and price forecasts for petroleum and natural gas commodities have declined relative to levels seen in 2022/23.
- Lower natural gas price forecasts reflect both a much warmer-than-average winter in North America, which has reduced demand for heating, and high natural gas production in both Canada and the U.S. These two factors have increased natural gas storage inventories in both countries to well above the five-year average (2018–2022).
- Price forecasts are based on private sector forecasts for the forecast period. The analysis also considers natural gas spot prices, futures prices, and North American natural gas storage levels. To maintain an appropriate degree of prudence, price forecasts are in the 20th percentile of a compilation of private sector forecasts for 2023/24 and 2024/25, which are lower than averages of the private sector forecasts.
- During the last decade because of relatively low North American gas prices and a high oil to natural gas price ratio, natural gas producers have focused their development on the liquids-rich shale gas plays such as the Marcellus in the US Northeast, Eagle Ford in Texas and Montney in B.C. and Alberta.
- Gross royalties from Natural Gas Liquids (NGLs) are forecast to account for 69% of total natural gas and NGL gross royalties for 2023/24 and between 66% and 78% each year for the five-year revenue forecast starting in 2024/25.

Attachments: Appendix 1 – PNG Royalty Revenue
Appendix 2 – Deep Well and Other Outstanding Credits

Cross Reference: Implementation of the New Royalty Framework

Contact:

Nathaniel Amann-Blake Assistant Energy Resources Division 250 889-1990
Deputy
Minister

Appendix 1 – Petroleum and Natural Gas Royalty Revenues

	Royalties (\$millions)*	Tender Bonus (\$millions)*
2007/08	1,132	1,222
2008/09	1,314	2,425
2009/10	406	896
2010/11	312	818
2011/12	339	287
2012/13	169	115
2013/14	445	221
2014/15	493	335
2015/16	139	16
2016/17	152	61
2017/18	161	141
2018/19	199	50
2019/20	118	13
2020/21	196	0
2021/22	920	4
2022/23	2,206	0
2023/24†	730	0

Source: BC Budget and Fiscal Plans from 2013, 2018 and 2023.

* Data are in fiscal years, not calendar years.

† Represent forecasted values.

Appendix 2 – Deep Well and Other Outstanding Credits

Year	Deep Well Balance (\$ Billions) (Measured at Year-End)
2018	\$2.746
2019	\$2.984
2020	\$3.293
2021	\$3.139
2022	\$2.560
2023*	\$2.310 (Nov 2023)

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Implementation of BC's New Oil and Gas Royalty Framework

Drafted/Revised: January 29, 2024

Issue: Implementation Timelines

Response:

- The new royalty framework, announced in May 2022, has already eliminated several royalty incentive programs including the Deep Well Royalty Program.
- Transition to the new royalty framework began September 1, 2022 and is being phased in over two years to give industry enough time to upgrade their systems.
- Work is underway to finalize policies, systems development and bring forward regulations to implement the new system.
- The new system will eliminate the largest fossil fuel subsidy, the Deep Well Royalty Program by September 1, 2026.
- The transition includes developing a new program that aims to help heal the land and reduce emissions with unused deep well deductions.

Background/Status:

- When oil and natural gas resources are produced in B.C., the Province charges either a royalty or a freehold production tax (collectively called the royalty system) on behalf of British Columbians.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is responsible for oil and natural gas royalty policy while Ministry of Finance (FIN) administers the collection of revenues under the royalty system.
- A comprehensive review of B.C.'s legacy petroleum and natural gas royalty system was launched by EMLI in 2021 the first in 30 years.
- On May 19, 2022, the Province announced a new oil and gas royalty system that is a revenue minus cost (RMC) framework with price sensitive royalty rates.
- A transition to the new framework began September 1, 2022, with an initial set of regulation amendments that eliminated several royalty incentive programs identified as inefficient and a transition rate of 5% for new gas wells to provide a bridge to the new system.

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Implementing the new royalty system

- The New Royalty Framework will require either an amendment to existing *Petroleum and Natural Gas Royalty and Freehold Production Tax Regulation*, or to repeal and replace that Regulation with a new one.
- Collaboration between EMLI and FIN continues to make the administrative changes and information technology enhancements necessary to ensure that the new royalty systems as well as the proposed Healing the Land and Emissions Reduction (HLER) program are in place on implementation.
- EMLI continues to engage with First Nations on the development on the proposed policies to address concerns and incorporate their feedback into the design.
- Additional engagement with industry will take place to ensure industry has time to update their systems and become familiar with the new requirements prior to implementation.

Healing the Land and Emissions Reduction

- Implementation of the Healing the Land and Emissions Reduction program HLER is occurring on a longer timeline than originally anticipated to ensure that the program aligns with interests of First Nations as well as the Province.
- As announced in May 2022, producers will have until September 1, 2026, to move their deductions to the HLER or they will expire.
- The HLER program will support work that goes above and beyond regulatory requirements to reduce emissions or cumulative impacts on the land base.

Royalty Rates

- As announced in May 2022, the new royalty system will use price-sensitive royalty rates with a goal of achieving a return of 50% of profits on the public resource after costs are accounted for.

Cabinet Confidences

Contact:

Nathaniel Amann-Blake	Assistant Deputy Minister	Energy Resource Division	250 889-1990
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: LNG Projects: Status and Facts

Drafted: February 7, 2024

Issue: Liquefied Natural Gas (LNG) projects at various stages of development

Response:

- British Columbia values the energy industry and supports those who are partnering with First Nations and respecting our province's environmental commitments.
- LNG Canada is now around 90 per cent complete. Woodfibre LNG construction is underway. Cedar LNG, the largest First Nations majority-owned infrastructure project in Canada, continues to show progress and a final investment decision is pending. Ksi Lisims, which is a partnership with the Nisga'a Nation, is also working through regulatory processes.
- The provincial government is taking steps to ensure projects align with B.C.'s five conditions for LNG development and the New Energy Action Framework.
- British Columbia is pursuing energy opportunities that make sense for our future. That means all proposed LNG facilities in or entering the environmental assessment process must pass an emissions test with a credible net zero 2030 plan.

Background/Status:

- There are two LNG projects under construction in British Columbia: the LNG Canada project in Kitimat (Haisla territory) and the Woodfibre LNG project in the Squamish area. These two projects are supported by the Coastal Gaslink Pipeline (now mechanically complete) and the Eagle Mountain Pipeline (under construction), respectively.
- LNG Canada is now engaging with government on Phase 2 of their project. It has approvals, but the investors have not yet decided to proceed.
- The Tilbury LNG facility, owned and operated by FortisBC, has been operating in the province since 1971. An expansion to the facility – a new liquefaction train and storage tank – was brought into service in 2018. Additional infrastructure is planned, including a second phase of the expansion (Phase 2) which is in the environmental assessment (EA) process.
- On March 14, 2023, British Columbia announced a New Energy Action Framework. As part of this framework, all proposed LNG facilities in or entering the EA process must pass an emissions test with a credible plan to be net zero by 2030.

2024/25 Estimates Note

Advice to the Minister

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- Cedar LNG, a proposed floating liquefied natural gas facility in Kitimat, within the traditional territory of the Haisla Nation, received an environmental assessment certificate (EAC) on March 14, 2023. A final investment decision for the project is pending.
- The Ksi Lisims LNG project is in the EA process. As a result, it is subject to the requirements of the New Energy Action Framework.
- In 2018, the provincial government announced four conditions for LNG investment to ensure long-term benefits for British Columbians while maintaining strong environmental protections. Later, in 2022, British Columbia developed a fifth condition to ensure companies mitigate impacts and enhance benefits for local communities.
- In all, the five conditions are in place to ensure LNG projects:
 - Create jobs and training opportunities for British Columbians.
 - Provide a fair return for the province's resources.
 - Respect and partner with First Nations.
 - Protect British Columbia's air, water and land.
 - Mitigate community impacts and enhance community benefits.

Attachments:

Appendix 1 – LNG Canada and Coastal GasLink Overview

Appendix 2 – Woodfibre LNG and Eagle Mountain Pipeline Overview

Appendix 3 – Cedar LNG Overview

Appendix 4 – Ksi Lisims LNG and Prince Rupert Gas Transmission Line Overview

Appendix 5 – Tilbury LNG Overview

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: LNG Canada and Coastal GasLink Overview

Drafted: February 7, 2024

Issue: Status of the LNG Canada export facility and connecting Coastal GasLink pipeline

Response:

- The LNG Canada export facility is around 90% complete and it will begin commissioning activities soon. The project remains on schedule to deliver its first shipments by mid-decade.
- The Coastal GasLink pipeline project is finished construction. It is ready to support LNG Canada's in-service target date.
- LNG Canada is evaluating a Phase 2 expansion which would double the export capacity of the project. Any advancement of Phase 2 would result in more jobs and economic benefits.

Background/Status:

- The LNG Canada project is a joint venture comprised of Shell Canada (40%), PETRONAS (25%), PetroChina (15%), Mitsubishi Corporation (15%) and KOGAS (5%).
- Construction on LNG Canada's LNG export facility is around 90% complete, with two liquefaction trains that will produce 14 million tonnes per annum (MTPA). The facility will begin commissioning activities within the second quarter (April-June) of 2024. The project remains on schedule to deliver its first shipments by mid-decade.
- LNG Canada reached peak construction in fall 2023, with more than 8,000 Canadians employed at the export facility in Kitimat.
- LNG Canada requires the Coastal GasLink (CGL) pipeline as it will supply natural gas for the export facility. The CGL pipeline is being developed by TC Energy and 65% equity holders, KKR and the Alberta Investment Management Corporation¹.
- Construction activities on the CGL project are complete. CGL's workforce exceeded 4,000 people throughout 2023. A portion of this workforce will return in Spring 2024 to finish reclamation work.

¹ Option agreements to purchase a 10 percent equity stake in the Coastal GasLink Pipeline Limited Partnership have been formally signed by 17 of 20 First Nations communities.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- To date, work on LNG Canada has resulted in over \$4.2 billion in contracts and procurement to business in British Columbia. Of that amount, more than \$3.3 billion has been awarded to First Nations-owned businesses and local area businesses. For CGL, more than \$1.8 billion in contracts have been awarded to Indigenous and local businesses.

Advice/Recommendations: Government Financial Information

- LNG Canada and its joint venture partners continue to explore and assess opportunities for Phase 2 of the facility – an expansion that would include two more trains at the Kitimat site and increase the total production capacity to 28 MTPA.
- Any FID by LNG Canada for Phase 2 triggers the need to increase capacity of the CGL project with an additional six compressor stations along the pipeline route.
- An investment decision about Phase 2 has not occurred. Discussions between the provincial government and LNG Canada are underway to consider Phase 2 in relation to British Columbia's New Energy Framework, climate commitments, economic opportunities, and benefits for First Nations and local communities.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Woodfibre LNG Facility and Eagle Mountain Pipeline Overview

Drafted: February 7, 2023

Issue: Status of Woodfibre LNG and Eagle Mountain Pipeline

Response:

- Construction activities on the Woodfibre LNG facility and connecting Eagle Mountain Pipeline are underway.
- Construction activities are leading to regional benefits through First Nations benefit agreements and contracting opportunities for local proponents.
- The Woodfibre LNG project's capital investment is estimated to be \$5.1 billion, inclusive of pipeline and hundreds of jobs.
- Government is working closely with First Nations, local communities, and industry to ensure benefits are realized and that proponents continue to meet the conditions in their Environmental Assessment Certificate and permits.

Background/Status:

- The Woodfibre LNG facility is owned in partnership by Pacific Energy LTD (70%) and Enbridge Inc. (30%).
- Woodfibre LNG is a proposed 2.1 million tonnes per annum (MTPA) facility, which will utilize electrically driven liquefied natural gas (LNG) trains, situated on privately-owned land on the Howe Sound. The LNG supply is nearly fully committed to commercial offtake agreements.
- In support of the Woodfibre LNG facility, FortisBC is constructing a 47-kilometre expansion (the Eagle Mountain Pipeline) from the Coquitlam watershed to the export facility.
- Construction on the export facility and the pipeline started in fall 2023.
- In addition to the pipeline expansion, FortisBC will increase the footprint of two electric-powered compressor stations in the Coquitlam watershed and build a new electric-powered compressor station in Squamish.
- Both projects (export facility and pipeline) received environmental approvals from the BC Environmental Assessment Office and Impact Assessment Agency of Canada.
- Woodfibre LNG has also received an Environmental Assessment Agreement from Squamish Nation and its facilities permit from BC Energy Regulator (BCER), with a permit plan in place for issuance of supporting permits.

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- Woodfibre LNG and FortisBC have concluded impact benefit agreements with Tsleil-Waututh Nation and Squamish First Nation. FortisBC has also executed a benefit agreement with Kwikwetlem First Nation (KFN) and Musqueam Indian Band (MIB).

Intergovernmental Communications

- The District of Squamish (DoS) has flagged concerns about impacts of out-of-town workers on local services, community safety, and the residential rental market. Proponents are committed to addressing concerns through existing committees and communication channels. They are planning on building a worker accommodation facility outside of the town centre, pending final DoS permit approval.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Cedar LNG Overview

Drafted: February 7, 2024

Issue: Status of the Cedar LNG project

Response:

- Cedar LNG is poised to be the largest First Nations majority-owned infrastructure project in Canada.
- The project will be powered by renewable electricity.
- Government is working closely with Cedar LNG and the Haisla Nation to ensure the project meets British Columbia's climate objectives.
- The Province understands from the Project's proponent that a final investment decision for the project is expected soon.

Background/Status:

- Cedar LNG is a partnership between Haisla Nation and Pembina Pipeline Corporation.
- The Cedar LNG project is a proposed floating LNG facility in Kitimat, B.C., within the traditional territory of the Haisla Nation, with a total production capacity of 3 million tonnes per year (MTPA).
- Cedar LNG will be powered by renewable electricity. It's expected to be one of the lowest carbon intensity LNG facilities in the world.
- Cedar LNG is expected to have a workforce of up to 500 full-time equivalent workers (FTEs) during peak construction, 100 FTEs over the 40-year life of the facility during operations, and up to 150 workers during decommissioning.
- In March 2023, Cedar LNG received an Environmental Assessment Certificate (EAC) from the BC Environmental Assessment Office (EAO). The BC EAO also carried out a federal impact assessment under a substitution agreement, with approval granted shortly after the province's EAC. Federal export approval was obtained from the National Energy Board in November 2015. All major permits are in place from the BC Energy Regulator (BCER).
- In March 2023, Cedar LNG entered into a memorandum of understanding for a 20-year liquefaction services agreement with ARC Resources. The parties are working towards finalizing a definitive agreement for 1.5 MTPA of LNG.
- More recently, in January 2024, Cedar LNG awarded the contract for engineering, procurement and construction for the design, fabrication and delivery of the facility to Samsung Heavy Industries and Black & Veatch. This

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followed an earlier agreement between the two companies announced in November 2023, where Cedar LNG secured shipyard capacity required to meet its target commercial operations date.

- Cedar LNG would receive its natural gas from the Coastal Gaslink project - the same pipeline that is providing feedstock to LNG Canada. The proposed Cedar Link connector would be an approximately 0.4-kilometre lateral pipeline that starts inside the LNG Canada export facility, travels within the facility footprint, and ends just outside the facility wall.
- A final investment decision (FID) is expected in 2024. Subject to a positive FID, onshore construction work could begin as early as the second quarter of 2024, with substantial completion of the facility in 2028.
- Project spending is estimated to result in \$107 million in direct Gross Domestic Product (GDP) contributions over the four-year construction phase and \$24 million in annual direct GDP contributions during the 40-year operations phase.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Ksi Lisims, LNG and Prince Rupert Gas Transmission Pipeline Overview

Drafted February 6, 2024

Issue: Ksi Lisims LNG Export Overview

Response:

- Ksi Lisims (pronounced “s’lisims”) is a proposed net-zero floating LNG export facility located on a site owned by the Nisga’a Nation near the community of Gingolx.
- The project is expected to have a capacity of 12 million tonnes per year (MTPA), destined for markets in the Pacific basin.
- Ksi Lisims has received a 40-year export license for 12 million tonnes per year once the facility is completed, with Shell Canada confirming a \$20 million export contract.
- The Ksi Lisims Project is currently in the Environmental Assessment process.
- TC Energy was granted an Environmental Assessment Certificate for its Prince Rupert Gas Transmission Project in 2014, which is set to expire on Nov. 25, 2024 if construction does not substantially start by then.
- Environmental groups are calling for the project to undergo an environmental assessment under the new 2018 Environmental Assessment Act, which includes First Nations consultation and stricter environmental conditions.

Background/Status:

- Ksi Lisims is a partnership between the Nisga’a Nation, Western LNG and Rockies LNG.
- The Ksi Lisims LNG project is a proposed net-zero 2030 floating LNG facility in Wil Milit, B.C., on treaty land owned fee simple by the Nisga’a Nation, northeast of Prince Rupert with a total production capacity of 12 million tonnes per year (MTPA).
- In March 2023, Ksi Lisims LNG received a 40-year export license from the Canadian Energy Regulator (CER), to commence on the first day of export, exceeding the maximum expected output of 12 MTPA.
- In October 2023, Ksi Lisims LNG submitted an application for an Environmental Assessment Certificate (EAC) from the BC Environmental Assessment Office (EAO). The BC EAO carried out a public comment period which concluded on

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November 29, 2023, and Ksi Lisims is currently revising their application submission to the EAO for review.

- Ksi Lisims LNG is subject to the 2030 net zero requirements and is currently building the credible plan needed to support acquiring an environmental assessment certificate. A significant new electrical transmission infrastructure will be required to meet these targets.
- In January 2024, Ksi Lisims LNG entered into a shared purchase agreement whereby Shell has committed to buying 2 million tonnes of LNG annually on a free-on-board basis.
- Ksi Lisims LNG has identified the Prince Rupert Gas Transmission (PRGT) line as the preferred supply line. TC Energy, the owner of the PRGT line, holds an EA certificate and associated pipeline permits set to expire in November 2024. PRGT is working with relevant agencies regarding the regulatory context around the certificate and permits and their ongoing engagement with Indigenous Groups.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Tilbury LNG Overview

Drafted: February 7, 2024

Issue: Status of the Tilbury LNG facility and expansion infrastructure

Response:

- The Tilbury LNG facility has been operating in British Columbia since 1971.
- The facility is expanding to meet increasing demand for LNG, including marine fueling and overseas export.
- The Tilbury Jetty Limited Partnership is seeking an environmental assessment certificate for a marine jetty next to FortisBC's Tilbury LNG facility.
- This would support the supply of LNG to vessels for ship-to-ship bunkering and for bulk delivery to overseas markets.
- This decision is currently in front of Minister Heyman and Minister Fleming.

Background/Status:

- The Tilbury LNG facility is owned and operated by FortisBC.
- The Tilbury LNG facility has been in operation since 1971 and supports energy needs in the Lower Mainland, including during high winter demand. The facility provides resiliency for the energy system and energy security in the lower mainland.
- Now the facility is producing LNG for transportation, including BC Ferries and Seaspans Ferries. FortisBC is also working with the Vancouver Fraser Port Authority to develop the first ship-to-ship LNG marine refueling service on the west coast of North America.
- The facility is also the first in Canada to produce LNG for export to China and more recently Japan.
- In 2018, FortisBC commissioned Phase 1A of an expansion that included:
 - a 46,000 cubic meter storage tank (enough to keep a community of 19,000 warm for 45 very cold days).
 - liquefaction capacity of 0.25 million tons of LNG per year.
- FortisBC is continuing to expand the facility (Phase 1B) which includes:
 - up to 0.65 million tons of incremental liquefaction capacity to meet rising demand for LNG as a marine fuel.

2024/25 Estimates Note Advice to the Minister

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- a one-to-three-kilometer gas line upgrade from the facility to the Tilbury gate station on River Road in Delta.
- The planned Tilbury Phase 2 LNG Expansion project will improve the resiliency of the gas system. It will also advance LNG as a marine fuel or meet demand from overseas customers. The project will include the construction of:
 - a new storage tank that can hold up to 142,400 cubic meters of LNG, which would increase Tilbury’s current storage capacity approximately 2.5 times.
 - a new liquefaction unit with capacity of up to 2.5 million tons per year to produce LNG for marine fueling or overseas export.
- Phase 2 LNG Expansion Project has submitted its detailed project design and is drafting and submitting its application for an Environmental Assessment Certificate.
- The Tilbury Jetty Limited Partnership has filed an application for an environmental assessment certificate (EAC) with the BC Environmental Assessment Office (EAO) for a marine jetty next to FortisBC’s Tilbury LNG storage facility. This project is expected to support Phase 1B (for marine bunkering) and Phase 2 (further expansion of marine bunkering or exports). This would allow the supply of LNG to vessels for ship-to-ship LNG bunkering and for bulk delivery to overseas markets. A decision on the project’s provincial EAC is currently in front of Minister Heyman and Minister Fleming and will require a separate decision by the federal government (Impact Assessment Agency of Canada).

Contact:

Nathaniel Amann-Blake	Assistant Deputy Minister	Energy Resources Division	250 889-1990
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Appendix: Current LNG Summary Table

Project	Location	Volume (MTPA)	Estimated Emissions (MT) & Intensity (CO2e/tonne)	Regulatory Approvals			Estimated Capital Expenditures (Cdn, Billions)	Estimated Jobs	
				CER Export License	Environmental Assessment				
					Provincial	Federal			
Under Construction <small>Advice/Recommendations</small>									
LNG Canada Phase 1 (Shell, PETRONAS, PetroChina, Mitsubishi, KOGAS)	Kitimat	14	2.1 (0.15)	✓	✓	✓	✓	\$20	Construction: Peak 8,000+ fall 2023 Operations: 350-550
Woodfibre LNG (Pacific Energy, Enbridge)	Squamish	2.1	0.04 (0.02)	✓	✓	✓	✓	~\$5	Construction: 650 Operations: 100+
Major Regulatory Approvals Issued <small>Advice/Recommendations</small>									
Cedar LNG (Haisla First Nation, Pembina Pipeline)	Kitimat	3	0.24 ¹ (0.08)	✓	✓	✓	✓	~\$3	Construction: 500 Operations: 100+
LNG Canada Phase 2 (Shell, PETRONAS, PetroChina, Mitsubishi, KOGAS)	Kitimat	14	2.1 (0.15)	✓	✓	✓	✓	tbc	Construction: 3,300 Operations: +200-300
Obtaining Regulatory Approvals <small>Advice/Recommendations</small>									
Tilbury Marine Jetty (FortisBC, Seaspan, Musqueam IB)	Delta	N/A	0.006	N/A	Application Referred Oct 2022		N/A	\$0.15	Construction: tbd Operations: tbd
Tilbury LNG Phase 1B (FortisBC, Musqueam IB)	Delta	0.65	0.05 (0.076)	✓	N/A – Sub EA		Not Submitted	\$1.1	Construction: 250 Operations: 30
Tilbury LNG Phase 2 (FortisBC, Musqueam IB)	Delta	2.5	0.19 (0.076)	✓	Application pending		Not Submitted	\$3 - \$3.5	Construction: 1,100 Operations: 110
Ksi Lisims LNG (Nisga'a Nation, Western LNG, Rockies LNG)	Wil Milit (Nisga'a Territory)	12	0.2 – 1.87 ² (0.02-0.16)	✓	EA in progress		Not Submitted	\$10	Construction: 600 Operations: 150 - 200
Summit Lake PG LNG (JX LNG Canada)	Prince George	2.7	0.1 (0.037)	Not Submitted	Initial Project Description Submitted		Not Submitted	tbc	tbc

Confidential – Contains Commercially Sensitive Information

RETURN TO TOC

¹ Net annual emissions during operations.

² Depending on power source (gas drive vs. electrified)

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Trans Mountain Expansion Overview

Drafted/Revised: February 6, 2024

Issue: Trans Mountain Expansion Project Overview

Response:

- Provincial staff meet regularly with Trans Mountain Corporation (TMC) to work through issues related to permitting. Provincial agencies will continue to support permitting until completion of the project.
- The project is providing economic benefits to the Province and will provide revenue sharing through the Condition 5 Agreement of \$25-50 million annually over 20 years.
- On March 10, 2023, TMEP's projected cost was revised from \$21.4 billion to \$30.9 billion. The federal government has reaffirmed the pipeline's financial viability through independent audits and will seek to divest ownership closer to completion date, with a focus on Indigenous led ownership groups.
- The economic impact, employment, industry skills and training investments, and indigenous agreements are located in Appendix 1.
- Completion and in-service of the pipeline is anticipated in Q2 of 2024.

Background/Status:

- TMEP falls under the Canadian Energy Regulator's (CER) jurisdiction as it crosses provincial borders.
- TMEP is organized into seven spreads. Spreads 1 and 2 are in Alberta, and Spreads 3 to 7 are in British Columbia (BC). Spreads 6 and 7 are in the Lower Mainland. Spread 7 includes the Burnaby Terminal, Burnaby Mountain Tunnel and Westridge Marine Terminal. (See Appendix 2 – TMEP Map).
- TMEP will twin TMC's existing 1150-kilometre pipeline within the existing right-of way, where possible, from Edmonton to Vancouver.
- The existing pipeline has a sustainable capacity of 300,000 barrels per day (bbl/d) and the new pipeline will add a sustainable capacity of 590,000 bbl/d.
- On April 6, 2017, BC entered into a bilateral agreement with Trans Mountain Corporation, which provides for revenue sharing of up to \$1 billion over 20 years. Once in-service, TMC will pay the Province between \$25 million and \$50 million annually for 20 years.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- The agreement also commits BC to establish and maintain a project office to facilitate a timely and efficient regulatory and decision-making process for all provincial regulatory matters related to TMEP or the existing pipeline system.
- The Infrastructure and Strategic Initiatives Branch in the Ministry of Energy, Mines and Low Carbon Innovation (EMLI) maintains regular connection to TMEP's project team and the relevant agencies to ensure any emerging issues are identified and addressed early and proactively, where possible. Operational relationships are strong between TMC and the BC Government, resulting in most issues being addressed at that level.
- All permits required for the expansion have been issued.

Over the next year, the key focus areas for EMLI in relation to the TMEP are:

- Designing and establishing the Condition 5 fund to ensure it is ready to receive and disburse funds when the TMEP commences service.
- Supporting agencies in the transition from construction to operations (i.e. permitting to compliance/ongoing maintenance focus).

Attachments: Appendix 1 – Trans Mountain Expansion Project Construction Benefits
Appendix 2 – Maps of Trans Mountain Expansion Project

Contact:

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Blake Division

2024/2025 Estimates Note

Advice to the Minister

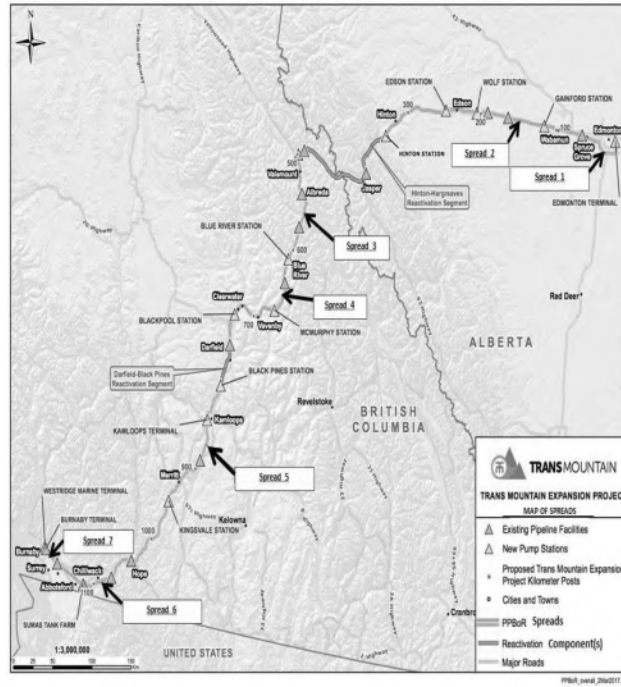
Ministry: Ministry of Energy, Mines and Low Carbon Innovation

Minister Responsible: Josie Osborne

APPENDIX 1

Trans Mountain Expansion Project Construction Benefits

Facility Locations Burnaby, Westridge, Sumas, Edmonton	Project Owner Canada Development Investment Corporation	Total Expanded Capacity 890,000 bbl/d	Pipeline Length 1173 km	Projected In-service Q2 2024
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Economic Impact (2018 – 2023, Capital Investment in BC)

Gross Output \$ 28.9B	GDP \$ 13.5B	Tax Impact \$2.8B	Wages 6.2B	Employment 37,756 FTE
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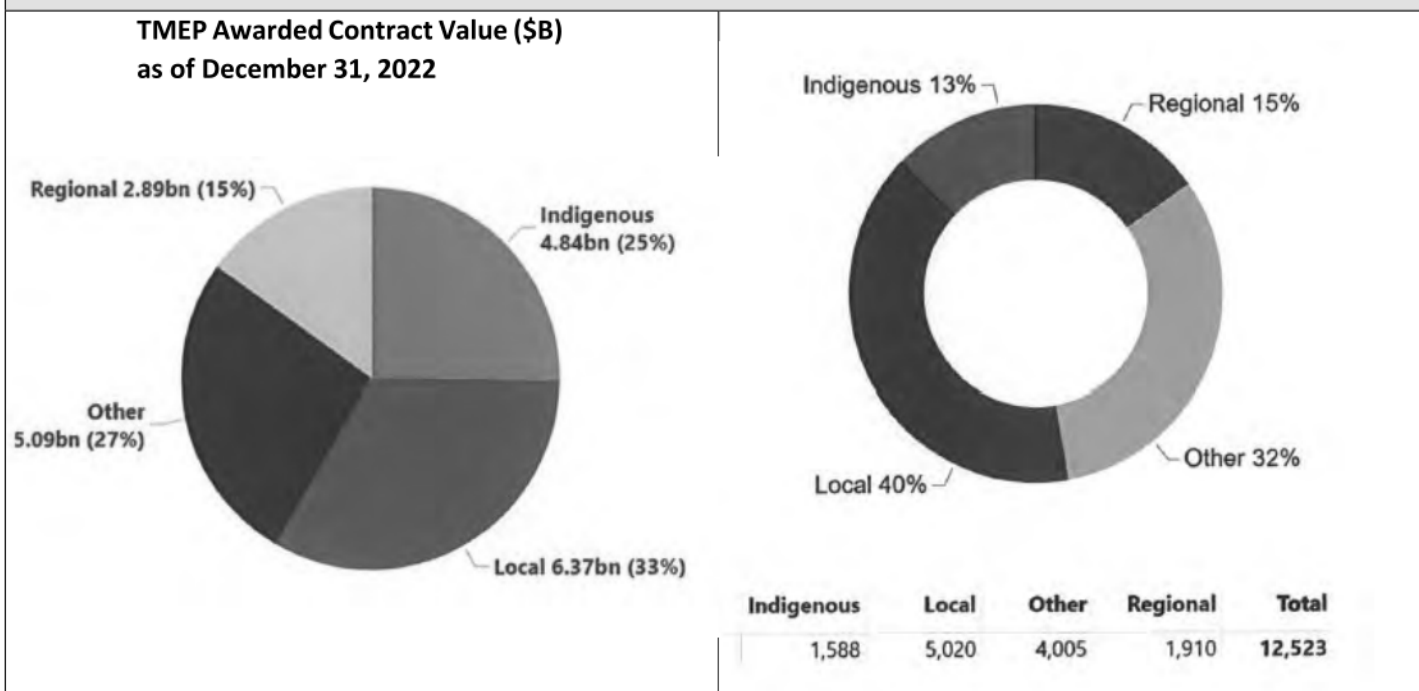
Economic Impact (Annual, In-service Operations)

Gross Output \$ 8.1B	GDP \$ 4.3B	Tax Impact \$ 1.1B	Wages \$ 1B	Employment 8,959 FTE
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Industry Skills and Training Investments

Industry Contributions to Initiatives >\$70.5 (through project-specific MBAs with Indigenous Groups)	Investment in Training Programs for Indigenous People \$1,320,000	Investment in Project-Specific Training for Contractors >\$4,250,000	Funding for Annual Awards and Scholarships at BC Post-Secondary Institutions >\$1.2M	Women Trades Training (YourPlace) N/A
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Procurement and Employment



Indigenous Agreements

Trans Mountain has signed 69 agreements with Indigenous groups in BC and Alberta (\$580M in benefits/opportunities for Indigenous Communities)	Trans Mountain will provide BC with up to \$1B over 20 years to BC Clean Communities Program to be accessed by communities for local social and environmental projects across the province.
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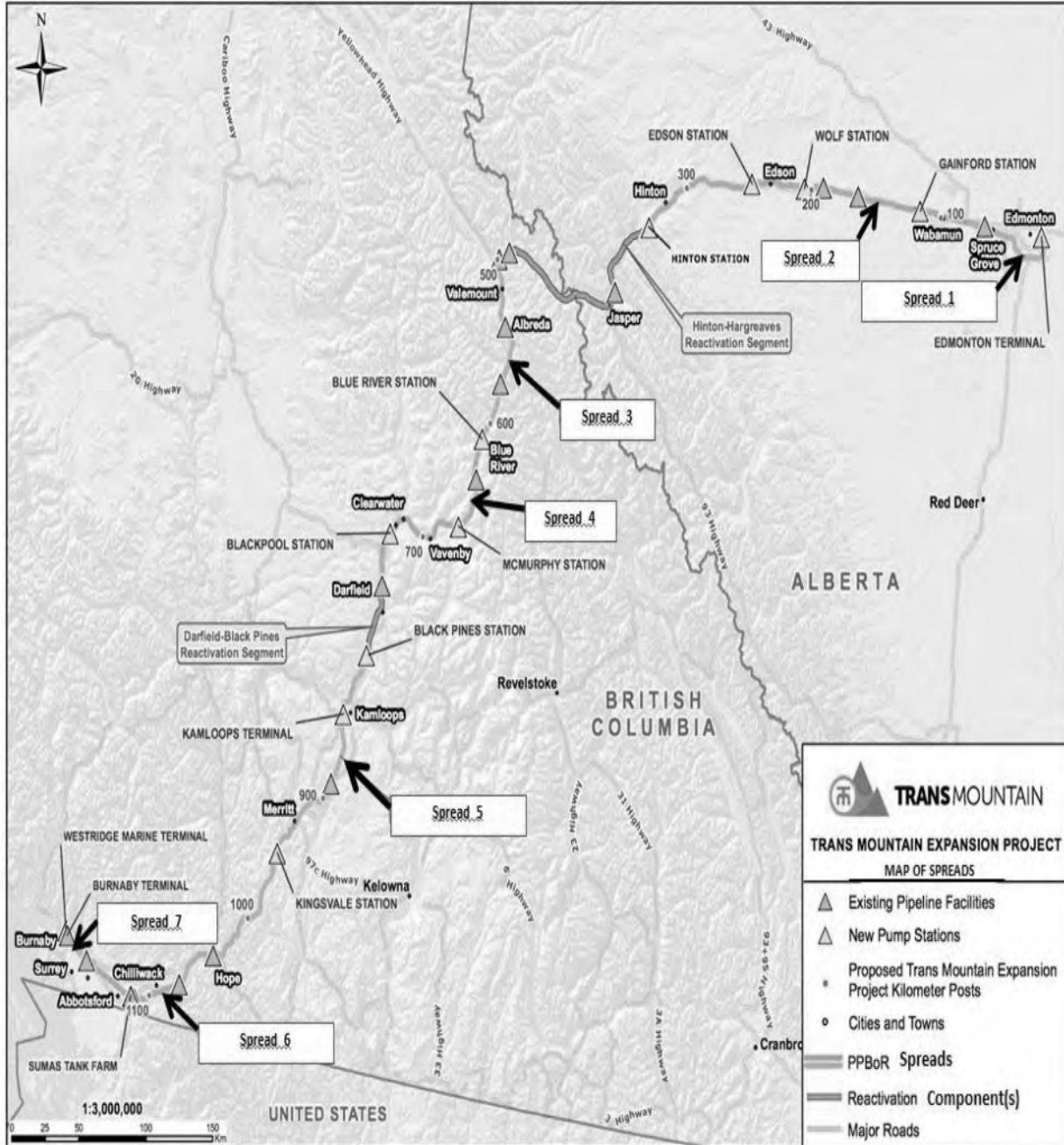
Authorizations

Permit approvals, authorizations or agreements required 1,710	Permit approvals, authorizations or agreements approved 1710	Canada Energy Regulator Project Certificate and Environmental Assessment Certificate Received
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2024/2025 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

APPENDIX 2 MAP OF TRANS MOUNTAIN EXPANSION PROJECT



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ADM

Energy Resource Division

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: United Nations Declaration on the Rights of Indigenous Peoples (Implementation)

Drafted/Revised: January 30, 2024

Issue: Ministry action to implement the UN Declaration

Response:

- Our Government is committed to advancing reconciliation with Indigenous people and aligning provincial legislation with the United Nations Declaration on the Rights of Indigenous People (UN Declaration), as required under the *Declaration on the Rights of Indigenous People's Act* (Declaration Act).
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is committed to implement the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act) Action Plan, to align B.C.'s laws with the UN Declaration, and support negotiations of new kinds of shared decision-making agreements.
- EMLI is working in consultation and cooperation with Indigenous peoples and First Nation organizations to deliver on priorities identified in the Declaration Act Action Plan, such as by collaborating with the Ministry of Water, Land and Resource Stewardship (WLRS) on modernized land use planning (MLUP) (i.e., government-to-government processes that will set new strategic direction for resource management and stewardship) and modernizing the *Mineral Tenure Act*.
- B.C. is working with First Nations, B.C. Hydro and Canada to explore First Nation co-ownership and project decision making with impacted Nations along the North Coast Transmission line route.
- The Ministry is working with the First Nations Leadership Council (FNLC) to remove legislative and policy barriers to Indigenous participation in the clean energy sector, develop processes to ensure the principles of the UN Declaration are reflected in the annual audits and alignment with the Code Review Committee, and on MTA modernization.
- EMLI developed a Reconciliation Plan to support Government's activities toward implementing the UN Declaration.

Background/Status:

- This Government's commitment to reconciliation is reflected in the Concrete Actions for Implementing the Commitment Document, the Ten Draft Principles to Guide the Province's Relationship with Indigenous People, Ministers' mandate letters, and the Declaration Act.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- EMLI is implementing the UN Declaration through three key areas laid out in the Declaration Act Action Plan:
 - WLRS is taking a coordinated and proactive approach to MLUP in order to implement Action 2.6. EMLI is committed to supporting sector interests through MLUP in coordination with WRLS and is currently working to update geological data and coordinate with WLRS to ensure mineral exploration and mining interests are considered throughout the planning lifecycle. MLUP provides a path forward for harnessing B.C.'s critical minerals opportunity by balancing our shared values in partnership with First Nations governments, industry, and the public.
 - EMLI is a lead partner along with other natural resource ministries in implementing a suite of collaborative stewardship and cumulative effects initiatives with the Blueberry River First Nation's agreement and six other Treaty 8 First Nations, through the Consensus Document. EMLI also participated in negotiations of the first consent-based decision-making agreement between Tahltan Central Government and the Province in relation to the Eskay Creek mine environmental assessment.
 - The Ministry is leading **Action 2.14** to modernize the MTA in consultation and cooperation with First Nations and First Nation organizations. Through in-depth collaboration with First Nations and First Nation organizations, EMLI is modernizing the MTA modernization in alignment with the aligns with the UN Declaration while continuing to enhance a strong, sustainable mineral exploration and mining sector.
 - Under the **Action 4.43**, EMLI has committed to collaboratively develop recommendations on strategic policies and initiatives for clean and sustainable energy with Indigenous partners. EMLI, in partnership with the First Nation Energy and Mining Council (FNEMC), as delegated by FNLC, are engaging First Nations rights holders and organizations through the Indigenous Clean Energy Opportunities process aimed at positioning First Nations to fully participate in current and future opportunities in B.C.'s clean energy sector to improve the economic, environmental, social and cultural outcomes for First Nations in B.C.
- The Province is working with First Nations, BC Hydro and Canada on the North Coast Transmission Line to help meet the growing demand from customers for clean, reliable electricity to help reduce greenhouse gas emissions, and support Government's objectives in CleanBC.

Relationship Protocol:

- Signed in September 2021, the Relationship Protocol creates structures for EMLI to work with FNLC in the spirit of the UN Declaration, as a pathway to support a

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

better future for Indigenous people on issues of common interest such as energy, mines and low carbon innovation in B.C.

- In March 2023, the Ministry provided \$2.4M in funding (over three years, until March 31, 2026), to support the implementation of the Relationship Protocol through an annual workplan which includes joint work in areas such as:
 - collaboration with the Audit Unit and Code Review Committee to develop processes to ensure the principles of the UN Declaration are reflected in the annual audits and alignment with the Code Review Committee work;
 - partnering with EMLI's Electricity and Utility Regulation Division on the Indigenous Clean Energy Opportunities engagement process.
- In addition, FNLC, through FNEMC and First Nations Forestry Council, participates in joint discussions on B.C.'s Regional Energy and Resource Table, an initiative to collaboratively identify, prioritize, and pursue opportunities presented by the net-zero transition. On June 27, 2023, the Governments of B.C. and Canada, with the support of FNLC, released the Collaboration Framework, which puts forward a long-term vision for clean growth based on six identified areas: clean fuels/hydrogen; electrification; critical minerals; forestry; carbon management, technologies and systems; and regulatory efficiency.

Reconciliation Plan:

- The EMLI Reconciliation Plan supports implementation of the Province's commitment to advance reconciliation by:
 - profiling current Ministry initiatives that support reconciliation with Indigenous peoples;
 - providing a staff with advice on consultation and cooperation; and
 - supporting staff to develop a comprehensive Learning Plan with tools, and resources staff may need to understand and advance reconciliation in the context of their work, and to support the creation of a culturally-safe environment.

Cross Reference: DRIPA Action Plan/Indigenous Clean Energy Opportunities process
Mineral Tenure Act Modernization
Code Review
Mines Audits Unit
Blueberry River FN & Treaty 8 Implementation
North Coast Transmission Line

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

Simon Coley	Assistant Deputy Minister	Strategic and Indigenous Partnerships Division	778 698-7176
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Strategic and Indigenous Partnerships Division Overview

Drafted/Revised: February 14, 2024

Issue: Strategic and Indigenous Partnerships Division Overview

Response:

- The Strategic and Indigenous Partnerships Division (SIPD) supports the delivery of the Ministry of Energy, Mines and Low Carbon Innovation's (EMLI) energy, mining and decarbonization mandates.
- SIPD supports EMLI's efforts to advance reconciliation with First Nations including supporting negotiation of agreements related to the mining and energy sectors (e.g., the Blueberry River First Nations and Treaty 8 agreements).
- SIPD also supports EMLI's advancement of policy and Action Plan work under the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA) and supports First Nations' active participation in natural resource development and decision-making in their traditional territories.
- SIPD also carries out coordination of cross government policies such as land use planning and cumulative effects for the Ministry. In addition, it provides corporate planning and services, including service plan development and reporting as well as cabinet submissions and OICs. It is also responsible for intergovernmental relations to promote strategic partnerships with the federal government and other jurisdictions to advance EMLI priorities.

Background/Status:

- SIPD was formed in late 2017 to address the need for corporate assistance and oversight of reconciliation-related initiatives and strategic policy functions. Administrative and operational components such as Freedom of Information and the Correspondence Unit were transferred from SIPD to the Deputy Minister's Office to align with similar arrangements across government.
- SIPD's mission is: Advance the Ministry's vision through collaborative leadership and championing policy and negotiation initiatives, integrating Indigenous, external, and intergovernmental perspectives, and through corporate planning and reporting.
- The Division has four goals: a healthy, empowered and integrated workforce, a leader in low carbon innovation, collaborative and shared governance with First Nations and an effective and trusted regulatory framework.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- SIPD's two branches align with its goals: Indigenous Partnerships Branch (IPB) and Strategic Initiatives Branch (SIB):
 - **IPB** leads EMLI's involvement in the corporate implementation of the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA), including the DRIPA Action Plan. Highlights of IPB activity include:
 - Implementing EMLI's Indigenous Reconciliation Plan and associated intranet site and working with all EMLI divisions to implement the Truth and Reconciliation Commission's Calls to Action, and the Government of B.C.'s 10 Principles.
 - Providing a point of contact with cross-government partners on Government's reconciliation-related priorities.
 - Advising EMLI staff on consultation and cooperation with Indigenous peoples for policy, regulatory and legislative initiatives.
 - Co-ordinating ministry participation in reconciliation tables, and leading EMLI's participation in First Nation negotiations related to major projects (e.g., the Tahltan negotiations, the North Coast Transmission Line and Site C related tables (West Moberly cumulative effects litigation settlement)
 - Leading EMLI's budget management within the provincial Indigenous Funding Envelope; and
 - Leading the First Nations Leadership Council Relationship Protocol implementation and First Nations Energy and Mining Council coordination.
 - **SIB** supports the Ministry on Cabinet and legislative coordination, staff communications and engagement, strategic planning, land use planning, and intergovernmental and policy files that transect multiple agencies and business lines. Highlights of SIB activity include:
 - Leading the Energy and Mines Ministers' Conference, Council of the Federation, Premier/Minister delegations to Ottawa, and Federal/Provincial forums.
 - Managing the Ministry's comprehensive legislative program and Cabinet initiatives.
 - Leading on land use planning for EMLI, in collaboration with lead Ministry of Water, Land, and Resource Stewardship (WLRS) and partner First Nations, to help advance strategic priorities including the B.C. Critical Minerals Strategy and 30 by 30.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Partnering with the Federal government on Regional Energy and Resource Tables will focus on priority areas and joint Federal-Provincial actions, including aligning resources, timelines, and regulatory processes to accelerate goals outlined in CleanBC and StrongerBC. The six priority areas are: electrification, critical minerals, clean fuels/hydrogen, carbon management technology and systems, forest sector, and regulatory efficiency.
 - Establishing linkages to the government strategic plan, leading the development of service planning and reporting for the Ministry, directing staff in other performance reporting within government, and ensuring involvement of all Ministry divisions.
 - Tracking and reporting of Ministry participation in cross government, as well as Ministry efforts, to support Government's regulatory reform, poverty reduction, multiculturalism and carbon reduction initiatives.
 - Supporting the Ministry's preparation of Estimates and Union of B.C. Municipalities convention binders along with Government transition binders.
 - Supporting the coordination and delivery of corporate initiatives and services for the Ministry, aligning with strategic human resources and corporate recognition and engagement programs to support the overall employee experience for Ministry staff.
- SIPD's 2024/25 Estimates budget is \$3.427 million.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Tahltan Nation Overview

Drafted/Revised: February 13, 2024

Issue: Summary of current initiatives

Response:

- The Province has a number of initiatives underway with the Tahltan Nation (Tahltan) with the goal of addressing Tahltan concerns in partnership and achieving a world class mining and wildlife management regime through a combination of new land use strategies, infrastructure, economic development support, decision-making reforms, and reconciliation initiatives.
- The Province will continue with the co-development conservation areas, environmental and land management tools with Tahltan, in alignment with the Tahltan Stewardship Initiative, B.C.'s modernization of the Land Use Planning (MLUP) process while inconsideration of strategies related to Critical Minerals, 30 by 30 conservation goals and CleanBC initiatives.
- The Province will continue to work with Tahltan to implement shared decision-making agreements for the Eskay Creek Revitalization Project, the Red Chris Mine EA Amendment Process, Cabinet Confidences
- Through the announcement of phase one the new BC Critical Mineral Strategy, B.C. will continue to collaborate with Tahltan to improve the safety and quality of infrastructure including Highway 37, and 51.

Background/Status:

Intergovernmental Communications

- The MLUP project with Tahltan presents an opportunity to address diverse interests such as conservation, development, and exploration activities with new land management strategies that include shared priorities such as conservation, co-governance, Critical Minerals, and CleanBC initiatives. Cabinet Confidences

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Cabinet Confidences

- Implementing shared decision making and the MLUP process will increase transparency and permitting efficiency while providing guidance to proponents on permissible activities and geographies.
- In January 2024, the Province announced phase one of the new BC Critical Mineral Strategy, and has indicated a commitment to improvement the safety, and quality of the infrastructure associated with Highway 37, and 51, which access Tahltan communities.
- The Province is advancing solutions for jade mining in Tahltan territory to address longstanding concerns of the environmental impacts, prior to the expiry of the permitting deferral that expires in May 2024.
- The Province and Tahltan are committed to working together to develop strong governance mechanisms between the two parties.

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Oil and Gas Permitting and Treaty 8 Agreements

Drafted: April 2, 2024

Issue: Highlights on BCER permitting and new landscape plans

Response:

- Over the past year, the BC Energy Regulator (BCER) has actively reviewed and reached decisions on hundreds of oil and gas permitting applications.
- BCER has issued permits within the Blueberry River First Nation (BRFN) Claim Area that adhere to the new consultation process and development rules, such as ground disturbance caps and environmental conditions, flowing from the Blueberry River and other Treaty 8 Nation agreements.
- In 2023, BCER approved 644 oil and gas applications in the BRFN Civil Claim area.
- In 2023, BCER made 780 statutory decisions resulting in 1,058 wells approved and 86 pipeline projects approved. Between January 1st of 2024 and March 31, 2024, the BCER has made 159 statutory decisions, resulting in 252 wells approved and 21 pipeline projects approved, with the private land / crown land distribution following historic trends of 40 / 60 respectively.
- Permitting of the discretionary disturbance allocation has taken additional time which has pushed some application decisions that received 2023 disturbance allocation into the BCER's decision making process in 2024. To-date, BCER has awarded permits for 12% of the eligible disturbance in Area 1, 21% in Area A, and 2% in the rest-of-the-claim area.
- Also, new landscape-level development and restoration plans are underway with some Treaty 8 Nations, including BRFN.
- These plans will provide 5-year planning horizons for how cumulative effects, restoration and infrastructure developments may be better managed in accordance with the new Treaty 8 agreements.

Background/Status:

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- In the first six months of 2023, the BCER and BRFN co-developed a new consultation process that meets the requirements of the BRFN Implementation Agreement (IA), respects Treaty Rights and contributes to the management of cumulative effects of energy activities in the BRFN Claim Area.
- In addition to the new consultation process, the BRFN IA commits to landscape- and watershed-level development planning. The first landscape-level plan in a High Value 1 area – the Gundy Plan - is targeted for approval this month (April).
 - Industry and other Treaty 8 Nations have been engaged in the plan development, and efforts have been made to respond to various interests raised in this new planning process.
- As new landscape plans are brought into effect, it is expected that regulatory permitting processes will become more efficient over time in the new operating context. The new environment aims to ensure that investment decisions are secure, durable and leave the land in a good way for future generations.

Contact:

Simon Coley

ADM

Strategic and
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2024/25 Estimates Debate

Ministry of Water, Land and Resource Stewardship

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Issue: Blueberry River First Nations (BRFN) Implementation Agreement

Recommend Response:

- In January 2023, government signed the Blueberry River First Nations Implementation Agreement (BRFN IA).
- The BRFN IA aims to substantively address infringements declared upon Blueberry's treaty rights in the 2021 *Yahey* decision due to the cumulative impacts of industrial development.
- It is our obligation to better protect BRFN's Treaty 8 rights, and honour the treaty signed over 100 years ago, on behalf of Canadians.
- WLRS is responsible for overseeing and coordinating the implementation of the BRFN IA in partnership with the natural resource sector.
- Government is working with BRFN Chief and Council to conclude the first operational land use plan, which is expected to be completed by March 31, 2024.

Additional Response points (if needed):

- The Blueberry Implementation Agreement and the Consensus Document are complex and include initiatives that have never been done before.
- This will be the first anniversary of these historic agreements, and we know that implementation has had its challenges.
- We are working very closely with all Treaty 8 Nations to implement these agreements.
- This work will transform how the Province and First Nations steward land, water and resources together to better manage for cumulative effect and ensure Treaty rights are upheld.
- Industry engagement and input to the implementation of the specific initiatives has been very valuable. This is most noticeable in new development planning initiatives.
- These historic agreements will guide a partnership approach to land, water and resource stewardship that ensures First Nations can meaningfully exercise their Treaty 8 rights and provide stability and predictability for industry and communities in the region.
- The overall objective of our work in the Northeast is to address the declarations from Justice Burke and to provide a stable basis to support Treaty rights, and economic development.

2024/25 Estimates Debate

Ministry of Water, Land and Resource Stewardship

Wildlife:

- BC and BRFN have convened their Wildlife Working Group. Priorities include assessing moose populations, predator management and prescribed fire.
- A review of the 2022 regulations is ongoing to determine if refinements are needed. We recognize this review has taken longer than expected; however, we are still collecting data to help inform those decisions.
- The current regulatory package includes some potential changes, including removing antler restrictions for licensed moose hunting, and identifying areas of cultural significance for First Nations' harvest opportunity.

Water:

- BRFN Environmental Flow Needs (EFN) Framework is in its implementation or 'pilot' phase. The successful implementation of this framework will support expansion to further watersheds across Northeast BC.
- Authorities to use Administrative Monetary Penalties for compliance issues under the *Water Sustainability Act* are now in effect.

Restoration:

- Blueberry River Restoration Society established in March 2023, and partial payment to the Society of the provincial commitment is complete.

Revenue Sharing:

- Currently based on payments that are set out in the BRFN IA, for three years.
- BRFN has an option to receive revenue sharing payments instead of fixed payments on the same basis as the revenue sharing agreements with other Treaty 8 Nations.

Date Prepared/Revised: February 9, 2024

Ministry Executive Sponsor:

Name: David Muter, Assistant Deputy Minister

Phone: 250-217-5385

Alternate Contact for Issue:

Name: James Cuell, Executive Director

Phone: 250-877-1615

2024/25 Estimates Debate

Ministry of Water, Land and Resource Stewardship

Issue: Treaty 8, Cumulative Effects and the Yahey Decision – Consensus Document

Recommend Response:

- In 2023, government signed multiple, historic reconciliation agreements with eight Treaty 8 First Nations.
- Agreements with seven of the eight Treaty 8 Nations were based on a co-developed approach to address cumulative impacts on treaty rights.
 - This co-developed approach was named the “Consensus Document,” for six Treaty 8 Nations and BC and the “workplan” between McLeod Lake Indian Band and the BC.
 - A separate Implementation Agreement was signed with Blueberry River First Nations.
- Five provincial ministries have responsibility for implementing these agreements. WLRS is responsible for overseeing the overall implementation of the agreements in partnership with the other natural resource ministries.

Additional Response points (if needed):

- The agreements demonstrate government’s ongoing commitment to a partnership approach with Treaty 8 Nations on land, water, and resource stewardship, providing more stability for people and industry in the region.
- Effects from these agreements on the Provincial and Regional economies are unknown. Provincial resources are being realigned to support agreements implementation from permitting and land use planning programs.
- Implementation of these agreements are not without their challenges. A transformative shift in natural resource management, in collaboration with Treaty 8 takes time.

2024/25 Estimates Debate

Ministry of Water, Land and Resource Stewardship

Key Facts:

The Treaty 8 Nations who signed Letters of Agreement and Revenue Sharing Agreements in B.C. are: Doig River, Fort Nelson, Halfway River, McLeod Lake, Prophet River, Saulneau, and West Moberly First Nations.

An update on the implementation of the key elements of the Consensus Document follows:

Honouring the Treaty:

- The province and several Treaty 8 Nations have formed an Honouring the Treaty working group to develop and implement initiatives to improve awareness and understanding of the Treaty with an anti-racism approach.
- Ongoing work to develop a Communications strategy and plan, as well as signage projects to increase awareness and visibility of Treaty 8, and to develop training curriculum.

Restoration:

- Blueberry River: The Province is providing funding to the Blueberry River Restoration Society for restoration, on behalf of the Nation, consistent with the BRFN Implementation Agreement.
- Seven other Treaty 8 Nations (Consensus Document signatory, and MLIB-BC workplan): The Nations and Province are working to complete restoration agreements by end of fiscal (March 2024), to meet agreement commitments for funding up to ten years for Nation-led, Nation-determined projects to heal the land and heal the people.
 - In March 2022, \$127.2M was granted to support these Nations in initial project development and implementation.

Revenue Sharing

- BC entered into revenue sharing agreements with the six Treaty 8 Nations that were engaged on the Consensus Document and with McLeod Lake Indian Band.
- The revenue sharing agreement was for two years and expires March 31, 2024.
- The revenue sharing agreement is to share 10% natural gas royalties received by the Province, and where oil and gas revenues exceeded \$1.0 billion there was an additional payment. In 2022/23, this delivered approximately \$248 million in revenue sharing because of the 10% plus additional payment.
- The Consensus Document committed Treaty 8 Nations and BC to develop a new fiscal relationship, and that work is ongoing.
- Payments to Blueberry River flowed pursuant to our Implementation Agreement that settled the Yahey court decision.

2024/25 Estimates Debate

Ministry of Water, Land and Resource Stewardship

Wildlife:

- The Treaty 8 Wildlife Working Group and its Technical Committee meet regularly to advance wildlife and wildlife habitat stewardship initiatives, co-develop workplans, collaborate on wildlife inventories and stewardship investments.
- A review of the Hunting and Trapping Regulations is ongoing and focused on identifying sustainable opportunities for all users in future amendments..
- We recognize this review has taken longer than expected; however, we are still collecting data to help inform wildlife management recommendations and decisions.

Land Use Planning:

- A number of Treaty 8 Nations are actively working with the Province on the development and implementation of their land use plans. The plans are seen as a key component to addressing the impact of cumulative effects through the setting of new standards and the establishment of new conservation efforts.
- There is a high expectation that completed land use plans that are supported by the Nations, will provide certainty for the resource sector.
- There will likely remain some areas of high conflict and high overlap where government will need to consider accommodation and or longer-term negotiation strategies.

Cumulative Effects

- One of the initiatives in the consensus documents addressed a shift in how cumulative impacts to values supporting T8 way of life were being considered in decision making. The commitment in the consensus document is:
 - *The Province will issue legally effective direction to statutory decision makers requiring:*
 - *Consideration of the extent and duration of cumulative impacts and*
 - *Measures to avoid or minimize cumulative impacts and the potential infringement of treaty rights.*
- A BC/Treaty 8 Legislative Working Group was struck to address the legislative approach to implementing this direction. Based on the input from this group, a final draft legal order has been established which will be presented to ELUC in April 2024 for approval. The draft order makes use of the Environment and Land Use Act (ELUA) and requires decision makers to prepare a report describing cumulative impacts of proposed activity, how these impacts and mitigation strategies were considered in the decision. The Order is proposed to be in effect for three years, to 2026, and is specific to the North East Region.
- Meanwhile, the Province and Treaty 8 representatives continue to discuss implementation of the Cumulative Effects Order (“the Order”).

2024/25 Estimates Debate

Ministry of Water, Land and Resource Stewardship

- The Implementation Plan encompasses a phased and inclusive approach to provide space for T8 Nations, the Province, and industry to work together on feasible solutions.
- Several nations are developing their own cumulative effects assessment tools.

Treaty 8/BC Collaborative Stewardship Forum

- BC and all Treaty 8 Nations are involved in a facilitated process to convene a new collaborative stewardship forum that can support the management and assessment of cumulative effects.
- They are committed to convening a forum that is inclusive of all Treaty 8 Nations at the community and land manager level. This work is taking significant time and is working at a pace that will allow trust to be re-established amongst all parties, especially amongst the nations.
- It is expected that this Forum will provide significant support to the CE Order under development.

Other Issues

- Pace of implementation is not meeting the expectations of the nations. The lack of a coordinated delivery of the commitments has stretched capacity for all parties.
- Both Halfway River First Nation and Doig River First Nation are concerned about the overlap of the Blueberry Implementation Agreement and their core territories. They have applied to the courts for a Judicial Review of the Province's decision to enter into the agreement with Blueberry. Intergovernmental Communications

Date Prepared/Revised: February 9, 2024

Ministry Executive Sponsor:

Name: David Muter, Assistant Deputy Minister

Phone: 250-217-5385

Alternate Contact for Issue:

Name: James Cuell, Executive Director

Phone: 250-877-1615

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Federal/Provincial Energy Transition and Economic Opportunities

Drafted/Revised: February 13, 2024

Issue: Update on the Regional Energy and Resource Tables

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) participates in the Regional Energy and Resource Tables (Regional Tables) as an important forum to advance alignment of federal and provincial programs and policies to accelerate the transition to a net-zero economy.
- Indigenous reconciliation is a foundational principle for the Regional Table, and we work closely with the First Nations Leadership Council (FNLC), the First Nations Energy and Mining Council (FNEMC) and the First Nations Forestry Council (FNFC), on this work.
- The Regional Tables Collaboration Framework, released in June 2023, identifies the following Opportunity Areas: critical minerals; electrification (built environment, transportation, and transmission); clean fuels/hydrogen; the forest bioeconomy; carbon management technology and systems; and regulatory efficiency.
- Since the release of the Collaboration Framework, three strategic priorities have been identified for focus at the staff level: regulatory efficiency; electricity transmission (primarily, expansion of the North Coast Transmission Line); and labour market-related actions.
- In addition to these priority areas, individual action items identified under each of the six Opportunity Areas in the Framework are being jointly implemented by federal and provincial subject matter experts.
- Staff from EMLI and Natural Resources Canada (NRCan) have also engaged with stakeholders both in the development of the Framework, and in the subsequent work to implement the actions and refine longer-term objectives related to the Opportunity Areas.
- The status of the work of the Regional Table will be shared in a one-year progress report, to be released in June 2024.
- The progress report will also include an overview of the partnership with Indigenous organizations, a summary of stakeholder perspectives garnered through engagement, and next steps towards developing the long-term vision of the Regional Table.

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Background/Status:

Background

- The BC Regional Table was launched on June 1, 2022.
- On May 2, 2023, a webinar jointly hosted by EMLI (Strategic Initiatives Branch), NRCan (Regional Strategies Office (RSO)), FNEMC and FNFC, and attended by First Nations from across the province, was held to dialogue with First Nations leaders and representatives on the Regional Table. The perspectives shared during the webinar was captured in a What We Heard report.
- June 27, 2023, marked the release of the BC Regional Energy and Resource Table Collaboration Framework, which outlines the Opportunity Areas and associated actions, and a long-term vision for clean growth in the Province.
- The Framework was launched by Minister Jonathan Wilkinson, alongside Josie Osborne, Minister of EMLI; George Heyman, Minister of Environment and Climate Change Strategy; Robert Phillips, Political Executive, First Nations Summit; and Chief Don Tom, Vice President, Union of British Columbia Indian Chiefs (UBCIC).
- Since the launch of the Framework, the focus of the Regional Table has been on implementation of actions in the Framework and engagement with stakeholder groups.
- Between October and December 2023, staff from EMLI and RSO met with academics, labour organizations, industry organizations, and private sector companies as part of Phase I of Engagement. FNEMC also participated in these sessions.
- A consistent theme raised on the part of proponents and First Nations' rights holders has been the need for enhanced regulatory efficiency and certainty, and measures to improve inclusion of First Nations groups, including through early and ongoing engagement with rights holders.

Current Status

Current Status – Regional Table Implementation and Engagement

- Phase II of Engagement, to take place in April 2024, will convene a targeted cross-section of stakeholder groups, and seek more in-depth feedback on advancing priority projects within the Opportunity Areas.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Subject matter experts from B.C. and Canada are in the process of jointly providing updates on Opportunity Area actions, including completed deliverables, and timelines for future work, to inform the one-year progress report.

Current Status – First Nations participation

- Representatives from FNFC and FNEMC sit on the B.C. Regional Table Steering Committee. The Committee guides work on engagement, and prioritization and implementation of the actions in the Framework.
- Contribution agreements are in place for FNEMC and FNFC for FY23-24, with Intergovernmental Communications

Current Status – Regulatory Efficiency

- B.C. and Canada are collaborating with proponents and First Nations on regulatory pilot projects to find efficiencies within regulatory processes, while ensuring robust environmental standards and adherence to the principles of Indigenous reconciliation as committed to through the *Declaration on the Rights of Indigenous Peoples Act*.
- B.C. and Canada have developed a short list based on jointly agreed upon criteria and are currently working to select pilot projects in the critical minerals and hydrogen sectors.
- Results of pilot projects will inform the development of future regulatory policy to enable more streamlined and coordinated processes, to support *Advice/Reco*
Advice/Recommendations

Current Status – North Coast Transmission Line

- A bilateral Deputy Minister Clean Energy Working Group (CEWG) has been established to advance the NCTL and other clean energy projects.
- Work is also being undertaken through working groups on Indigenous Participation, Regional Electrification, Ownership, and Environmental Protection, which have representation from B.C. and First Nations; with federal government representatives to join in the coming weeks.

Intergovernmental Communications

Current Status – Labour Market

- EMLI is collaborating with BC Hydro, the Ministry of Jobs, Economic Development and Innovation, the Ministry of Post Secondary Future Skills and

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

NRCan to develop labour market projections for the electrification, clean fuels/hydrogen and critical minerals sectors.

- Labour market projections will draw on growth scenarios, being developed through analysis of provincial data related to anticipated projects in the sectors.
- Projections are expected to provide information about the potential jobs associated with these sectors, with supporting information about regional and demographic trends.

Cross Reference: N/A

Contact:

Simon Coley	Assistant Deputy Minister	Strategic and Indigenous Partnerships Division	778-698-7176
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: North Coast Transmission Line

Drafted/Revised: February 14, 2024

Issue: North Coast Transmission Line Project Profile

Response:

- The North Coast Transmission Line (NCTL) will serve the growing need of the North Coast by building new 500 kilovolt (kV) transmission infrastructure between Prince George and Terrace.
- NCTL will support the significant growth on the North Coast including ports, critical minerals exploration and mining.
- NCTL is key infrastructure for the Critical Minerals Strategy unlocking new mineral projects.
- CleanBC and the Roadmap to 2030 rely on electricity to meet the Province's climate targets. The ability to electrify industrial projects will support industry in meeting climate obligations.
- The Province and BC Hydro are working with First Nations on a partnership approach to project development.
- Canada is also involved at the technical and Deputy level to explore areas for federal support in the form of loans, grants and tax credits.
- Based on current information regarding customer demand, BC Hydro anticipates a need for additional transmission beyond Terrace.

Background/Status:

- To date, proponents in the North Coast have expressed interest in electrifying projects involving over 3,000 megawatts (MW) of incremental electricity demand, with nearly half that demand coming from new or expanding critical mineral and metal mining projects and the electrification of ports.
- Meeting the anticipated demand will require adding a second 500 kV transmission circuit across the three segments of the existing North Coast radial line at an estimated capital cost of \$3B. The general plan is to twin the existing 500 kV transmission line to minimize disturbance, routing decisions will need to be made collaboratively with First Nations.
- Indigenous leaders along the proposed transmission line route have expressed significant interest in ownership opportunities. Parties are well advanced in non-binding commercial investment opportunity discussions. Co-ownership

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

would provide First Nations low risk, long-term stable source of revenue resulting from capital investment.

Intergovernmental Communications

- The Province and BC Hydro have had consistent engagement with impacted and non-impacted First Nations along the proposed on key topics such as ownership, environmental protections, regional electrification and indigenous participation.

Intergovernmental Communications

- Technical Working Groups have been established for each topic area with good participation and leadership from Indigenous Nations and their advisors. NRCan and the Canada Infrastructure Bank (CIB) are recent members of the ownership and regulatory working groups.
- The Province and BC Hydro continue to negotiate several agreements with Nations outlining a principled approach to project development and key features of the ownership opportunity.
- EMLI will be bringing forward ownership, regulatory and fiscal mandate options for cabinet consideration Q1 and Q2 2024.

Attachment: Map of Transmission Line with Impacted First Nations

Cross Reference: N/A

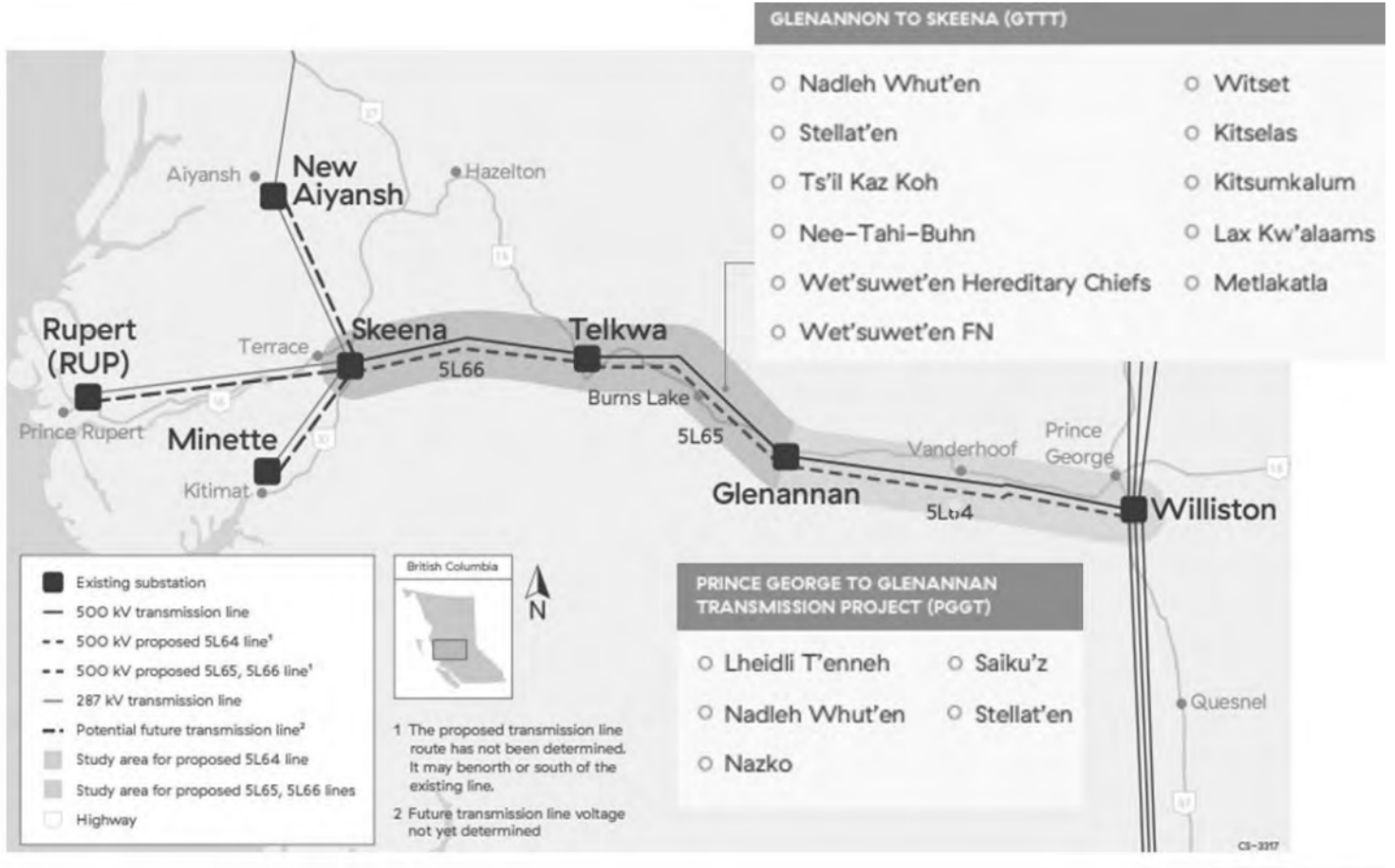
Contact:

Simon Coley	Assistant Deputy Minister	Strategic and Indigenous Partnerships	778-698-7176
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Attachment: Map of Transmission Line with Impacted First Nations



2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Land Use Planning and Critical Minerals in Northern B.C.

Drafted/Revised: February 12, 2024

Issue: Modernized land use planning in northern B.C. and linkages to the B.C. Critical Minerals Strategy

Response:

- B.C. is a world-class mining jurisdiction with the critical minerals to supply the transition to a low-carbon economy, and our mining industry is well positioned to lead during this global transition and generational economic opportunity.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) announced Phase 1 of the B.C. Critical Minerals Strategy (Strategy) to capitalize on this opportunity.
- Related government priorities such as modernized land use planning (LUP) can help support the Strategy in the long term, by setting new strategic land use direction to balance economic, environmental, and social objectives.
- In northern B.C., government-to-government modernized LUP projects, once completed, will enable land use designations aligned to First Nations requirements for economic, environmental, and cultural sustainability, to advance reconciliation and improve industry clarity throughout mineral exploration and development (including critical minerals).
- EMLI is working closely with the Ministry of Water, Land and Resource Stewardship (WLRS) as they lead LUP initiatives in northern B.C. in partnership with First Nations. Of particular importance for EMLI is to ensure that geological data, mineral potential and exploration objectives are reflected and communicated throughout the LUP process.

Background:

- Modernized LUP is a government-to-government (B.C. and First Nation) process that involves stakeholders and the public to set new strategic direction for sustainable resource management, to help determine 'what' can occur 'where' on the land base.
 - Specifically, it delivers on B.C.'s Declaration Act Action Plan action to "co-develop strategic-level policies, programs and initiatives to advance collaborative stewardship of the environment, land and resources."

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- It is also the key tool for working with First Nations to balance achieving B.C.'s commitment to protect at least 30% of lands and waters province-wide by 2030 (30 by 30) – including Indigenous Protected and Conserved Areas (IPCAs) – with the pursuit of responsible mineral development.
- Modernized LUP projects are occurring throughout the province, including in important regions for mineral exploration and mining in northern B.C. Some of these projects are at the initial scoping stages and have not yet been announced.
- Phase 1 of the B.C. Critical Minerals Strategy (Strategy) takes impactful actions focused on unlocking critical minerals opportunities throughout the value chain. EMLI will build on this momentum by releasing Phase 2 of the Strategy in the coming months.
- To implement the Strategy successfully, creative partnerships with First Nations, government and industry will be required to create the conditions for critical mineral development that respects Indigenous rights, conserves the environment, and addresses broader socio-economic concerns.
- Through modernized LUP with First Nations, B.C. is balancing development of the mining and critical minerals sector with conservation goals (i.e., 30 by 30), to help determine where economic activity is permitted, and where it is not.
- Specifically, modernized LUP aims to create certainty and predictability for industry by working with First Nations to clearly define areas where natural resource development is:
 - Permitted via standard legislative frameworks and consultative processes;
 - Permitted in a special or innovative manner to balance with other values; and
 - Not permitted, to protect and conserve sensitive values.
- A broad range of information is considered during the development of land use zones and other LUP products, including traditional ecological knowledge, socio-economic and environmental data, and feedback from industry and the public.
- EMLI is closely involved with emerging LUP projects in key mining regions – including in northern B.C. – to help ensure that geological data, mineral potential, and mining interests are considered early and throughout LUP processes.
- For example, the B.C. Geological Survey recently updated mineral potential data and will continue to model geological systems in the coming months in key LUP regions for consideration in modernized LUP processes.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Cross Reference: Critical Minerals Strategy

Contact:

Simon Coley	Assistant Deputy Minister	Strategic and Indigenous Partnerships Division	778-698-7176
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Ministry of Energy, Mines and Low Carbon Innovation February 2024 – 24/25 Estimates

Budget and Ministry Key Documents (Prepared by CSNR)

Budget Highlights	1
i. Minister Briefing Slides	
ii. Estimates Summary	
Service Plan & Estimates Blue Book	2
Minister Mandate Letter	3

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION

2024 Budget Highlights

EMLI's 2024/25 budget is \$141,254M. This represents a \$4.587M or 3.4% net increase from the restated previous year. This net budget increase is comprised of:

Budget 2024 Decisions:

- \$6.548M increase to continue funding existing Major Project and Regional Permitting resources (38FTEs)
- \$3.835M increase in ICE Fund spending plan
- \$1.329M increase for the Shared Recovery Wage Mandate
- \$0.220M increase in First Nation Clean Energy Business Fund spending plan
- (\$0.024M) decrease for Parliamentary Secretary Adjustment

Budget 2024 subtotal: increase of \$11.908M

Prior Year Decisions:

- \$0.755M increase for Shared Recovery Wage Mandate
- \$0.225M increase for incremental FTE growth for strategic support for Permitting Authorizations
- \$0.150M salary increments for CleanBC and Permitting Resources
- \$0.111M increase in First Nation Clean Energy Business Fund spending plan
- (\$5.982M) decrease planned reduction of Major Project and Regional Permitting Resources
- (\$2.200M) decrease in ICE Fund spending Plan
- (\$0.380M) decrease in Critical Minerals

Prior Year Decisions subtotal: decrease of (\$7.321M)

\$000	2023/24 Estimates	Change	Restated 2023/24	2024/25	\$ Change	% Change
Ministry Operations	118,408	87	118,495	121,111	2,616	
Innovative Clean Energy Fund Special Account	10,128	-	10,128	11,768	1,640	
First Nations Clean Energy Business Fund	-	8,044	8,044	8,375	331	
Total	128,536	8,131	136,667	141,254	4,587	3.4%

* 2023/24 restated due to 1 FTE realignment back to the Ministry from the Ministry of Water, Land and Resource Stewardship and the First Nations Clean Energy Business Fund transfer from the Ministry of Indigenous Relations and Reconciliation.




Budget 2024

Ministry of Energy, Mines and Low Carbon Innovation

Minister Briefing
February 2024

Ministry Budget 2023/24 – 2026/27

	2023/24 Restated	2024/25	2025/26	2026/27
Ministry Operations	\$000			
Responsible Mining and Competitiveness	28,383	29,927	30,413	30,194
Mines Health, Safety and Enforcement	13,670	14,120	14,120	14,120
Energy Decarbonization	37,319	37,651	37,656	37,656
Electricity and Utility Regulation	3,002	3,206	3,201	3,201
Energy Resources	18,496	18,821	18,821	18,821
Strategic and Indigenous Partnerships	3,427	3,570	3,570	3,570
Executive and Support Services	14,198	13,816	13,998	13,998
Total Ministry Operations	\$118,495	\$121,111	\$121,779	\$121,560
<i>Changes from Budget 2023</i>		\$2,616	\$3,284	\$3,065
<i>Changes Year over Year</i>		\$2,616	\$668	(\$219)
Innovative Clean Energy Fund Special Account	10,128	11,768	10,268	8,735
First Nation Clean Energy Business Fund	8,044	8,375	9,177	8,524
Total Ministry Budget	136,667	141,254	141,224	138,819
Operations Budget Changes from Budget 2023				
Major Projects and Regional Permitting		\$6,548	\$6,543	\$6,543
Shared Recovery Wage Mandate		\$1,329	\$1,329	\$1,329
Ministers Office		(\$24)	(\$24)	(\$24)
Prior Year Approvals				
Mining Regional Permitting		(\$4,000)	(\$4,000)	(\$4,000)
Mining Major Projects		(\$1,982)	(\$1,982)	(\$1,982)
Critical Minerals		(\$380)	\$293	\$74
Permitting		\$225	\$225	\$225
Shared Recovery Wage Mandate		\$750	\$750	\$750
CleanBC		\$150	\$150	\$150
Total Changes		\$2,616	\$3,284	\$3,065
Percent Change to Operations from Budget 2023		2%	3%	3%



Budget 2024 Highlights

- \$6.548M to continue funding 38 existing FTEs to support major projects and regional permitting; offset by the planned (\$5.982M) reduction as part of Budget 2022. There is no impact to existing FTE count.
- \$2.079M increase for the shared recovery wage mandate
- \$3.835M ICE Fund spending plan updates; offset by a planned (\$2.195M) reduction
- First Nation Clean Energy Business Fund transferred from Indigenous Relations & Reconciliation for better alignment and to support Clean Energy expertise

Clean BC Base Budget Funding (Current & Prior Year)

CleanBC Initiative	2024/25	2025/26	2026/27	TOTAL
<i>Previous Budget Approvals:</i>				
Efficiency BC Expansion (Better Buildings Better Homes)	23,490	23,490	23,490	70,470
Efficiency BC Expansion (Clean Building)	3,000	3,000	3,000	9,000
Go Electric	2,443	2,443	2,443	7,329
Low Carbon Fuels	1,732	1,732	1,732	5,196
Clean Energy Vehicle Supply Standard	948	948	948	2,844
Low Carbon Fuels - BC Hydrogen	940	940	940	2,820
Remote Community	165	165	165	495
Building Energy Codes	140	140	140	420
Low Carbon Fuel Standard	2,609	2,609	2,609	7,827
Clean Transportation	1,779	1,779	1,779	5,337
Advancing Industrial Decarbonization	1,169	1,169	1,169	3,507
Building Pathway	508	508	508	1,524
Reduce Emissions from Natural Gas	317	317	317	951
Go Electric funded by ICE Fund	5,000	-	-	5,000
Total Prior Year Approvals	44,240	39,240	39,240	122,720
Grand Total CleanBC Base Budget	44,240	39,240	39,240	122,720

CleanBC and Contingencies

	2024/25	
	Base	Cont
Go Electric/CEV Program Expansion / Clean Transportation	4,222	25,850
Efficiency BC Expansion/BetterHomes Better Buildings/Clean Building/Building Pathway	26,998	9,150
Clean Energy Vehicle Supply Standard	948	-
Building Energy Codes	140	-
Low Carbon Fuels	5,281	-
Remote Communities	165	1,540
Reduce Emissions from Natural Gas	317	-
Advancing Industrial Decarbonization	1,169	825
Go Electric (ICE Fund)	5,000	-
Sub total Clean BC	44,240	37,365
Permitting	546	690
Major Energy Projects Office	-	5,053
Fuel Price Transparency Act	-	1,104
Atlin Hydro and Transmission Project	-	5,000
Shared Recovery Wage Madate	-	432
EMLI Total	44,786	49,644

Advice/Recommendations; Government Financial Information

Note: All contingency information to be confirmed in the Ministry Budget Letter. Does not include any pending reprofile requests



Questions ?

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION
Budget 2024 Estimates Summary

By Core Business																					
\$000s																					
Restatement					Budget 2024 Decisions																
Estimates 2023/24	(1) Realignment (Fiscal Neutral)	(2) WLRs Transfer	(3) FNCEBF Transfer	Restated Estimates 2023/24	(4) Major Projects & Regional Permitting	(5) Wage Mandate	(6) Ministry Office Adjustment (PS)	(7) Spending Plan Updates	(8) Major Projects & Regional Permitting (B2022)	(9) Critical Minerals (B2023)	(10) Permitting (B2023)	(11) CleanBC (B2022)	Estimates 2024/25	(12) Major Projects & Regional Permitting	(13) Critical Minerals	Fiscal Neutral	(14) Spending Plan	2025/26 Estimates	(15) Major Projects & Regional Permitting	(16) Spending Plan	2026/27 Estimates
Ministry Operations																					
Responsible Mining & Competitiveness	28,383	-	-	28,383	5,828	719			(4,653)	(530)	171	9	29,927	(5)	491			30,413	(219)		30,194
Mines Health, Safety and Enforcement	13,670	-	-	13,670		396					54		14,120					14,120			14,120
Energy Decarbonization	-	37,319	-	37,319		220						112	37,651					37,656			37,656
Electricity & Utility Regulation	41,365	(38,363)	-	3,002		204							3,206			5	(5)	3,201			3,201
Energy Resources	17,706	790	-	18,496		317						8	18,821					18,821			18,821
Strategic & Indigenous Partnerships	2,669	679	79	3,427		143							3,570					3,570			3,570
Minister's Office	826	-	-	826		32	(24)						834					834			834
Executive and Support Services	13,789	(425)	8	13,372	720	48			(1,329)	150		21	12,982		182			13,164			13,164
Sub-Total	118,408	-	87	118,495	6,548	2,079	(24)		(5,982)	(380)	225	150	121,111	(5)	673	-	-	121,779	(219)		121,560
First Nations Clean Energy Business Fund	-	-	8,044	8,044				331					8,375				802	9,177		(653)	8,524
Innovative Clean Energy Fund	10,128	-	-	10,128		5		1,635					11,768				(1,500)	10,268		(1,533)	8,735
TOTAL MINISTRY	128,536	-	87	136,667	6,548	2,084	(24)	1,966	(5,982)	(380)	225	150	141,254	(5)	673	-	(698)	141,224	(219)	(2,186)	138,819

2023/24 Restatement:

- (1) Fiscal Neutral **realignment** with current mandate priorities and support EMLI's leading role in the energy resource and mineral transition to a clean, competitive, and inclusive low-carbon economy
- (2) 1 FTE transferred during the creation of the Ministry of Water, Land and Resource Stewardship (**WLRs**) was 'returned to the ministry
- (3) To leverage ministry subject matter experts the **First Nation Clean Energy Business Fund** was transferred from the Ministry of Indigenous Relations & Reconciliation

Budget 2024 Decisions:

- (4) (8) 38FTEs approved for **Major Project** and **Regional Permitting** temporarily approved in Budget 2022, were confirmed with permanent on going funding. There was no reduction in FTEs to the Ministry
- (5) The ministry received a budget lift to support the negotiated **wage mandate**
- (6) Adjustment for Parliamentary Secretary removed from **Minister's Office**
- (7) First Nation Clean Energy Business Fund (FNCEBF) **spending plan** updated based on the forecast for how much money will be returned to the Fund through land and water rents associated with power projects
- (7) Updated Innovative Clean Energy (ICE) fund **spending plan** includes increase for projects streams call and partnerships
- (9) (10) (11) Incremental adjustment for resources for prior year **CleanBC, Permitting** and **Critical Mineral** approvals

Budget 2024 and Prior Year Decisions for Out Years

- (12) (13) (15) Incremental adjustment for resources for prior year **Critical Minerals, Major Mines** and **Regional Permitting** approvals
- (14) (16) Out year adjustments Special Account **spending plans**

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Ministry Service Plan

Drafted/Revised: February 12, 2024

Issue: Ministry of Energy, Mines and Low Carbon Innovation Service Plan
2024/25

Response:

- Goals and objectives outlined in this service plan support Government's priorities for the energy sector.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is well positioned to deliver on the Service Plan for fiscal 2024/25.
- EMLI's core priorities in fiscal 2024/25 support a clean, secure and fair economy and include significant efforts to meet CleanBC targets and goals, achieve our stated DRIPA actions and ensure that the energy and mining sectors provide jobs and business opportunities and drive the transition to a low carbon economy.
- I believe this is an excellent service plan that ensures the responsible development of B.C.'s energy and mining sectors.

Background/Status:

- EMLI's Service Plan was prepared in accordance with the Service Plan Guidelines released by the Crown Agencies and Board Resourcing Office (CABRO) in October 2023. The coordination of Ministry and Crown Corporation service plans is performed by CABRO at the Ministry of Finance.
- The EMLI 2024/25 Service Plan is consistent with the Minister's January 15, 2024 Mandate Letter from Premier Eby.
- The 2024/25 goals, objectives and strategies, both new and carried forward, expand upon the Ministry's 2024/25 – 2025/26 Service Plan published in February 2024.
 - Goal 1: An innovative, low carbon energy portfolio that advances CleanBC economic opportunities across all sectors.
 - Objective 1.1: Accelerate efforts to electrify B.C.'s economy to support the provincial CleanBC plan.
 - Objective 1.2: Effective programs and incentives that encourage British Columbians to decarbonize their energy usage, by choosing greener homes, buildings and transportation.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Goal 2: A sustainable and competitive mining sector that supports Indigenous reconciliation, reflects high environmental, social and governance (ESG) standards and contributes to the transition to a low carbon economy with responsibly produced minerals and metals.
 - Objective 2.1: A strong, responsible, low carbon and innovative mining sector that creates good, family supporting jobs.
 - Objective 2.2: Oversight of the mining industry is continuously improved to protect the environment, health and safety, and the public interest.
- Goal 3: B.C.'s oil and gas industry reduces its carbon footprint in a manner that supports economic sustainability, advances Indigenous reconciliation and exhibits high environmental, social, and governance (ESG) performance.
 - Objective 3.1: Policies, technologies and processes that support the reduction of greenhouse gas (GHG) emissions in the oil and gas sector.
 - Objective 3.2: Value-added development of B.C.'s energy resources to maximize the benefits to all British Columbians and provide a fair return from our resources.
- The Service Plan supports Government's commitment to implement the *B.C. Declaration on the Rights of Indigenous Peoples Act* and Calls to Action of the Truth and Reconciliation Commission through several goals and strategies.
- During development of the EMLI Service Plan, a thorough review of current resources was completed to enable the Ministry to focus on programs designed to achieve Service Plan goals and objectives.
- The Service Plan incorporates direction from the CleanBC plan and includes goals, objectives and strategies that make progress towards the CleanBC targets to protect our air, land and water.
- The complete 2024/25 Service Plan is attached.

Attachment: 2023/24 Service Plan

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

Simon Coley	Assistant Deputy Minister	Strategic and Indigenous Partnerships Division	778-698-7176
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MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION

The mission of the Ministry of Energy, Mines and Low Carbon Innovation is to facilitate sustainable, safe, environmentally responsible, and competitive natural gas, oil, energy, and mining sectors for the benefit of British Columbians and effective service delivery in all areas of business.

Government Financial Information

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION

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Ministry of Energy, Mines and Low Carbon Innovation

2024/25 – 2026/27 Service Plan

February 2024



For more information on the Ministry of Energy, Mines and Low Carbon Innovation contact:

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Published by the Ministry of Energy, Mines and Low Carbon Innovation

Minister's Accountability Statement



The Ministry of Energy, Mines and Low Carbon Innovation 2024/25 – 2026/27 Service Plan was prepared under my direction in accordance with the *Budget Transparency and Accountability Act*. I am accountable for the basis on which the plan has been prepared.

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

Honourable Josie Osborne
Minister of Energy, Mines and Low Carbon Innovation
February 12, 2024

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Strategic Direction

In 2024/25, the Government of British Columbia will remain focused on providing the services and infrastructure that people depend on to build a good life. Government will continue delivering results that matter to British Columbians including helping people with costs, attainable and affordable housing, strengthened health care, safer communities, and a secure, clean and fair economy. Government will continue working collaboratively with Indigenous Peoples as it implements the Action Plan for the Declaration on the Rights of Indigenous Peoples Act and delivers initiatives that advance reconciliation in ways that make a difference in communities throughout the province.

This 2024/25 service plan outlines how the Ministry of Energy, Mines and Low Carbon Innovation will support the government's priorities including the foundational principles listed above and selected action items identified in the December 2022 [Minister's Mandate Letter](#).

Purpose of the Ministry

The [Ministry of Energy, Mines and Low Carbon Innovation](#) (Ministry) is responsible for British Columbia's (B.C.'s) electricity, alternative energy, hydrogen, oil, and natural gas sectors and related infrastructure, and the province's mining and mineral exploration sectors. These sectors are made up of diverse interests that use and develop energy, low carbon fuels and electricity generation, transmission, and distribution infrastructure and that explore for and produce oil, natural gas, coal, and valuable minerals. To support Government's coordinated climate, energy and economic objectives, the Ministry focuses on advancing energy efficiency and clean or renewable energy sources and technologies, making sure that the energy we use, develop and export is the cleanest possible.

The Ministry facilitates electricity, mining, oil and gas, and clean energy sectors which are globally competitive, demonstrate leading environmental practices, and advance reconciliation with Indigenous peoples, while providing opportunities and quality jobs for British Columbians and a fair return on resources to support the province's priorities.

The Ministry carries out this work in support of the [CleanBC plan and Roadmap to 2030](#), as well as commitments to Indigenous reconciliation including the Declaration Act Action Plan. In fulfilling its mandate, the Ministry consults and collaborates with other ministries and levels of government, private sector stakeholders, Indigenous people, communities, regulators, environmental and industry organizations, and the public.

The Ministry supports the Minister in discharging responsibilities for the following Crown Corporations: [British Columbia Hydro and Power Authority](#) (BC Hydro), the [BC Energy Regulator](#).

Operating Environment

The CleanBC Roadmap to 2030 and the [StrongerBC Economic Plan](#) set out the Government's integrated approach for long-term low carbon energy production and use, reducing

greenhouse gas (GHG) emissions, and economic resilience. Ministry programs further the advancement of the Province's climate goals through the decarbonization of energy used in the built environment, transportation, and industry. The Site C Project continues, and once complete in 2025, will provide 1,100 megawatts of dependable capacity and generate about 5,100 gigawatt hours of energy each year — enough to power the equivalent of 450,000 homes. The Ministry continues to work with the First Nations Leadership Council and First Nations directly on current and future opportunities in B.C.'s low carbon energy sector.

British Columbians are adopting zero-emission vehicles (ZEVs) at high rates, across all regions of B.C. Zero-emission vehicles use cleaner energy, improve air quality, and cost dramatically less over time to fuel and operate. To increase supply of ZEVs to B.C., Government has increased the requirements of the light-duty ZEV mandate and committed to implement regulated targets for medium- and heavy-duty ZEVs. The suite of CleanBC Go Electric programs is supporting the market transformation with funding and rebates to help make ZEVs more affordable, and spur investment in outreach, infrastructure, skills training, and economic development in the ZEV sector.

There is a need for energy efficiency as well as fuel-switching policies in the transportation sector. To this end, the Ministry committed to develop, along with other ministries, a Clean Transportation Action Plan that will outline further actions to reduce emissions, increase energy efficiency, through reducing distances travelled and switching to more energy-efficient modes like walking, cycling, bus, rail, and marine, and move to low carbon energy in the transportation sector. B.C.'s ZEV sector continues to deliver jobs and significant economic opportunities across the province, supporting approximately 11,300 full-time jobs and contributing \$1.15 billion to the provincial gross domestic product.

The Ministry is implementing policies and programs to support the decarbonization of buildings and community energy systems. Energy efficiency retrofits reduce energy costs and increase the health and comfort of buildings while supporting local businesses. The CleanBC [Better Homes](#) and [Better Buildings](#) suite of programs support individuals, low-income households and businesses to complete energy retrofits, including the installation of heat pumps. In the case of remote communities, the Province's partnership with Indigenous nations, BC Hydro and the federal government aims to replace diesel generators with renewable alternatives while supporting Indigenous economic development.

Through the Low Carbon Fuel Standard, B.C. is reducing GHG emissions from fuels supplied in the province, driving innovation and investment in low carbon fuel production and strengthening fuel supply chains to increase the availability of low carbon energy.

B.C. is partnering with the Federal government and the First Nations Leadership Council on [Regional Energy and Resource Tables \(RERT\)](#), an initiative created by Canada to enable provinces, including First Nations, to address barriers and seize economic opportunities enabled by the transition to a low carbon economy. RERT will focus on priority areas and joint actions, including aligning resources, timelines, and regulatory processes to accelerate goals outlined in CleanBC and StrongerBC. The six priority areas are: electrification, critical minerals,

clean fuels/hydrogen, carbon management technology and systems, forest sector, and regulatory efficiency.

There is a growing trend in the global marketplace toward the consideration of Environmental, Social and Governance performance in important investment and decision-making. The B.C. government is committed to creating an economic and investment climate that is ESG-centric, as we continue building an inclusive, sustainable, and innovative economy that works for everyone. The Ministry is enabling digital tools to support B.C.'s sustainable economic development while maintaining high levels of environmental protection. The Ministry's collaboration with industry on the Energy & Mines Digital Trust (EMDT) empowers operators to securely and efficiently share critical data on their sustainability performance and prove where their products originated and how they were produced. EMDT has the potential to open new market opportunities for B.C.'s natural resource industry and solidify the province as a world leader in low carbon innovation.

In 2023/24, B.C.'s mining industry saw mixed results due to fluctuating commodity prices. Prices for precious metals (gold and silver) increased over 2022/23 and copper prices remained strong finding support in emerging technologies including ZEVs. However, the price for metallurgical coal decreased over 20% from 2022/23 due to global oversupply conditions and slowing demand from major steel producers including China. B.C.'s long-term outlook remains positive with the demand for critical minerals expected to grow significantly. B.C. is Canada's largest producer of copper and only producer of molybdenum and has potential for nickel, cobalt, graphite, rare earth elements, niobium, platinum group minerals, tantalum, vanadium, and zinc. B.C.'s low carbon mining sector has significant potential to attract global investment and a fair share of the [\\$3.8 billion in federal funds earmarked for a critical minerals strategy](#). Three new mines are anticipated to start production in the next three years and several new mines and expansions are currently under or scheduled for regulatory review.

The Ministry continues to focus on First Nation consultation and permitting improvements to advance a regulatory framework that protects the environment while ensuring competitiveness. Delivering on a [Declaration Act Action Plan](#) commitment to modernize the Mineral Tenure Act (MTA), including responding to a recent, related decision by the BC Supreme Court, will be key to the long-term outlook for the sector.

Oversight of mining activity is critical to fostering greater confidence in B.C.'s mineral exploration and mining sector. The Office of the Chief Inspector of Mines (OCIM) provides regulatory oversight of approximately 4700 permitted mines and mineral exploration sites across the province, as per the [Annual Report of the Chief Inspector of Mines 2022/23](#). This represents a 19% increase in permitted sites since 2020/21. This increase is largely due to growth in mineral exploration activity and placer mining in the province, which are closely linked to changes in commodity prices and speculation related to critical minerals, as well as efficiencies in permitting new sites. The numbers of permitted major mines, and stone, sand and gravel sites have remained relatively stable. The OCIM continues to prioritize inspections in consideration of site and operational risks, to ensure that inspection resources are allocated to the highest risk sites, which is in keeping with the Natural Resource Sector Compliance Management Framework. Additionally, the OCIM is actively engaging with First Nations to

increase participation and collaboration in compliance activities, including increasing the number of inspections accompanied by First Nations.

On September 1, 2023, the provisions of the *Energy Statutes Amendment Act, 2022* (Bill 37) were brought into force. The amendments renamed the *Oil and Gas Activities Act* to the *Energy Resource Activities Act*, established the [BC Energy Regulator](#) (formerly the BC Oil and Gas Commission), and expanded their responsibilities to include hydrogen, ammonia and methanol. Additional amendments clarified government's authority to regulate the safe and effective storage of carbon dioxide from any source; and, along with regulatory updates, advanced a provincial approach to carbon capture, utilization and storage, a key action in the CleanBC Roadmap to 2030.

The majority of natural gas produced in the province continues to make its way via pipelines to Alberta, eastern Canada and into the United States, with the remainder supplying domestic consumers. According to the Canada Energy Regulator's [Energy Future 2023](#), and the US Energy Information Agency's [Annual Energy Outlook 2023](#), strong demand for natural gas throughout North America is expected to continue into 2024. In terms of domestic consumption, the Ministry continues to develop policies to decarbonize B.C.'s natural gas grid and reduce emissions in the buildings and industry sectors.

Performance Planning

Goal 1: An innovative, low carbon energy portfolio that advances CleanBC economic opportunities across all sectors.

This goal is key to supporting the CleanBC Plan and Roadmap to 2030. The Ministry facilitates energy sectors which demonstrate leading environmental practices while providing opportunities and quality jobs for British Columbians. The first objective under this goal outlines the Ministry's efforts to electrify B.C.'s economy, which will contribute significantly to the reduction of greenhouse gas (GHG) emissions. The second objective outlines the Ministry's programs to incentivise British Columbians to decarbonize their energy choices to further reduce GHG emissions.

Objective 1.1: Accelerate efforts to electrify B.C.'s economy to support the provincial CleanBC plan.

Electrification of the B.C. economy supports the greenhouse gas (GHG) reduction targets set out in the CleanBC Plan and Roadmap to 2030.

Key Strategies

- Continue implementing CleanBC policy objectives and initiatives into ministry legislation, policies, programs, and operations to meet provincial energy, economic and climate goals.
- Support Government's coordinated, climate, energy, and economic objectives through energy innovation and clean technology development, including continued support provided by the Innovative Clean Energy (ICE) Fund.
- Develop a climate-aligned energy framework for B.C., which will articulate the Province's overall vision, principles, goals, and priority areas for direction that will lead to a clean, competitive, and inclusive B.C. that is powered by our world-leading low-carbon energy resources.
- Work with BC Hydro to support their plan to acquire new clean or renewable energy resources through a competitive Call for Power in 2024.
- Pursue new Indigenous community partnerships (including ownership and/or equity interest) in clean energy and infrastructure with BC Hydro and support Indigenous leadership in community clean energy projects.
- Work with BC Hydro to advance the electrification of the B.C. economy – including their updated electrification and capital plans.
- Work with the BC Utilities Commission to advance B.C.'s clean energy transition to support the Province's climate goals and affordability objectives.

- Work with BC Hydro to support their plan to acquire new clean or renewable energy resources through a competitive Call for Power in 2024.
- Continue the development and implementation of the CleanBC Remote Community Energy Strategy in collaboration with Indigenous nations, BC Hydro and the federal government to reduce the use of diesel fuel for electricity generation by 80% by 2030.

Discussion

The strategies under Objective 1.1 focus on electrification, industrial decarbonisation, and energy efficiency, all of which support the CleanBC plan and the plan transition to a low carbon energy system. The Ministry will work with Indigenous nations and communities, to provide partnership opportunities in the green economy. The Ministry will continue to monitor progress on its CleanBC policies and programs.

The Ministry will continue to work with Canada and stakeholders to expand electrification of industries of all sizes across sectors to fast-track their efforts to go green. The Ministry will work with academia, industry and all levels of government to support innovation of clean energy technology and systems.

This includes continuing to work with BC Hydro to ensure the Province's generation, transmission and distribution assets continue to deliver reliable and cost-effective service to all British Columbians, including those living in remote communities.

Objective 1.2: Effective programs and incentives that encourage British Columbians to decarbonize their energy usage, by choosing greener homes, buildings and transportation.

The Ministry encourages energy market transformation by incentivizing consumers and businesses to manage energy costs and switch to low carbon transportation and heating fuels in support of CleanBC outcomes.

Key Strategies

- Increase affordability and accessibility of clean transportation options through the [Zero-Emission Vehicles Act](#) and [GoElectric](#) program investments in public awareness, skills training, advanced research and commercialization, home and workplace charging rebates, public charging and hydrogen fuelling infrastructure, fleets, vehicle rebates across all vehicle classes, and commercial vehicle pilots.
- Work with utility, private and public partners to complete B.C.'s Electric Highway in 2024 to ensure geographic connectivity for EVs across all highways and major roads in B.C., and to install 10,000 public chargers by 2030.
- Enhance utility and provincial energy efficiency programs through improved accessibility, alignment with CleanBC and supports for low-income households.
- Continue to implement legislation and policies to advance energy efficiency and conservation in the built environment, including highest-efficiency equipment

standards and a virtual home energy rating tool to provide energy performance and retrofit guidance to homeowners, home buyers and renters.

- Implement a Clean Transportation Action Plan to reduce emissions in the transportation sector.

Discussion

The strategies under Objective 1.2 support clean energy and efficiency upgrades which reduce emissions in the transportation, buildings and fuels sectors, while ensuring affordability for British Columbians. The Ministry will continue to focus on the implementation of programs and raising public awareness, while monitoring its progress towards the listed outcomes.

The CleanBC Roadmap to 2030 (released in October 2021) proposes to complete B.C.'s Electric Highway in 2024 and reach a target of 10,000 public EV charging stations in B.C. by 2030. As of December 2023, the Electric Highway is 72% complete, with plans in place to complete the remaining stations in 2024. There are more than 4,800 public charging stations across B.C.

The CleanBC Go Electric Program was designed to reduce barriers to the adoption of electric vehicles (EVs) across all modes, including the cost of vehicles, access to infrastructure, public awareness, and skills training. It has been highly successful in starting the transition to a transportation system that is powered by clean energy. British Columbia is a leader in the adoption of ZEVs and has one of the highest uptake rates of zero-emission vehicles in North America. In 2023, the CleanBC Go Electric Passenger Vehicle Rebate program transitioned to being funded by revenues generated from BC Hydro's sale of credits created through the Low Carbon Fuel Standard.

In 2022, light-duty zero-emission vehicle (ZEV) sales represented 13% of all new light-duty vehicle sales in British Columbia, and as of September 2023 the ZEV share of new vehicle sales in 2023 was at 22%.¹ In 2024, the Ministry will draft regulations to implement the increased light-duty ZEV sales targets under *the Zero-Emission Vehicles Act* of 26% by 2026, 90% by 2030, and 100% by 2035, and developing targets for larger vehicle weight classes.

The CleanBC [Better Homes](#) and [Better Buildings](#) program provides financial incentives to help households, businesses and the public sector save energy and reduce GHG through heating equipment replacement and building envelope improvements. As of September 2023, the CleanBC [Better Homes](#) and the CleanBC [Income Qualified Program](#) have processed 55,144 residential retrofit rebates province-wide, including 15,031 rebates for heat pumps, since the programs were launched in 2018 and 2021 respectively. At least 377 capital incentives have also been approved for energy-efficiency and fuel-switching projects in large commercial, institutional and multi-unit residential buildings.²

The Ministry continues to reduce GHG emissions from transportation fuels through B.C.'s Low Carbon Fuel Standard (LCFS). The LCFS requires fuel suppliers to progressively decrease the average carbon intensity of the fuels they supply in B.C. Effective January 1, 2023, the LCFS

¹ Compiled by Ministry of Energy, Mines and Low Carbon Innovation staff from ZEV sales. Light-duty vehicle is defined here as one that weighs 4,536kg (10,000lbs) or less.

² Data source: Compiled by the Ministry of Energy, Mines and Low Carbon Innovation.

increased its stringency by raising the carbon-intensity reduction requirement for gasoline and diesel fuel pools from 20% to 30% by 2030, relative to 2010 levels. The new Low Carbon Fuels Act came into force on January 1, 2024, which streamlines the LCFS and enable a broader scope for emission reductions from regulated fuels.

The LCFS remains one of the most successful approaches to reducing GHGs from transportation. The LCFS considers the "fuel lifecycle" which encompasses all the components of a fuel product's life including extraction or production of the feedstock (raw material used to produce the fuel), through to the end use of the fuel. The LCFS is anticipated to meet 20% of CleanBC's 2030 target, by reducing GHG emissions generated in B.C. by 4.8 million tonnes in 2030. The LCFS is expected to reduce overall lifecycle emissions by 10 million tonnes in 2030.

Performance Measures

Performance Measure	2023/24 Forecast	2024/25 Target	2025/26 Target	2026/27 Target
[1a] Clean, renewable and low carbon energy as a share of total utility and transportation energy sales ¹	33%	34%	35%	36%

Data source: Compiled by the Ministry of Energy, Mines and Low Carbon Innovation and includes data from BC Hydro.

¹ The following data is tracked to provide the performance measure: BC Hydro's performance in clean procurement; FortisBC's performance in deploying Renewable Natural Gas; relative sales of electricity and natural gas using data from the largest utilities; and transportation fuels data.

Discussion

The provincial CleanBC Roadmap to 2030 highlights the critical role of electricity and low carbon fuels (such as hydrogen, and biofuels; in reducing emissions where they displace higher carbon energy sources. This performance measure directly relates to the goal of an innovative, low carbon energy portfolio in B.C., by measuring the proportion of clean, renewable, and low carbon energy relative to GHG emitting energy sources. An increasing share of clean, renewable and low carbon energy will be achieved through measures such as increasing the proportion of biofuels in transportation, supporting fuel switching from fossil natural gas to electricity or low carbon alternatives (e.g., renewable natural gas) by gas utility customers. Targets under this measure are projected from historical performance, with 1% improvement per year selected for consistency with 2030 CleanBC targets.

Performance Measures

Performance Measure[s]	2023 Forecast ¹	2024 Target	2025 Target	2026 Target
[1b) Zero-Emission Vehicle sales per cent of new light-duty vehicle sales.	22%	28%	32%	35%
[1c] Zero-Emission vehicle sales per cent of on-road medium- heavy-duty vehicle sales	1%	3%	5%	7%

Data Source: Compiled by Ministry of Energy, Mines and Low Carbon Innovation staff from ZEV sales. Light-duty vehicle is defined here as one that weighs 4,536kg (10,000lbs) or less.

¹ ZEV data is reported on a calendar year basis in the legislated ZEV Annual Update.

Discussion

Transportation accounted for 38 per cent of B.C.'s total GHG emissions in 2021. As a result, to reduce GHG emissions and meet B.C.'s climate targets, significant and sustained action needs to be taken to reduce GHG emissions from light, medium and heavy-duty vehicles. Increased adoption of ZEVs will contribute to reductions in B.C.'s GHG emissions and improve air quality. Performance measure 1b measures progress towards Government's target of increasing the number of light duty ZEVs in B.C., reaching 100% of all new light-duty vehicle sales by 2035, while new measure 1c tracks Government's commitment to implement a medium- and heavy-duty vehicle ZEV standard. Due to the increasing pressure ZEVs place on clean energy supplies and infrastructure, transitioning to clean electricity and hydrogen in the transportation sector necessitates significant efforts to reduce overall transportation energy demand (e.g., shift goods movement from truck to rail, and passenger movement from individual vehicles to walking, cycling, transit including passenger rail, etc.). The Clean Transportation Action Plan will outline further policies and performance measures in that area.

Goal 2: A sustainable and competitive mining sector that supports Indigenous reconciliation, reflects high environmental, social and governance (ESG) standards and contributes to the transition to a low carbon economy with responsibly produced minerals and metals

A sustainable sector provides opportunities for all British Columbians, while contributing to a clean economy that combats climate change.

Objective 2.1: A strong, responsible, low carbon and innovative mining sector that creates good, family supporting jobs.

Innovation in mining contributes to the sector's competitiveness and fosters technological change which supports sustainable employment.

Key Strategies

- Modernize the Mineral Tenure Act (MTA) in consultation and cooperation with First Nations and First Nation organizations in accordance with the Declaration Act Action Plan through the newly created Mineral Tenure Act Modernization Office.³
- Support reconciliation with Indigenous peoples, continuously improve consultation and engagement processes on relevant permit applications and support work on strategic agreements for major mine developments.
- Continue to improve the authorizations review process for mining applications by implementing updated guidance documents and policies, as well as streamlined processes for application reviews for major and regional mines and exploration projects.
- Finalize a B.C. Critical Minerals Strategy to position B.C. to supply materials to the emerging clean global economy, accelerate the domestic low-carbon shift, drive inclusive economic development and economic reconciliation, and access federal funding opportunities.
- Update regulatory and policy tools that support and align improving B.C.'s stewardship of biodiversity and land use planning with a competitive, prosperous low carbon mining future.

Discussion

EMLI is developing a Critical Minerals Strategy to help unlock our potential to produce critical minerals, such as copper, molybdenum, nickel, cobalt and others. This Strategy also looks at how best to add value and grow downstream opportunities such as processing and manufacturing, as well as battery recycling that will add mined materials back into the supply chain. Beginning in 2023/24, the Province has allocated \$6 million over three years for this work.

Foundational to the Strategy is continuing to implement the *Declaration on the Rights of Indigenous Peoples Act* and the Declaration Act Action Plan, MTA modernization, and advancing an efficient mining regulatory framework that protects the environment while ensuring competitiveness.

The Strategy will capitalize on this critical mineral-intensive global transition to clean energy with B.C. positioned as a supplier of choice supported by our strong geology, stable government, and social, environmental and governance (ESG) performance positions.

³ To prioritize and support this important work, the Ministry created a dedicated MTA modernization office in June 2023.

The Ministry sees the B.C. Critical Mineral Strategy as complementary to the federal strategy while advancing provincial interests and will support access to B.C.'s share of federal funding programs, such as the \$3.8 billion in federal funds earmarked for critical minerals in Canada.

The Ministry created a dedicated MTA modernization office in June 2023. The MTA Modernization office has started to engage and will be working closely with First Nations rights and title holders, as well as with First Nations organizations on transformation of the MTA. Industry and other interested parties will be consulted as stakeholders.

The foundational driver of this work is alignment with the Declaration on the Rights of Indigenous Peoples Act (Declaration Act). Transformation of the MTA will also incorporate implementation of a recent B.C. Supreme Court decision on the MTA, while striving towards a healthy and responsible mining sector.

Objective 2.2: Oversight of the mining industry is continuously improved to protect the environment, health and safety, and the public interest.

Industry oversight contributes to both a safe and sustainable mining sector that produces the minerals needed to transition to a low carbon economy.

Key Strategies

- Continue enhancing environmental, climate and health and safety standards by reviewing legislation and regulations and continuing the work of the Code Review Committee to ensure the Health, Safety and Reclamation Code for Mines in B.C. is responsive to emerging trends and changing standards of practice and contributes to reconciliation with Indigenous nations.
- Ensure that owners of mining and exploration projects are bonded and responsible for environmental clean up costs associated with their projects and continue to support the Public Interest Bonding Strategy for all large industrial sites led by the Ministry of Environment and Climate Change Strategy.
- Continue undertaking mine audits to evaluate the effectiveness of the regulatory framework for mining in B.C. and implement actions to continuously improve the mining regulatory framework.
- Ensure timely communication about health and safety incidents to support continuous improvement opportunities for mine operators.
- Continue identifying abandoned mines and assessing and mitigating public hazards.

Discussion

The strategies reflect a combined oversight focus on responsible development, the environment, health and safety as well as the impacts of the sector on climate. This supports the implementation of a critical minerals strategy and the continuous improvement envisioned in Objective 2.2. Continuing audits, the Code Review Committee's ongoing work, and the internal tracking of mine inspections per performance measure 2b (Minimum mine

inspections) will ensure that the regulation of mining remains effective over the coming fiscal year.

Performance Measures

Performance Measure	2023/24 Forecast	2024/25 Target	2025/26 Target	2026/27 Target
[2a] B.C.'s share of Canadian mineral resource development investments	16.4%	17%	17.5%	18%

Data source: Ministry of Energy, Mines and Low Carbon Innovation and Natural Resources Canada

This may be influenced by provincial actions related to critical minerals and reconciliation, as well as overall global market conditions.

Discussion

The Ministry continuously strives to attract long-term investment in B.C.'s mining sector and related service industries to support lasting, well-paying jobs for British Columbians. Government can help to reduce risk and sustain investment levels through streamlined processes for mine project permitting, and this measure reflects the B.C. mining sectors' competitive performance. Between 2020-2022, B.C. has seen mineral resource development investment increase by 82%. However, investment in other jurisdictions, namely Ontario, Quebec, and Saskatchewan have also seen large increases which has muted the increase in B.C.'s share of Canadian mineral resource development investments (16.7% in 2022/23 vs. 15.1% in 2020/21). The current 2023/24 forecast shows mineral resource investment in B.C. increasing by a moderate \$175M, however, the Province's share of Canadian investment is forecasted to decline from 16.7% to 16.4% with other Canadian jurisdictions anticipated to report significant increases to investment in their mineral resource sectors over 2023/24. Considering the significant and increasing amount of investment in Canada's mining sector, an annual increase of 0.5% from the 2023/24 forecast for this performance measure is a realistic target for B.C. The level of investment in B.C.'s mineral resources is a measure of the sector's competitiveness. Additionally, given the increasing focus on responsible investment by financial institutions, it is also a reflection of B.C.'s high ESG standards.

Performance Measure	2023/24 Forecast	2024/25 Target	2025/26 Target	2026/27 Target
[2b] Minimum mine inspections	1,600	1,600	1,600	1,600

Data source: Manually compiled by Ministry of Energy, Mines and Low Carbon Innovation.

Discussion

Compliance verification activities, such as inspections, are a key part of regulatory oversight under the Natural Resource Compliance Management Framework to help ensure that mines are operating responsibly and protecting the environment, human health and public safety. Budget 2019 provided the Ministry with funding to hire new inspectors and build a robust and stable inspectorate. This gave the OCIM the ability to increase the minimum annual inspection

target from 1350 to 1600. The minimum annual inspection target provides the OCIM with a consistent baseline for effective annual risk-based inspection planning that is in line with the available resources, while maintaining the ability to efficiently and effectively implement other key components to regulatory oversight, such as reviewing compliance to permit conditions, responding to public complaints, refining and undertaking escalated enforcement actions as necessary, and responding to and investigating incidents that occur on mine sites. This approach also provides the OCIM with the ability to focus on other critical priorities such as increasing collaboration with First Nations on compliance activities, issuing certifications, and adjusting practice and resources to respond to new and emerging practices on mine sites. The OCIM continually seeks opportunities to engage with mine operators to create efficiencies for the inspectorate and to adopt best practices aimed at promoting responsible practices on mine sites. For example, the OCIM continues to use desktop compliance reviews, which is a practice that the OCIM adopted during the pandemic. The OCIM, is also exploring further opportunities for increasing the use of compliance promotion activities, such as developing guidance in consultation with industry on how to improve health and safety systems at mines. Last year, the OCIM exceeded the inspection target by monitoring inspection totals throughout the year and using resources responsibly through efficiencies such as joint inspections and a targeted inspection blitz.

Goal 3: B.C.'s oil and gas industry reduces its carbon footprint in a manner that supports economic sustainability, advances Indigenous reconciliation and exhibits high environmental, social and governance (ESG) performance.

Reducing the carbon footprint of oil and gas activities enhances the industry's ESG performance.

Objective 3.1: Policies, technologies and processes that support the reduction of greenhouse gas emissions in the oil and gas sector.

Reducing the carbon footprint of oil and gas activities enhances the industry's ESG performance.

Key Strategies

- Lead supply-side policy for hydrogen, biofuels, geothermal, carbon capture, utilization and storage, and natural gas in support of an inclusive and sustainable energy transition.
- Work with the BC Energy Regulator and Climate Action Secretariat (CAS) on the development of a sector- specific approach to reducing methane emissions through world-class regulations and research, an integrated methane measurement and monitoring program, and the promotion of innovative technologies.

- Encourage industry to invest in emission reduction technologies through the development and launch of a new program that will repurpose deep well credits into a land-healing and emissions-reduction project pool and explore options for transitioning any remaining oil and gas subsidies to clean energy and tech sectors.
- Work with the BC Energy Regulator and CAS to ensure an appropriate enabling environment to support the deployment of carbon capture and storage to reduce carbon dioxide emissions from the oil and gas sector.
- Work with CAS to reduce GHG emissions in the industrial sector by implementing regulations for net zero emissions plans and by setting a regulatory cap on oil and gas sector emissions to support B.C. meeting its sectoral targets.

Discussion

This objective and its strategies support Government's climate goals and the implementation of the CleanBC Roadmap to 2030 in relation to the oil and gas sector. The strategies all focus on emissions reduction and the storage of carbon dioxide. GHG emissions reduction positively impacts the province's carbon footprint and supports its ESG credibility. This in turn contributes to long-term economic sustainability, ensuring that the sector can continue to provide high-paying jobs and revenue to the Province as it transitions to a low-carbon energy future.

The Roadmap to 2030 includes commitments to reduce (GHG) emissions produced by the oil and gas industry in line with its sectoral target of 33-38 percent reductions from 2007 levels by 2030. This includes a commitment to achieve a 75 percent reduction in methane emission from 2014 levels by 2030 and near elimination of methane emissions by 2035. Through its work with BCER and CAS, EMLI will review and strengthen methane emissions regulations to ensure achievement of the 2030 target and advance supportive research for the 2035 target. The BC Methane Emissions Research Collaborative will develop and implement a new three-year research plan, and focused methane measurement campaigns, in partnership with the United Nations Environment Programme and Carleton University will continue.

Ensuring an enabling environment for carbon capture and storage delivers on the Roadmap commitment to advancing a provincial approach to carbon capture, utilization and storage and negative emissions technologies and will further be advanced by Ministry supported research initiatives to assess the geological potential for permanent underground storage in promising regions around the province.

The strategies support actions in the New Energy Action Framework to develop a regulatory emissions cap on oil and gas sector emissions to help meet sectoral emission reduction targets.

Objective 3.2: Value-added development of B.C.'s energy resources to maximize the benefits to all British Columbians and provide a fair return from our resources.

Oil and natural gas activities generate revenues to the Province that support services such as health care and education and facilitate reconciliation with Indigenous nations.

Key Strategies

- Promote price transparency and public accountability in the gasoline and diesel market through the implementation of the *Fuel Price Transparency Act*.
- Implement B.C.'s new oil and gas royalty system that encourages additional oil and gas emissions reduction projects, supported by a new land-healing and emissions-reduction pool program.
- Drive clean energy investment in and provide regulatory certainty and project support for a wide range of clean tech sectors.
- Add value to B.C.'s abundant natural gas resources by continuing to work with industry, Indigenous Peoples, BC Hydro, and the Climate Action Secretariat to ensure oil and gas development and related infrastructure supports CleanBC and clean growth.
- Work to implement a cumulative effects and conservation management framework in Northeast B.C. with respect to oil and gas energy development, as part of the Province's commitment to meeting the B.C. Supreme Court declarations from *Yahey v. B.C.*

Discussion

The strategies focus on transparency, GHG emission reduction, and initiatives that support clean growth and reconciliation with Indigenous peoples. This value-added approach supports the positive social outcomes envisaged by the goal and objective for the responsible development of B.C.'s oil and gas resources. A fair return provides revenue that supports valuable public services like health care and education. In addition to Relative annual investment in natural gas and oil exploration and development (B.C. as % of Canada) (measure 3b,) which reports our investment relative to Canada, the Ministry will work with its industry and regulatory partners to ensure that development occurs in a responsible manner.

The Roadmap to 2030 commits B.C. to a net zero future, which will be backed by legislation. As a result of its net zero pledge, the Province will be instituting a new requirement for all new industrial facilities, including oil and gas facilities, to have enforceable plans to achieve net-zero emissions by 2050.

Performance Measures

Performance Measure	2023/24 Forecast	2024/25 Target	2025/26 Target	2026/27 Target
[3a] Annual GHG reductions from infrastructure improvements under royalty programs	290,000 tonnes	410,000 tonnes	500,000 Tonnes	620,000 Tonnes

Data source: Ministry of Energy, Mines and Low Carbon Innovation

Discussion

This measure tracks the GHG reductions from oil and gas infrastructure royalty programs, which directly relates to the environmentally responsible development of oil and gas resources in B.C. The purpose of the programs is to help achieve the oil and gas sectoral targets and methane reduction targets, while also facilitating job creation, rural development and maintaining competitiveness. Through royalty deductions, infrastructure royalty programs partner with industry in projects to advance new technologies and processes that reduce methane emissions and promote innovative infrastructure including electrification projects to support reaching GHG emission reduction targets.

In order to receive royalty deductions under the infrastructure programs, project proponents for emission reduction projects must submit an Emissions Reductions Report that documents emissions reductions attributed to completion of the project and include a Verification Statement provided by an accredited third-party.

On May 19, 2022, the Province announced a new oil and gas royalty system. The new royalty system encourages additional oil and gas emissions reduction projects, which will be supported through a new Healing the Land and Emissions Reduction program. Projects continue to be completed under previous infrastructure programs resulting in emissions reductions and this completion of infrastructure will continue over the next several years. Previous infrastructure royalty programs are no longer being offered under the new royalty system, but the projects completed will continue to reduce GHG emissions.

Under the new program being considered, companies may transfer existing deep-well credits to fund healing the land and emission reduction work that goes beyond regulatory requirements. This new program would contribute to achieving the emission reduction targets under Performance Measure 3a in addition to the emission reductions achieved from projects approved under previous infrastructure programs as those projects are completed and emission reductions are verified.

Performance Measure	2023/24 Forecast¹	2024/25 Target	2025/26 Target	2026/27 Target
[3b] Relative annual investment in natural gas and oil exploration and development (B.C. as % of Canada) ^{1,2}	14%	14%	14%	14%

Data source: Ministry of Energy, Mines and Low Carbon Innovation based on information from Statistics Canada and Canadian Association of Petroleum Producers Net Cash Expenditure historical data and forecasts. All data is only available and provided by calendar year.

¹Statistics Canada data not available until later in 2024

Discussion

The target is set to maintain B.C.'s share of investment at a level consistent with recent years reflecting government's goal to see the responsible development of the province's resources. This performance measure aligns with government's policy intentions under the New Energy Action Framework to design an oil and gas sector emissions cap that will not limit production in B.C.. Measuring relative annual investment in natural gas and oil exploration and development is an indicator that investment in B.C., where the sector's relative emissions intensity is low, is not moving to other higher emissions intensity jurisdictions, i.e. carbon leakage is checked. Investment in the development of and reducing emissions from B.C.'s oil and gas resources are important for maximizing value to British Columbians. Maintaining B.C.'s share of annual investment in Canadian oil and gas resources, including value-added oil and gas development and the reduction of the carbon intensity of natural gas production, supports job creation, economic growth, and infrastructure development in B.C., and is important to provincial revenues and economic growth. Investment in B.C.'s oil and gas resources and the return it provides to the Province in the form of revenues support the provision of benefits and services to British Columbians. These revenues also provide the means to advance reconciliation with B.C.'s Indigenous Nations and provide opportunities for increasing economic benefits to be realized by Nations from resource development.

Financial Summary

(\$000s)	2023/24 Restated Estimates ¹	2024/25 Estimates	2025/26 Plan	2026/27 Plan
Operating Expenses				
Responsible Mining and Competitiveness	28,383	29,927	30,413	30,194
Mines Health, Safety and Enforcement	13,670	14,120	14,120	14,120
Energy Decarbonization	37,319	37,651	37,656	37,656
Electricity and Utility Regulation	3,002	3,206	3,201	3,201
Energy Resources	18,496	18,821	18,821	18,821
Strategic and Indigenous Partnerships	3,427	3,570	3,570	3,570
Executive and Support Services	14,198	13,816	13,998	13,998
First Nations Clean Energy Business Fund	8,044	8,375	9,177	8,524
Innovative Clean Energy Fund	10,128	11,768	10,268	8,735
Total	136,667	141,254	141,224	138,819
Capital Expenditures				
Executive and Support Services	546	546	546	546
Total	546	546	546	546
Other Financing Transactions				
By Core Business (and Purpose)				
British Columbia Energy Regulator Disbursements	45,000	53,600	53,300	54,800
British Columbia Energy Regulator Receipts	(45,000)	(53,600)	(53,300)	(54,800)
Net Cash Requirements (Source)	0,000	0,000	0,000	0,000
Total Disbursements	45,000	53,600	53,300	54,800
Total Receipts	(45,000)	(53,600)	(53,300)	(54,800)
Total Net Cash Requirements (Source)	0,000	0,000	0,000	0,000

¹ For comparative purposes, amounts shown for 2023/24 have been restated to be consistent with the presentation of the 2024/25 Estimates.

* Further information on program funding and vote recoveries is available in the [Estimates and Supplement to the Estimates](#).

Appendix A: Public Sector Organizations

As of February 28, 2024, the Minister of Energy, Mines and Low Carbon Innovation is responsible and accountable for the following organizations:

BC Energy Regulator

The BC Energy Regulator is a single-window regulatory agency with responsibilities for regulating oil, gas, hydrogen and renewable geothermal operations in B.C. The BC Energy Regulator regulates activities from exploration and development to pipeline transportation and reclamation.

BC Hydro

BC Hydro is one of the largest electricity suppliers in Canada, generating and delivering electricity to 95 per cent of the population of B.C., and serving over four million people.

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION
(\$000)

VOTE 23 Ministry Operations

Description	Total 2023/24 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
Responsible Mining and Competitiveness	28,383	21,010	1,235	5,352	—	27,597	50	1,343	—	3,150	237	230	—	—	108
Mines Health, Safety and Enforcement	13,670	8,987	868	2,282	—	12,137	50	818	—	588	124	281	—	—	29
Energy Decarbonization	37,319	7,678	—	1,950	—	9,628	—	87	—	1,826	806	89	354	—	—
Electricity and Utility Regulation	3,002	3,530	—	896	—	4,426	—	437	—	483	118	141	75	—	—
Energy Resources	18,496	7,250	—	1,842	—	9,092	—	354	—	2,490	317	350	—	—	69
Strategic and Indigenous Partnerships	3,427	2,213	—	562	—	2,775	—	91	—	513	15	74	—	—	—
Executive and Support Services	14,198	1,773	36	474	58	2,341	—	177	3,381	438	791	2,459	—	—	—
Minister's Office	826	541	—	161	58	760	—	47	—	—	10	20	—	—	—
Corporate Services	13,372	1,232	36	313	—	1,581	—	130	3,381	438	781	2,439	—	—	—
Total	118,495	52,441	2,139	13,358	58	67,996	100	3,307	3,381	9,488	2,408	3,624	429	—	206

Statutory Appropriations

Description	Total 2023/24 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
First Nations Clean Energy Business Fund special account	8,044	159	—	41	—	200	—	—	—	—	—	—	—	—	—
Innovative Clean Energy Fund special account	10,128	325	—	82	—	407	—	5	—	16	—	5	—	—	—
Total	18,172	484	—	123	—	607	—	5	—	16	—	5	—	—	—

70	72	73	75	Total Operating Costs	77	79	80	Total Govt Transfers	81	83	85	Total Other Expenses	86	88	Total Internal Recoveries	89	90	Total External Recoveries	Total 2024/25 Operating Expenses
134	—	—	—	5,252	—	—	116	116	—	—	16	16	—	(1)	(1)	(1)	(3,052)	(3,053)	29,927
29	—	—	—	1,919	—	—	59	59	—	—	8	8	—	(1)	(1)	(1)	(1)	(2)	14,120
—	—	—	—	3,162	—	—	24,863	24,863	—	—	1	1	—	(1)	(1)	(1)	(1)	(2)	37,651
—	—	—	—	1,254	—	—	1,505	1,505	—	—	3	3	—	(3,980)	(3,980)	(1)	(1)	(2)	3,206
63	—	5,934	—	9,577	—	—	100	100	—	—	55	55	—	(1)	(1)	(1)	(1)	(2)	18,821
—	—	—	—	693	—	—	100	100	—	—	5	5	—	(1)	(1)	(1)	(1)	(2)	3,570
306	—	1,042	1,323	9,917	—	—	—	—	—	—	2,317	2,317	—	(753)	(753)	(3)	(3)	(6)	13,816
—	—	—	—	77	—	—	—	—	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	834
306	—	1,042	1,323	9,840	—	—	—	—	—	—	2,317	2,317	—	(752)	(752)	(2)	(2)	(4)	12,982
532	—	6,976	1,323	31,774	—	—	26,743	26,743	—	—	2,405	2,405	—	(4,738)	(4,738)	(9)	(3,060)	(3,069)	121,111

70	72	73	75	Total Operating Costs	77	79	80	Total Govt Transfers	81	83	85	Total Other Expenses	86	88	Total Internal Recoveries	89	90	Total External Recoveries	Total 2024/25 Operating Expenses
—	—	—	—	—	5,559	—	2,619	8,178	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	8,375
—	—	—	—	26	—	—	11,338	11,338	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	11,768
—	—	—	—	26	5,559	—	13,957	19,516	—	—	—	—	—	(2)	(2)	(2)	(2)	(4)	20,143



January 15, 2024

Honourable Josie Osborne
Minister of Energy, Mines and Low Carbon Innovation
Parliament Buildings
Victoria, BC V8V 1X4

Dear Minister Osborne:

Thank you for agreeing to serve as Minister of Energy, Mines and Low Carbon Innovation. I trust in your leadership at this critical time to deliver results for the people of British Columbia.

British Columbians continue to recover from and respond to the upheaval caused by the COVID-19 pandemic and climate related natural disasters, while global inflation is driving up costs for more households and the world's economic outlook is concerning. Now more than ever, we need to focus on building a secure, low emission, sustainable economy, and a province where everyone can find a good home – whether you live in a rural area, in a city, or in an Indigenous community. We will continue working toward true and meaningful reconciliation by supporting opportunities for Indigenous Peoples to be full partners in the inclusive and sustainable province we are building together.

Our government is committed to delivering on the mandate British Columbians gave us in 2020. Together we can make life better for people in B.C., improve the services we all rely on, and ensure a sustainable province for future generations.

As we renew our work, my priority as Premier is to deliver results that people can see and feel in four key areas:

- **Attainable and affordable housing:** In the wake of soaring prices and record migration to B.C., we will take on the important work of building new homes that are actually attainable for the middle class, while continuing our work to address the housing crisis for those in distress on our streets.

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**Office of the
Premier**

Web Site:
www.gov.bc.ca

Mailing Address:
PO Box 9041 Stn Prov Govt
Victoria BC V8W 9E1

Location:
Parliament Buildings
Victoria

- **Safer communities:** To address concerns about public safety, both for the people struggling with mental health and addiction on our streets, as well as the feeling that downtown centres are not as safe as they were before the pandemic, we will work with our partners at all levels of government, the justice and health care systems, the non-profit sector, and community leaders to find solutions for this complex challenge facing our province, and work overtime to seize the assets of high-level criminals.
- **Improved health care:** Amid unprecedented pressures we will continue to work to strengthen our public health care system, from family doctors to new hospitals, so care is there for each of us when we need it.
- **A sustainable, clean, secure, and fair economy:** We will continue our work investing in British Columbians, fighting racism and promoting equity, and building a clean economy that addresses our obligations to combat climate change by driving down emissions, while creating good, family supporting jobs.

Energy is central to our economic growth, our response to climate change, and to delivering the basics that British Columbians expect – heat, light, transportation, and so much more. How and where we deliver energy, and how we leverage our natural energy advantages as a solution to the generational challenge of climate change, will determine how our province is positioned to benefit from the low-carbon economy of the future for generations to come.

British Columbia has significant environmental, social and governance (ESG) advantages in our partnerships with First Nations, our high standards for major project environmental protection, and our commitment to transparent and independent permitting and corporate regulation. Combined with our rich mineral and metal deposits across the province, this puts British Columbia in an enviable position to help deliver high-standard products from our mining sector to build global solutions to climate change.

Applying innovation in partnership with the private sector, labour, First Nations, and end users will ensure British Columbia doesn't just produce raw materials, but turns them into an economic development engine of related technologies that are ready for deployment around the world. British Columbia can and should be a leader in using our energy, mining and innovation to address the challenges faced by the world.

Since 2020, our government has made considerable progress on important initiatives including:

- Launching the transitional phase of a new oil and gas royalty system that puts the interests of British Columbians first and replaces outdated and inefficient fossil fuel subsidies.

- Accelerating zero emission vehicle adoption by increasing the maximum rebate amounts for eligible electric vehicles and ensuring they are going to those who need them most, increasing rebates to buy and install charging infrastructure at home and work, expanding the public network of charging stations across the province, and exempting used zero emission vehicles from PST.
- Driving made-in-B.C. innovation through the establishment of a new 'B.C. Centre for Innovation and Clean Energy' where areas such as carbon capture and storage and renewable fuels will be advanced.

As you continue to make progress on items in your previous mandate letter, over the remaining period of this mandate I expect you to prioritize making progress on the following:

- Drive delivery of your ministry's CleanBC Roadmap to 2030 policies and programs on time and on target to help ensure we meet our legislated GHG goals.
- Develop targeted programs to support clean energy and efficiency upgrades for low-income and rental housing that will help reduce emissions while making our homes more comfortable and affordable, with support from Ministers of Housing, Environment and Climate Change Strategy, and Social Development and Poverty Reduction.
- Develop and implement a climate-aligned energy framework for B.C. with an overall goal of maximizing our province's production of clean energy to use at home and for export.
- Improve timing and transparency of permitting processes to support sustainable economic development while maintaining high levels of environmental protection, aligned with cross-government work on permitting led by the Minister of Water, Land and Resource Stewardship.
- Work with BC Hydro to implement its Electrification Plan and to ensure the province is well positioned to electrify B.C.'s economy and industry, including options for Indigenous ownership and/or equity interest in BC Hydro infrastructure and Indigenous partnership in clean energy projects.
- Work with the Minister of Environment and Climate Change Strategy to develop policies and regulations that meet B.C.'s 2030 sectoral and methane targets for the oil and gas sector while ensuring alignment with the federal cap on oil and gas emissions.

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- In collaboration with the Minister of Transportation and Infrastructure, complete the Clean Transportation Action Plan to support shifts to sustainable modes of travel, advance modern transportation systems, and help meet our ambitious greenhouse gas targets for the transportation sector.
- Work with the BC Utilities Commission to identify an appropriate role for the Commission in supporting B.C.'s clean energy transition, in alignment with our province's climate goals to achieve net zero by 2050 and affordability objectives.
- Review and identify opportunities to transition fossil fuel subsidies to the clean tech and clean energy sectors.
- Support B.C.'s mining sector by launching the Mining Innovation Hub and expedite a provincial critical minerals strategy that positions British Columbia to take advantage of the emerging clean global economy.
- Advance the co-development of a modernized Mineral Tenure Act with First Nations and Indigenous organizations, in alignment with the DRIPA Action Plan commitment.

Our work together must continue to evolve to meet the changing needs of people in this province. Issues not contemplated by this letter will come forward for government action and I ask you to bring such matters forward for consideration by the Planning and Priorities Committee of Cabinet, with the expectation that any proposed initiatives will be subject to the usual Cabinet and Treasury Board oversight and include measurable outcomes for British Columbians. Your ministry's priorities must reflect our government's overall strategic plan as determined by Cabinet.

British Columbians expect their elected representatives to work together to advance the public good. That means seeking out, fostering, and championing good ideas regardless of their origin. I expect you to reach out to elected members from all parties as you deliver on your mandate. Further, you will build thoughtful and sustained relationships both with title holders and through public and stakeholder engagement plans that incorporate diverse perspectives early in the policy development process. Federal partnerships and resources will be particularly important and, on behalf of our government, you will engage with the federal government on advancing priorities to improve the lives of British Columbians.

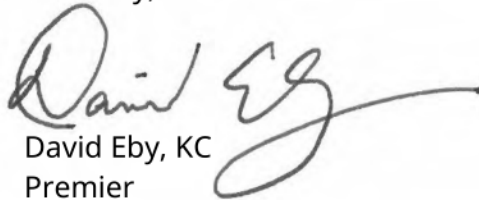
As a Cabinet, we will uphold the highest standards of ethics, collaboration, and good conduct in service of the public, and as a Minister of the Crown, you are expected to review, understand, and act according to the Members' Conflict of Interest Act. You will establish a collaborative working relationship with your Deputy Minister, and the public servants under their direction, who provide the professional, non-partisan advice that is

fundamental to delivering on our government's priorities. Your Minister's Office must meet the highest standards for integrity and provide a respectful, rewarding environment for all staff.

The rural and urban challenges that we face are urgent and complex. In response, we must be forward-thinking, strategic, and ready to work across disciplines and old divisions in new ways. Labour shortages are a major issue globally, and British Columbia is no exception, including in the public service. Maintaining the BC Public Service as an employer of excellence will be key to retaining and recruiting the diverse professionals we rely on to deliver essential services, advice, and analysis.

At the core of this work is listening and responding to the priorities of people in B.C. Together, we can deliver results in very real ways – ways that people can see, feel, and touch, and that change their lives for the better. Thank you for doing this important work with me.

Sincerely,

A handwritten signature in black ink, appearing to read "David Eby", with a long horizontal flourish extending to the right.

David Eby, KC
Premier

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: CleanBC

Drafted/Revised: March 11, 2024

Issue: CleanBC Implementation – Roadmap to 2030

Response:

- The 2018 CleanBC plan and the 2021 CleanBC Roadmap to 2030 (Roadmap), are detailed plans on how the Province will create an equitable, resilient, low carbon future to meet our greenhouse gas (GHG) emissions targets.
- The focus of CleanBC is on energy efficiency, clean fuels and electrification in order to reduce GHG emissions and transition away from fossil fuels.
- The Roadmap commits to maximizing reductions in GHG emissions by enhancing clean transportation and low carbon fuels standards, implementing a GHG emissions cap for natural gas utilities, advancing building energy codes and standards, and continuing to implement the B.C. Hydrogen Strategy.
- The most recent official emissions data from 2021 shows emissions are down 6% since the start of CleanBC in 2018. Emissions are down 4% from 2007 levels, despite GDP growing by 35% in the same period.
- The carbon intensity of B.C.'s economy has decreased 24% since 2007, and GHG emissions per capita are down 21% between 2007 and 2021.
- The Climate Solutions Council provides independent advice to Government on CleanBC to strengthen our actions moving forward.

Background/Status:

- B.C.'s legislated emission targets for 2030, 2040 and 2050 are 40%, 60% and 80% below 2007 levels, respectively. The Province has also set sectoral targets and will develop legislation to ensure B.C. reaches net-zero emissions by 2050.
- In 2021, B.C.'s net GHG emissions were 60.9 million tonnes (Mt) of carbon dioxide equivalent (CO₂e). This represents a net decrease of 4% from 2007 levels (-2.8 Mt CO₂e).
- CleanBC and the Roadmap are a collaborative effort of many ministries across the B.C. Government. The Ministry plays a leading role in developing policies, programs, and standards that decarbonize energy systems, improve energy efficiency, and reduce GHG emissions across B.C.'s economy.

- Launched in December 2018, CleanBC set out the pathway to achieve 75% of the 2030 emission reduction target. In 2020, a new interim GHG reduction target was set at 16% below 2007 levels by 2025. The recently released Roadmap, together with CleanBC, set out actions to achieve 100% of the 2030 target.
- The Roadmap includes a wide range of accelerated and expanded actions that are being implemented in this mandate to reduce pollution and build a cleaner, stronger economy for everyone, including:
 - accelerated Zero Emission Vehicle Standard targets, a strengthened Low Carbon Fuel Standard, and a new emissions cap for natural gas utilities;
 - a revised carbon pricing system to meet or exceed the federal benchmark, with supports for people and businesses;
 - expansion of the Better Homes and Better Buildings programs to help people use less energy and electrify their homes, with increased access for low-income households, multi-unit residential buildings, and Indigenous communities;
 - requirements for new industry projects to have enforceable plans to reach net-zero emissions by 2050;
 - development of the Highest Efficiency Equipment Standards (HEES) for space and water heating, so that all equipment sold from 2030 is at least 100% efficient;
 - near elimination of methane emissions by 2035 in oil and gas, mining, industrial wood waste and other sectors; and,
 - a new program to support local government climate and resiliency goals with predictable funding.
- The Province conservatively expects the Roadmap to lead to gross domestic product increases of 19% by 2030 and job growth of 7% by 2030. The economic benefits could be greater if new clean technologies cost less than expected, or more jurisdictions accelerate their climate ambitions, as is occurring.

Transportation Successes

- In 2021, transportation remained the largest source of B.C.'s emissions (41% of total). Emissions since 2007 have increased 8%. This is because of increases from heavy-duty vehicles (+8%) and marine and aviation (+11%), off-setting a reduction in emissions from light-duty vehicles (-3%).
- B.C. is a leader in clean transportation. In 2022, B.C. had the second highest zero-emission vehicle (ZEV) adoption rate in North America –18.1% of new light-duty vehicle sales– and in Q3 2023 that number had risen to 26.4%.
- The province has one of the largest public charging networks in Canada, the largest public hydrogen fuelling network in Canada, and a world-leading hydrogen and fuel cell industry.

- In May 2019, the Province passed the Zero-Emission Vehicles Act (ZEV Act) to ensure increased ZEV availability and choice at more affordable prices in B.C.
- The Roadmap targets 26% of light-duty vehicle (LDV) sales to be ZEV by 2026, 90% by 2030, and 100% by 2035, and a commitment to implement medium and heavy-duty ZEV targets, for which work is ongoing. The ZEV Act was amended in November 2023 to include the updated LDV targets.
- In 2011, B.C. introduced ZEV programming, currently called the CleanBC Go Electric Program. To date, more than \$600 million has been committed to make ZEVs more affordable and reduce GHG emissions.
- The Roadmap committed to developing a Clean Transportation Action Plan (CTAP), which is under development and expected to be released in spring 2024. It identifies concrete actions across five areas: vehicle kilometres travelled (VKT) reduction; mode shift to efficient modes; vehicle efficiency; ZEVs; and clean fuels - to help B.C. work toward GHG and Roadmap transportation targets.
- Budget 2023 included \$100M, over three years, to support the CleanBC Active Transportation Strategy with capital funding for more active transportation networks that are safe, accessible, and convenient for pedestrians, cyclists, transit riders and motorists – of all ages and abilities. This builds on \$48M provided in Budgets 2021 and 2022. (Note: this is a Ministry of Transportation and Infrastructure area)
- The Low Carbon Fuel Standard (LCFS) is the single largest contributor to meeting the greenhouse gas (GHG) reduction targets set out under CleanBC and is an integral part of BC's GHG reduction policies.
- On January 1, 2024, the Low Carbon Fuels Act (LCFA) and its regulations came into force, implementing updates to the LCFS that include:
 - Recognizing jet fuel as a new category and setting renewable and low carbon fuel requirements for jet fuel and its alternatives;
 - Expanding the LCFS to include non-transportation uses of gasoline, diesel, and jet fuel that must comply with low carbon fuel requirements;
 - Expanding the scope of Initiative Agreements to increase the supply of low carbon fuels in BC by enabling support for new proponents and new business opportunities; and
 - Closing compliance and enforcement gaps.
- Between 2010 and 2022, actions taken to comply with the LCFS have avoided over 18.8 million tonnes of global GHG emissions.
- At a 30% reduction in carbon intensity by 2030, the LCFS is expected to deliver nearly 5 million tonnes of reductions in BC's GHG emissions in 2030, which represents 18% of CleanBC's current 2030 target.
- Initiative Agreements under the LCFS currently support projects aiming to produce 840 million litres of low-carbon fuel by 2028. The Ministry will continue to work with industry to achieve the 1.3 billion litre production goal for 2030.

Clean Industry Successes:

- In 2021, emissions in the industrial sector (excluding oil and gas) were down 8% compared to 2007 and up 2% from 2020.
- In 2021, emissions from the oil and gas sector were down 13% from 2007 and down 8% from 2020, which can be attributed to declining carbon intensity in natural gas production. Carbon intensity of natural gas production has declined as a result of reductions in methane emissions and electrification, supported by investments through the CleanBC Industry Fund and a robust regulatory framework that continues to reduce methane emissions in the sector.
- In January 2021, government and BC Hydro announced the CleanBC Industrial Electrification Rates comprised of two categories – clean industry and innovation, and fuel switching. The rates provide a 7-year discount from BC Hydro's standard transmission service rate: 20% in years 1-5, 13% in year 6 and 7% in year 7.
- As of August 10, 2023, maximum participation was reached for the CleanBC Industrial Electrification Rates. New applications will be placed on a waitlist in case existing ones do not proceed.
- Since 2019, the CleanBC Industry Fund has invested more than \$215 million into supporting projects that directly reduce industrial emissions, accelerate new emissions reduction technologies, and study potential decarbonization opportunities.
- In 2022 the Province invested \$89.7M in 41 emissions reduction projects across the province through the CleanBC industry Fund. This funding goes towards cost-sharing projects with industry.
- In alignment with the Spring 2024 transition to a B.C. Output Based Pricing System, the CleanBC Industry Fund (CIF) did not launch a new intake for its Emissions Performance and Innovation Accelerator streams in 2023. Instead, around \$24M will be allocated towards waitlisted projects, and \$3M for Feasibility Studies. Funding agreements are in the process of being finalized.

Clean Energy and Major Projects Office (CEMPO)

- On March 14, 2023, the Government of British Columbia announced a new Clean Energy and Major Projects Office (CEMPO) as a major component of the New Energy Action Framework.
- The CEMPO combines the expertise of the former BC Hydrogen Office, LNG Canada Implementation Secretariat, and Woodfibre Implementation Group. It provides project management support to new and existing major clean energy project proponents throughout the full project lifecycle.
- The CEMPO now has the mandate to implement the BC Hydrogen Strategy. Hydrogen is expected to play a key role in helping the Province achieve net-zero

greenhouse gas emissions by 2050, as it is one of the only practical replacements for fossil fuels in the hardest-to-abate sectors.

- The strategy includes 63 actions to undertake over the short term (to 2025), medium term (2025-2030) and long term (2030-beyond).
- In 2023/24, B.C. delivered on several key actions, like publishing the BC Hydrogen Regulatory Mapping Study, supporting the Indigenous Clean Energy Opportunities (ICEO) and the City of Prince George to develop a Central B.C. Hydrogen Hub, and expanding the B.C. Energy Regulator's mandate to include regulation of hydrogen, ammonia, and methanol production.

Buildings and Communities Successes:

- Emissions in the buildings and communities sector were almost unchanged from 2020 and were down 6% compared to 2007 levels, driven by lower emissions from waste (-25%).
- The CleanBC Better Homes and Better Buildings program provides financial incentives to help households, businesses and the public sector save energy and reduce GHG through heating equipment replacement and building envelope improvements.
- CleanBC Better Homes and Better Buildings has \$94.7 million in base funding from fiscal 2023/24 through fiscal 2026/27.
- As of September 2023, CleanBC Better Homes and Better Buildings has provided 55,144 residential retrofit rebates, approved pre-registrations for 1,000 residential new construction projects and disbursed 402 incentives, and approved 361 capital incentives for commercial, institutional, and multi-unit residential building energy efficiency and fuel-switching projects.
- In February 2022, the program introduced a stand-alone income qualified program, which is complementary to current residential and income-qualified rebates, providing high value incentives to low- and moderate-income households. As of September 2023, it had provided 4,203 income-qualified rebates, in addition to the rebates mentioned above.
- As of 2022, the CleanBC Remote Community Energy Strategy (RCES) has achieved 5% of the CleanBC commitment to reduce the GHG emissions from diesel electricity generation in remote communities by 80% by 2030.
- RCES programs support the capacity of Indigenous remote communities, and the planning, development and implementation of diesel-displacing energy efficiency and renewable energy generation projects.
- The Roadmap announced new requirements for all new buildings to be zero carbon and new space and water heating equipment to be 100% efficient or greater starting in 2030.
- EMLI staff also support the Ministry of Housing in the design of the B.C. Energy Step Code and Zero Carbon Step Code. These codes set out a series of energy

efficiency and carbon intensity requirements beyond the base B.C. Building Code that local government can voluntarily adopt.

Cross Reference:

- 05 Zero Emission Vehicles Act/Regulation
- 03 CleanBC Go Electric Vehicle and Industry
- 04 CleanBC GoElectric Infrastructure and Training
- 06 Clean Transportation Action Plan
- 05 Clean Energy and Major Projects Office (ERD)
- 01 Low Carbon Fuel Standard
- 08 Better Homes and Better Buildings
- 10 Highest Efficiency Energy Strategy
- 11 Remote Community Energy Strategy
- 02 RNG, GGRR, National RNG Registry [EURD]
- 07 BC Hydrogen Strategy (ERD)
- 11 Remote Community Energy Strategy

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: CleanBC Go Electric Program, Vehicles and Industry Investments

Drafted: February 20, 2024

Issue: Investments to stimulate increased uptake of zero-emission vehicles (ZEV), and further economic development in the ZEV sector in British Columbia

Response:

- British Columbia (B.C.) is a leader in clean vehicle adoption with the second highest zero-emission vehicle (ZEV) adoption rate in North America in 2023 (23% of new light-duty vehicle sales in B.C. compared to 25% in California).
- The CleanBC Go Electric Program has been highly successful in: reducing market barriers; encouraging the adoption of ZEVs by British Columbians; leveraging private, municipal, and federal investment in ZEVs and infrastructure in B.C.; and supporting new economic opportunities in the ZEV sector.
- The CleanBC Go Electric Program provides rebates for zero-emission light-duty vehicles, medium- and heavy-duty trucks and buses, marine vessels, and airport and port ground equipment, and makes investments in infrastructure, training, public outreach, and economic development.
- In 2023, the CleanBC Go Electric Passenger Vehicle Rebate program transitioned its funding source to revenues from BC Hydro's sales of credits obtained through the Low Carbon Fuel Standard.
- In September 2020, \$30 million in funding was announced through Stronger BC, B.C.'s economic recovery plan for the creation of the Commercial Vehicle Innovation Challenge under the CleanBC Go Electric Advanced Research and Commercialization Program. The first funding call launched in 2023 and will commit \$20 million to successful projects in 2024. The second funding call will occur in 2025.
- In May 2019, the Province passed the *Zero-Emission Vehicles Act* (ZEV Act) which requires automakers to meet ZEV sales targets reaching 10% of new light duty vehicle sales by 2025, 30% by 2030, and 100% by 2040. The CleanBC Roadmap to 2030 accelerated the ZEV sales targets to 26% by 2026, 90% by 2030 and 100% by 2035, which were officially added to the ZEV Act on November 9, 2023. The CleanBC Roadmap also announced the development of new ZEV targets for medium- and heavy-duty vehicles. The purpose of the ZEV Act is to ensure increased ZEV availability and choice at more affordable prices in B.C.

Background/Status:

- In 2011, B.C. introduced ZEV programming, currently called the CleanBC Go Electric Program (the Program). Including Budget 2023, and fiscal year-end funding in Fiscal 2023, more than \$600 million has been committed to make ZEVs more affordable and reduce greenhouse gas emissions.
- Budget 2023 approved an additional \$40 million for the CleanBC Go Electric Commercial Vehicle Pilots Program, increasing the total budget to \$89 million.
- As of December 31, 2023, the Program has led to the following positive outcomes for ZEVs and the B.C. ZEV sector:
 - over 140,000 new light-duty ZEVs on the road (accurate to October 31, 2023);
 - over 1,400 ZEVs in commercial applications, such as forklifts, medium/heavy-duty vehicles, cargo e-bikes and port and airport ground equipment;
 - over 110 early-market commercial medium/heavy-duty ZEVs for diverse on-road and off-road applications, as well as 118 commercial vehicle charging points;
 - almost 100 electric school buses; and
 - an economic development program for B.C.'s ZEV sector supporting 21 research and commercialization ZEV projects leading to approximately 180 additional full-time equivalent jobs.
- There are multiple Program streams:
 - The income-tested passenger vehicle rebate program provides up to \$4,000 for small light-duty ZEVs priced below \$55,000, or for larger light-duty ZEVs priced below \$70,000, including minivans, sport utility vehicles, and pickup trucks. The rebate may be combined with federal rebates, for a total rebate of up to \$9,000 per ZEV.
 - Commercial Vehicle Pilots Program, which provides funding for vehicles, infrastructure, and data analysis to support zero-emission technologies. The sixth funding call is open and accepting applications until March 31, 2024. The first five funding calls allocated funding to 31 projects.
 - Supporting a pilot program with the Vancouver Fraser Port Authority that is expected to support the deployment of twelve low and zero-emission drayage trucks, a biofuel-based switch locomotive, and a biofuel-based harbour patrol vessel.
 - Go Electric Rebates (formerly Specialty Use Vehicle Incentive) program which provides a rebate up to 33% for e-cargo bikes, electric motorcycles, low-speed vehicles, medium/heavy-duty vehicles, airport and port vehicles, and utility vehicles. Medium/-heavy-duty rebates may be combined with federal rebates, for total rebates of up to \$300,000. The name of the program was changed to Go Electric Rebates in July of 2023.

- School Bus program which provides public, private, and Indigenous schools with funding for ZEV buses and charging stations.
- The Advanced Research and Commercialization program which supports projects that create jobs and lead to economic growth in the ZEV industry sector in B.C. The third funding call's expression of interest stage closed on September 15, 2023. The deadline to submit full proposals for proceeding applicants is February 16, 2024.
- A new Commercial Vehicle Innovation Challenge under the Advanced Research and Commercialization program launched in 2023. It aims to help attract international investment to B.C. companies and address the current technology gap in the hard-to-decarbonize commercial vehicle sector. The deadline to submit proposals was September 29, 2023. Successful projects will be announced in 2024.
- CleanBC Go Electric Programs support the growth of B.C.'s ZEV sector, which as of 2021 has over 270 companies and organizations involved in all aspects of the supply chain employing more than 11,000 jobs, producing \$2.1 billion in total economic output and contributing \$1.15 billion to the provincial gross domestic product. An updated economic assessment will be published in the summer of 2024.

Cross Reference:

- 01_Low Carbon Fuel Standard (EDD)
- 04_CleanBC Go Electric Infrastructure Training (EDD)
- 05_Zero Emission Vehicles Act / Regulation (EDD)
- 06_Clean Transportation Action Plan (EDD)
- 08_ICE Fund 3-year Spending Plan (EURD)

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Honourable Josie Osborne

Title: CleanBC Go Electric Program, Infrastructure and Training Investments

Drafted: February 20, 2024

Issue: Investments to stimulate increased uptake of zero-emission vehicle (ZEV) infrastructure and jobs training in British Columbia

Response:

- The CleanBC Go Electric Program provides rebates for zero-emission light-duty vehicles, medium- and heavy-duty trucks and buses, marine vessels, and airport and port ground equipment, and makes investments in infrastructure, training, public outreach, and economic development.
- The CleanBC Go Electric Program has been highly successful in: reducing market barriers; encouraging the adoption of ZEVs in British Columbia (B.C.); leveraging private, municipal, and federal investment in ZEVs and infrastructure in B.C.; and supporting new economic opportunities in the ZEV sector.
- B.C. is a leader in clean transportation infrastructure and training, with one of the largest public charging networks in Canada (over 5,000 public charging stations), the largest public hydrogen fuelling network in Canada (five stations), a world-leading hydrogen and fuel cell industry, and a ZEV automotive maintenance training program offered at seven post-secondary institutions.

Background/Status:

- In 2011, B.C. introduced ZEV programming, currently called the CleanBC Go Electric Program (the Program). Including Budget 2023, and fiscal year-end funding in Fiscal 2023, more than \$600 million has been committed to make ZEVs more affordable and reduce greenhouse gas emissions.
- A total of \$45.7 million was approved for 2022-2023 fiscal year-end funding, which includes \$26 million for the Public Charging program, \$19.5 million for a Medium and Heavy-Duty Charging Infrastructure program, and \$0.2 million for First Nations low-carbon transportation planning. Budget 2023 approved a further \$40 million for the Commercial Vehicle Pilots Program.
- As of December 31, 2023, the Program has led to the following positive outcomes for ZEV infrastructure and training:
 - 5,107 public charging stations across 1,955 locations, including 3,989 Level 2 chargers and 1,118 fast-charging stations;

- a network of five public hydrogen fueling stations, spanning Metro Vancouver, Victoria, and Kelowna;
 - automotive technician training at seven B.C. technical institutions, electrician training; and
 - a multi-faceted ZEV outreach and awareness program called Emotive, including community awareness in remote, rural and Indigenous communities, and planning funding.
- There are multiple Program streams:
 - Home and workplace charger rebates, which provide up to \$350 for charging stations in homes, and up to \$2,000 for charging stations and free EV advisor services in apartments, condos and workplaces. Rebates up to \$3,000 are available to complete an EV Ready Plan for condominiums and apartments and up to \$600/parking stall for electrical infrastructure upgrades (maximum of \$120,000 per complex). Increased rebates are available for Indigenous communities and businesses.
 - Public charging infrastructure funding, which provides up to 50% funding for public fast charging stations (up to \$80,000). Increased rebates of up to 90% of project costs (to a maximum of \$130,000) per station are available for Indigenous-owned DCFC stations.
 - Hydrogen fuelling infrastructure funding, which provides funding for public hydrogen fuelling stations. Through RFP competitions, applicants can receive capital funding of \$850,000 per station and an additional \$100,000 to support operations and maintenance.
 - Fleet Charging program, which provides funding for ZEV fleet and infrastructure assessments, electrical upgrades, installations of Level 2 and fast charging stations, and advisory services.
 - “Emotive”, the province-wide ZEV public outreach program developed and delivered under partnerships with local governments and community organizations, including Indigenous communities.
 - Funding to upgrade electrician and automotive technician training to incorporate charging infrastructure and ZEVs.

Cross Reference:

05 *Zero Emission Vehicles Act*

01 Low Carbon Fuel Standard

06 Clean Transportation Action Plan

Contact:

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Energy Decarbonization Division

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: CleanBC Better Homes and Better Buildings Program

Drafted/Revised: February 20, 2024

Issue: CleanBC Better Homes and Better Buildings Program Overview

Response:

- Through the CleanBC Roadmap to 2030, the Province has a target to reduce emissions from the built environment by 59%-64% by 2030.
- The CleanBC Better Homes and Better Buildings program launched in 2018 to provide financial incentives to help households, businesses and the public sector save energy and reduce greenhouse gas emissions (GHG) through heating equipment replacement and building envelope improvements. The program portfolio includes:
 - residential retrofit and income-qualified incentives;
 - First Nations community retrofit incentives;
 - specialized energy coaching support for small businesses, First Nations communities and civic organizations;
 - retrofit incentives for commercial buildings, social housing, and multi-unit residential buildings;
 - commercial new construction incentives; and
 - additional incentives for northern residential and commercial buildings.
- CleanBC Better Homes and Better Buildings has \$94.7 million in base funding from fiscal 2023/24 through fiscal 2026/27.
- For fiscal 2023/24, the budget for CleanBC Better Homes and Better Buildings was \$120.1 million, inclusive of base budget and contingencies.

Background/Status:

- Achieving the Province's legislated 2030 and 2050 GHG reduction targets will require a shift towards low-carbon heating options and the highest performing buildings.
- Programs are important for preparing the market for planned standards in 2030 that will require all space and water heating to be 100% efficient or more.

- Between 2007 and 2023, the percentage of households using heat pumps for primary or secondary heating increased by 333%.

Better Homes and Better Buildings Program Overview:

- The CleanBC Better Homes and Better Buildings program launched in 2018 and provides financial incentives to help households, businesses and the public sector save energy and reduce GHG emissions through heating equipment replacement and building envelope improvements.
 - **Better Homes:**
 - Residential retrofit rebates for fuel-switching to heat pumps, high efficiency windows, doors and insulation in oil and propane heated homes;
 - High value incentives for income-qualified households;
 - Northern top-up incentives for residential and commercial buildings located north of and including the District of 100 Mile House; and
 - A single application for Provincial, BC Hydro, FortisBC, and local government incentives.
 - **Better Buildings:**
 - Energy study and capital incentives for commercial, institutional, and multi-unit residential buildings and social housing to support fuel-switching and energy efficiency improvements.
 - **Online hubs, energy coaching, and information:**
 - Online web hubs for homeowners and businesses to access information, incentives (provincial, utility and local government) and supports to reduce energy use and GHG emissions in homes (www.betterhomesbc.ca) and buildings (www.betterbuildingsbc.ca).
 - Free energy coaching services for homeowners, contractors, small businesses, Indigenous communities, and civic organizations.
 - The Ministry is developing a virtual home energy assessment tool to generate home energy ratings and help homeowners connect with Better Homes program resources.
- The Ministry continues to increase awareness of heat pumps and available incentives through public and contractor education and marketing.
- The Ministry works with the utilities and Home Performance Stakeholder Council (HPSC) to develop home retrofit installation best practices and subsidizes training for registered members of the Home Performance Contractor Network (HPCN). CleanBC Better Homes requires the use of an HPCN member for heat pump, insulation and all income-qualified incentives. This requirement helps foster quality workmanship and maximize energy efficiency and emission reductions.

- The CleanBC Better Homes New Construction program has been fully subscribed since August 2022. As of May 1, 2023 BC Building Code amendments to require 20% better energy efficiency for most new residential buildings took effect and an opt-in Zero Carbon Step Code was introduced, enabling municipalities to set a maximum annual amount of GHG emissions that new buildings can emit. As the Province is regulating construction, it is not anticipated that a residential new construction offer will be reintroduced.
- The Ministry is exploring enhancements to the program portfolio for fiscal 2024/25 and beyond to increase rebates, optimize support services, and better integrate offers with utility partners for Indigenous communities, multi-unit residential buildings, and income-qualified households.

Cross Reference: 01 – CleanBC
09 – Utility Demand-Side Management
10 – Highest Efficiency Equipment Standards

Contact:

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B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
<p>CleanBC Better Homes <i>Focus on greenhouse gas (GHG) emission reductions by enabling electrification and efficiency upgrades in homes that don't qualify for utility rebates.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Heat pumps (fossil fuel heating converted to heat pump)	Up to \$3,000 or \$6,000 in North	Up to \$3,000	-	Up to \$5,000 ¹	Up to \$2,000	<ul style="list-style-type: none"> Funded by CleanBC. BC Hydro top-up available. Municipal top-ups available in select communities. Federal rebates available through Canada Greener Homes Grant (GH), which can be stacked with CleanBC/BC Hydro LCE funding. However, registration for GH closed Feb 12, 2024.
	Heat pumps (electric heating converted to heat pump)	-	Up to \$2,000	Up to \$2,000	Up to \$5,000 ¹	-	<ul style="list-style-type: none"> Not funded by CleanBC, outside scope of BHBB. BC Hydro funds in their electric territory. FortisBC funds in their electric territory. BC Hydro and FortisBC rebates cannot be stacked. Federal rebates available through GH, which can be stacked with utility funding. However, registration for GH closed Feb 12, 2024.
	Gas equipment (furnaces, water heaters, fireplaces)	-	-	(Up to \$1,000)	-	-	<ul style="list-style-type: none"> Not funded by CleanBC, outside scope of BHBB. Historically funded by FortisBC. As of Jan. 1, 2024, conventional gas equipment rebates are no longer available due to regulatory changes. FortisBC plans to start supporting dual-fuel heat pump systems.
	Building envelope (windows/doors, insulation)	Up to \$5,500 (insulation); \$100/window, up to \$2,000	Up to \$5,500 (insulation); \$100/window, up to \$2,000	Up to \$5,500 (insulation); \$100/window, up to \$2,000	Up to \$5,000 ¹ (insulation), \$125-\$250/window, up to \$5,000	-	<ul style="list-style-type: none"> CleanBC, BC Hydro, and FortisBC rebates cannot be stacked. CleanBC funds in oil and propane heated homes. BC Hydro funds in electrically heated homes in their electric territory. FortisBC funds in gas heated homes in their gas territory and in electrically heated homes in their electric territory. Federal rebates available through GH, which can be stacked with CleanBC or utility funding. However, registration for GH closed Feb 12, 2024.
B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
CleanBC Income Qualified Program (Better Homes and Better Buildings). <i>Aims to improve energy affordability, enable GHG reductions, and improve energy efficiency.</i>	Heat pumps (fossil fuel heating converted to heat pump)	Up to \$9,500	-	-	Up to \$5,000 ¹ (gas/propane conversions); Up to \$10,000 (oil conversions)	-	<ul style="list-style-type: none"> Funded by CleanBC. Federal rebates available through GH or the Oil to Heat Pump Affordability (OHPA) Program, depending on customer eligibility, which can be stacked with CleanBC funding. Oil conversion incentive planned to increase to \$15,000.

¹ Through the Canada Greener Homes Grant, a maximum of \$5,000 in federal funding is available per home, across all measure types, plus \$600 for completing required EnerGuide evaluations. Registration for new households closed effective February 12, 2024. Homeowners who completed online registration by this date and have an application number can proceed with retrofits subject to funding availability.

B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i>	Heat pumps (electric heating converted to heat pump)	Up to \$5,000	Up to \$5,000 (as of Jan 1, 2024)	-	Up to \$5,000	-	<ul style="list-style-type: none"> Currently funded by CleanBC. BC Hydro will fund effective January 1, 2024 to March 31, 2024 in their electric territory, and tentatively from F25-F27 (subject to approval). CleanBC will continue to fund electric to heat pump upgrades outside of BC Hydro territory. CleanBC and BC Hydro-funded IQP rebates cannot be stacked. Federal rebates available through GH, which can be stacked with CleanBC or BC Hydro funding. However, registration for GH closed Feb 12, 2024.
	Building envelope (windows/doors, insulation)	Up to \$5,500 (insulation); \$950/window, up to \$9,500	Up to \$5,500 (insulation); \$950/window, up to \$9,500	-	Up to \$5,000 ¹ (insulation), \$125-\$250/window, up to \$5,000	-	<ul style="list-style-type: none"> CleanBC funds all building envelope upgrades through IQP up to December 31, 2023, regardless of home heating fuel source. As of Jan. 1, 2024, BC Hydro funds building envelope upgrades in electrically heated homes in their electric territory for low-income customers. CleanBC continues to fund for moderate-income customers in BC Hydro territory, all customers in FortisBC electric territory, and all customers in fossil fuel-heated homes. CleanBC and BC Hydro-funded IQP rebates cannot be stacked. Federal rebates available through GH, which can be stacked with CleanBC or BC Hydro funding. However, registration for GH closed Feb 12, 2024.
B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
CleanBC Indigenous Community Heat Pump Incentive (CleanBC Better Homes and Better Buildings). ² <i>Aims to improve energy affordability, enable GHG reductions, and improve</i>	Heat pumps (fossil fuel heating converted to heat pump or wood heating converted to heat pump)	Up to \$12,000 (fossil fuel); Up to \$6,500 (wood)	-	-	Up to \$5,000 ¹	-	<ul style="list-style-type: none"> Funded by CleanBC. Federal rebates available through GH, which can be stacked with CleanBC funding. However, registration for GH closed Feb 12, 2024.

² For residential retrofits, Indigenous communities can access funding from either CleanBC Better Homes, the CleanBC Income Qualified Program, or Indigenous Community Heat Pump Incentive for an eligible upgrade, but cannot stack CleanBC funding from all programs combined. Subject to approval, the Province and utilities are developing a new Indigenous retrofit program that will integrate provincial and utility offers into a single program with a streamlined, one-window application.

B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
<p><i>energy efficiency.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Heat pumps (electric heating converted to heat pump)	-	Up to \$5,000	Up to \$5,000	Up to \$5,000 ¹	-	<ul style="list-style-type: none"> Not funded by CleanBC (outside scope of BHBB) except conversions for Indigenous communities served by diesel generated electricity. BC Hydro and FortisBC funds in their respective electric territories. BC Hydro and FortisBC rebates cannot be stacked. Federal rebates available through GH, which can be stacked with utility funding. However, registration for GH closed Feb 12, 2024.
	Gas equipment (furnaces, water heaters, fireplaces)	-	-	Up to \$3,000	-	-	<ul style="list-style-type: none"> Not funded by CleanBC. Funded by FortisBC in northern B.C. only for space heating and across B.C. for water heating. As of Jan 1, 2024, conventional gas rebates are otherwise no longer available due to regulatory changes.
	Heat pumps (fossil fuel heating converted to heat pump) in community buildings	Up to \$200,000	-	-	-	-	<ul style="list-style-type: none"> CleanBC is the only rebate that specifically funds retrofits in Indigenous community buildings. Indigenous communities can participate in other utility commercial offers.
	Building envelope (windows/doors, insulation)	-	Up to \$2,000 (insulation); \$7,500 (window/door)	Up to \$2,000 (insulation); Up to \$7,500 (window/door)	Up to \$5,000 ¹ (insulation), \$125-\$250/window, up to \$5,000	-	<ul style="list-style-type: none"> Outside the scope of CleanBC ICHPI. Indigenous communities can participate in IQP for building envelope upgrades. BC Hydro and FortisBC fund building envelope upgrades through their respective Indigenous offers and are <u>not stackable</u>.
B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
<p>CleanBC Multi-Unit Residential Building Offer³ <i>Aims to achieve greenhouse gas (GHG) emission reductions by enabling electrification in fossil fuel heated homes.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Heat pumps (fossil fuel heating converted to heat pump)	\$TBD	-	-	-	\$TBD	<ul style="list-style-type: none"> Heat pump rebates and measures that enable fuel switching (e.g. electrical service upgrades) to be funded by CleanBC. Local governments have expressed interest in providing top-ups, but this is yet to be confirmed. No federal rebates currently available (MURBs ineligible for heat pump rebates through GH).
	Heat pumps (electric heating converted to heat pump)	-	\$TBD	\$TBD	-	\$TBD	<ul style="list-style-type: none"> Heat pump rebates and capacity-related measures (e.g. electrical service upgrades) to be funded by BC Hydro. FortisBC partnership in MURB offer has not yet been determined.

B24 Program Names	Initiative or Measure Funded	Funding/Delivery Partners and Amount					Details on partner/leveraged funding
		CleanBC	BC Hydro	FortisBC	Canada	LGs	
							<ul style="list-style-type: none"> Local governments have expressed interest in providing top-ups, but this is to be confirmed. No federal rebates currently available (MURBs ineligible for heat pump rebates through GH).
<p>CleanBC Better Buildings (Social Housing Incentives Program, Custom Program, Custom-Lite Program, Commercial Express Program, and Commercial New Construction Program).</p> <p><i>Includes CleanBC funding to achieve greenhouse gas (GHG) emission reductions by enabling electrification and fuel switching upgrades.</i></p> <p>Various utility rebates <i>Where available these aim to achieve energy savings to reduce growth in demand.</i></p>	Energy studies	Up to \$20,000 (retrofit); Up to \$15,000 (new construction)	Funding varies	Up to \$37,500 (retrofit); Up to \$15,000 (new construction)	-	-	<ul style="list-style-type: none"> Funded by CleanBC for fuel switching and electrification projects across all offers, except not required for the Commercial Express Program. Funded by BC Hydro and FortisBC for energy efficiency projects in their territories. CleanBC, BC Hydro, and FortisBC funding cannot be stacked.
	Electrical load analysis	-	Up to \$7,000	-	-	-	<ul style="list-style-type: none"> Funded by BC Hydro in partnership with CleanBC. This offer is only available for the Social Housing Incentives Program (SHIP)
	Project implementation support	Up to \$7,000	Up to \$7,000	Up to \$7,000	-	-	<ul style="list-style-type: none"> This offer is only available through SHIP and the joint BC Hydro and Fortis BC Social Housing Retrofit Support program. Funder depends on scope of project.
	Fuel switching, electrification, and energy efficiency projects	Up to \$200,000 (retrofit); Up to \$500,000 (new construction)	Funding varies	Up to \$500,000 (retrofit); Up to \$500,000 (new construction)			<ul style="list-style-type: none"> Funded by CleanBC for commercial fuel switching and electrification projects only (including social housing via SHIP). Funded by BC Hydro and FortisBC for commercial energy efficiency projects in their territories (including social housing). CleanBC, BC Hydro, and FortisBC funding cannot be stacked.

Better Homes- Better Buildings budget and Participation Outlook

	F24-25
CleanBC Better Homes and Better Buildings	
Total	\$ 72,873,000
<i>Base funding</i>	\$ 23,873,000
<i>Contingency funding</i>	\$ 9,000,000
<i>IQP allocation*</i>	\$ 40,000,000
<i>Residential heat pump installations</i>	11,100
<i>Commercial projects</i>	55
Better Homes (non-IQP)	
<i>Approximate allocation</i>	\$ 23,150,577
<i>Retrofits</i>	6,500
<i>Heat pump installations</i>	6,200
Better Buildings	
<i>Approximate allocation</i>	\$ 9,722,424
<i>Projects</i>	55
Income Qualified Program	
<i>Approximate allocation</i>	\$ 40,000,000
<i>Retrofits</i>	6,300
<i>Heat pump installations - Tier 1</i>	3,800
<i>Heat pump installations - Tier 2</i>	1,100
Matching BC Hydro funding	
LCE - residential	
<i>Funding</i>	\$ 19,000,000

<i>Heat pump installations**</i>	6,000
Matching Federal funding	
Oil to Heat Pump Affordability Program (OHPA)	
<i>Funding</i>	\$ 14,170,000
<i>Heat pump installations**</i>	1,182
Low Carbon Economy Leadership Fund (LCELf) - TBC	
<i>Funding</i>	\$ 30,446,950
<i>Heat pump installations**</i>	3,800
TOTAL POTENTIAL	
<i>Funding</i>	\$ 136,489,950
<i>Residential heat pump installations</i>	11,100
<i>Commercial projects</i>	55

* IQP is from F23-24 fiscal year-end allocation.

** These installations are NOT incremental to BH or IQP installations, but instead increase the overall incentive value.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Highest Efficiency Equipment Standards

Drafted/Revised: February 20, 2024

Issue: Implementation of the Highest Efficiency Equipment Standards (HEES)

Response:

- The HEES policy commitment in the CleanBC Roadmap to 2030 includes point of sale standards and point of installation standards for space and water heating equipment.

Advice/Recommendations: Cabinet Confidences

- The point of sale standards will prohibit the sale of new and replacement conventional gas- and oil-fired equipment such as residential furnaces, residential boilers, domestic water heaters and weatherized package units as of 2030.
- The Ministry will work with the Ministry of Housing and the federal model building codes process to develop point of installation standards in the building code.
- Starting in 2030, the HEES will impact about 5% of buildings per year, taking 20 years to affect the entire building stock. The HEES will result in a 79% reduction in emissions from buildings by 2050 relative to 2017.

Background/Status:

- The policy will impact building owners when their heating equipment reaches end-of-life and requires replacement or when equipment is purchased for or installed in new construction.
- The HEES provide lifecycle cost savings as a result of lower energy bills, though upfront capital costs will be higher. The standards will have a negligible impact on the cost of new homes and secondary suites due to their alignment with Building Code policies for energy and carbon performance.
- Homeowners and renters in older multi-unit residential buildings and in northern B.C. will be impacted the most by capital costs.
- The HEES will drive adoption of heat pumps, leading to increased access to air conditioning for homeowners and tenants, which is important for health and safety during heat waves and smoke events.

HEES Details:

- The HEES policy will set performance standards that require electric resistance heaters, heat pump technology or dual fuel systems that combine a heat pump with a conventional gas appliance.
- The standards will prohibit the sale of new and replacement conventional gas- and oil-fired equipment such as residential furnaces, residential boilers, domestic water heaters and weatherized package units.
- The policy allows the continued sale and operation of wood or gas fireplaces and stoves, process equipment, cooking equipment and certain niche products. The sale and operation of emergency heating systems such as fireplaces and stoves will not be affected by the HEES.
- Repair parts will continue to be available for emergency repair of conventional gas and oil-fired heating equipment that haven't reached the end of life or are part of a dual fuel system.
- Colder regions of the province will be best served by cold climate heat pumps with electric backup or dual fuel systems that combine a heat pump with a conventional gas appliance.
- Point of sale standards for common, mass-produced heating equipment will be incorporated in the Energy Efficiency Standards Regulation by winter 2023/24 (effective in 2030). This includes gas and oil-fired residential space and water heating products as well as some light commercial products used in smaller multi-unit residential buildings, offices, and retail stores.
- The Ministry will work with the Ministry of Housing and the federal model building code process to develop point of installation standards in the building code. These will cover complex systems, as well as allow for early adoption by municipalities with voluntary effective dates beginning in 2027.
- The Ministry supports development of technical standards with funding and staff participation on steering and technical committees on the Canadian Standards Association's Energy Efficiency and Renewables Program.

Contact:

Nat Gosman

Assistant Deputy
Minister

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: CleanBC Remote Community Energy Strategy

Drafted/Revised: February 20, 2024

Issue: Reducing GHG emissions from diesel electricity generation in remote communities

Response:

- Most remote off-grid communities in British Columbia (BC) rely on diesel for electricity generation. Under CleanBC, the Province aims to reduce emissions from diesel electricity generation in remote communities by 80% by 2030.
- The CleanBC Remote Community Energy Strategy (RCES) includes three streams of action to pursue the CleanBC goal: (1) build remote community capacity to lead energy efficiency and clean energy projects; (2) support remote community efforts to improve energy efficiency and minimize greenhouse gas (GHG) emissions in new and existing buildings; and (3) implement renewable energy generation projects to displace diesel generation.
- Budget 2021 included a \$34 million investment in new RCES programs to support the capacity of First Nations remote communities, and for the Community Energy Diesel Reduction (CEDR) program, which supports the planning, development and implementation of diesel-displacing energy efficiency and renewable energy generation projects.
- In 2022, a first round of CEDR funding provided \$7.1 million to 12 remote communities.
- In February 2023, Treasury Board approved the addition of \$30 million to CEDR, extending the program until March 2028. In December 2023, the second intake allocated \$5.5 million to 13 projects.
- Following engagement with a Working Group of remote First Nations' community representatives, the Ministry developed a RCES Action Plan to achieve the CleanBC diesel reduction goal. The plan includes the development of regulatory approaches to enable diesel-displacing projects.
- In fall 2023, the Ministry engaged on an amendment to the Greenhouse Gas Reduction Regulation (GGRR) to advance renewable energy projects that displace diesel use in remote communities. The amendments would require the B.C. Utilities Commission to allow BC Hydro to recover the costs from ratepayers of EPAs for Indigenous-owned renewable energy projects in BC Hydro's Non-Integrated Areas.

Background/Status:

- The Community Clean Energy Branch (CCEB) is implementing RCES in collaboration with provincial ministries, First Nations, the federal government, and BC Hydro.
- B.C. has the largest number of diesel-dependent remote communities of any province in Canada. RCES focuses on about 44 communities, most of which are governed by First Nations.
- Some remote communities own and operate the diesel generating stations that supply their micro-grids, while others are served by BC Hydro as non-integrated areas (NIAs). Most provincial diesel consumption for electricity occurs in NIAs.
- BC Hydro NIA stations consume over 20 million litres of diesel fuel per year, resulting in about 50,000 tonnes of GHG emissions. Independently owned stations consume about 2.75 million litres per year, resulting in about 7,500 tonnes of GHG emissions.
- The Ministry established a RCES Working Group with seven remote Indigenous Nations to strengthen relationships and gain a further understanding of community priorities and effective program approaches. In June 2022, the Working Group provided recommendations for provincial actions to achieve the CleanBC diesel reduction target.
- The RCES Working Group recommendations informed the development of the Ministry's RCES Action Plan to achieve the CleanBC diesel reduction goal.

Cross Reference: 12 BC Indigenous Clean Energy Initiative

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: British Columbia Indigenous Clean Energy Initiative

Drafted/Revised: February 20, 2024

Issue: Supporting development of clean energy projects in Indigenous communities

Response:

- Formed in 2016 by the New Relationship Trust (NRT) with funding from Western Economic Diversification Canada (now PacifiCan), the BC Indigenous Clean Energy Initiative (BCICEI) provides support and capacity-building funds to Indigenous nations across the province working to develop clean energy projects.
- PacifiCan has provided \$20.78 million (M) in total funding to BCICEI (\$4.2M in 2016; \$4.5M in 2019; \$6.4M in 2021; and \$5.68M in 2022). Their confirmed funding ends March 31, 2024, however funded projects will continue to be implemented after this time.
- The Ministry has supported the program and participated in its governance since its inception, contributing \$5M through CleanBC in 2019. In March 2023, Treasury Board approved a \$140M contribution to expand the BCICEI with access to the Contingencies bottom-line surplus in 2022/23.
- The fiscal year-end funds were invested by the NRT, with interest (estimated \$5-7 million per year) used to support existing BCICEI activities over the next 5-10 years. The Province, New Relationship Trust, BC Hydro, and PacifiCan are developing a new program stream to help offset the higher anticipated cost of small-scale grid-connected Indigenous power projects (e.g. < 15 MW in size) relative to large-scale projects (e.g. 30-50 MW in size). The new stream is expected to draw down the \$140 million over several years beginning in 2028.
- The BCICEI program development team will engage on the new funding stream in spring 2024.
- A key strength of BCICEI is an Indigenous-government-stakeholder governance model that pursues consensus decisions on program parameters and project approvals.

Background/Status:

- BCICEI supports clean energy developments in Indigenous communities, including hydro, wind, biomass, solar, tidal and geothermal projects. The BCICEI also supports energy efficiency projects and energy storage.
- Funding through the BCICEI covers feasibility and site selection activities; environmental review and permitting; project design and engineering; demand-side management; and small-scale clean energy projects.
- The BCICEI program has an established annual reporting regime that tracks the development and impact of each supported project. BCICEI has completed third-party program evaluations that resulted in the implementation of improvements by NRT in 2020 and 2022. The program continues to receive positive feedback from Indigenous nations, government partners and stakeholders.

Cross Reference: 11 Remote Community Energy Strategy

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: First Nations Clean Energy Business Fund

Drafted/Revised: February 20, 2024

Issue: First Nations Clean Energy Business Fund

Response:

- The First Nations Clean Energy Business Fund (FNCEBF) promotes increased First Nation participation in the clean energy sector in BC.
- The fund provides capacity and equity funding toward projects, as well as revenue sharing agreements with eligible First Nations. The fund plays a key role in the development of First Nations-led clean energy projects such as biomass, solar, wind and geothermal across the province.
- In the 2023/24 fiscal year, FNCEBF approved projects from six First Nations across the province. In total, these projects will receive more than \$1.8 million in funding.
- The FNCEBF was created under the *Clean Energy Act* in 2010 and has been administered by the Ministry of Indigenous Relations and Reconciliation (MIRR) since then.
- Effective April 1, 2024, responsibility for the FNCEBF will be transferred from MIRR to the Ministry of Energy, Mines and Low-Carbon Innovation (EMLI) to leverage its clean energy expertise.

Background/Status:

- FNCEBF collects revenues from existing and eligible independent power projects that pay royalties to the province. A portion of the revenues are used to sustain the FNCEBF.
- The FNCEBF provides up to \$500,000 in equity funding for clean energy projects; up to \$150,000 in equity funding toward community energy projects such as energy-efficiency, demand-side management and small fuel-switching projects; and up to \$50,000 in capacity funding for projects like community energy planning, feasibility studies or engagement with private sector clean energy project proponents.
- Communities that have previously reached the \$50,000 maximum for FNCEBF capacity funding have had their limit re-set and have the opportunity to re-apply for capacity funding.

- Since the FNCEBF began, more than 150 Indigenous communities have benefited from \$20.3 million in capacity and equity funding.
- Today, 46 First Nations are benefitting from 71 clean energy revenue-sharing agreements with B.C.
- Over time, First Nations have proposed various improvements to the capacity, equity and revenue sharing components of the fund.
- In June 2023, BC Hydro announced a new call for clean power production that prioritizes Indigenous proponents, and the FNCEBF has not had the resources or flexibility to support these proponents to the extent envisaged under the fund's original mandate. More calls for power are anticipated.
- EMLI has long provided clean energy policy expertise to support MIRR, and developed the database that MIRR uses to administer the fund. The Ministry would like to leverage its expertise to explore fund improvements aligned with the *Clean Energy Act* and *Declaration Act*. MIRR concurs with the re-assignment.
- Effective April 1, 2024, responsibility for FNCEBF will be transferred from MIRR to the EMLI.
- EMLI will initially operate the fund as is, while exploring options that align with First Nations' desires for the future of the fund. Recommended changes to the fund would be subject to Indigenous engagement and Cabinet approval.

Cross Reference:

12 BC Indigenous Clean Energy Initiative,
 11 Remote Community Energy Strategy

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Climate Aligned Energy Framework

Drafted/Revised: April 9, 2024

Issue: Development of a Climate Aligned Energy Framework

Response:

- The Framework will articulate the Province's overall vision, principles, goals, and priority actions and ensure that our energy system will be there to support a clean, competitive, and inclusive British Columbia (B.C.).
- Our government will ensure our future prosperity will be enabled by an energy system that is powered by our world leading low carbon energy resources.
- This vision will demonstrate that we are planning for a clean future and that B.C.'s energy systems will continue to be reliable and affordable while they evolve to support our climate and economic growth objectives.
- Development of the Framework is grounded in the Province's other key priorities and initiatives, such as CleanBC and StrongerBC.
- I look forward to releasing the Climate Aligned Energy Framework later this spring. In addition to the work of the BC Hydro Task Force, this work will put the Province on the path to a clean and prosperous future for all British Columbians.
- This framework will set the stage for future work and inform a go-forward energy plan. I look forward to continued partnership with industry, stakeholders, First Nations and Indigenous groups and others moving forward.

Background/Status:

- The Climate Aligned Energy Framework mandate letter item.
- Our work is focused on the release of a public vision document by the end of spring 2024. The Framework is not intended to be a full energy plan with detailed actions and planning at this point of its development, rather it will set the stage for for engagement with the public on an energy plan in the next mandate.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- The Ministry is taking a principle-based approach to develop the Framework:
 - Aligns with CleanBC, StrongerBC, and supports B.C.'s climate targets.
 - Enables market transformation to meet B.C.'s climate targets.
 - Emphasizes the importance of energy efficiency now and into the future.
 - Maintains energy reliability and security.
 - Protects affordability and competitiveness of energy for people and businesses.
 - Is inclusive of partnership opportunities with First Nations.
 - Informs the highest value and best use of energy resources in the mid to long term.
 - Considers all energy types and embraces new technologies.
 - Supportive of clean growth economic opportunities and jobs.
- As part of the development of the Framework, the Ministry facilitated a working group for B.C.'s large gas and electric utilities and government to collaboratively discuss possible future clean energy scenarios for B.C.
- The Minister hosted five roundtable engagement sessions with over fifty stakeholders representing a broad variety of sectors including industry, municipalities, First Nations organizations and environmental non-government organizations as part of developing the Framework.
- Key themes heard at the Ministerial roundtables included:
 - The importance of taking a regional approach to the energy transition and clean energy development, where we recognize the different opportunities and needs of different regions of B.C.
 - The need for the Framework to prioritize energy affordability and reliability alongside climate objectives. The Framework should be clear that there will be costs and trade-offs.
- In collaboration with the First Nation Energy and Mining Council (FNEMC), the Ministry also conducted broad engagement with First Nations in B.C. as part of developing the Framework.
- Key themes heard from engagement with First Nations included:
 - The Framework is an opportunity to fundamentally incorporate the economic interests of First Nations in a new way of approaching development and energy systems in B.C.
 - The importance of early and meaningful inclusion of First Nations within the planning and decision-making process for the development of clean energy resources and infrastructure.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- A common theme emerging from the Ministerial roundtables and engagement with First Nations is a desire for enhanced skills training and educational and awareness opportunities related to clean energy resources, resource development options, and jobs.

Contact:

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2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Permitting Regional Mines

Drafted/Revised: January 29, 2024

Issue: Timelines for processing applications for regional mines

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) continues to work with industry associations to reduce timelines for Notice of Work (NoW) applications.
- This work has resulted in a backlog reduction of 52 percent since March 2022
- Regional mines include mineral and coal exploration, placer, aggregate and stone quarries.
- EMLI has made changes to streamline the permit intake process and to ensure that applications are received by technical reviewers as early in the process as possible.
- Ministry staff continue to improve the NoW application form and to develop accompanying materials that provide more guidance for proponents.
- Ministry staff have also been holding permitting workshops around the Province to provide training, to share knowledge, and to remain accessible and transparent with industry.
- EMLI received funding for 13 new positions to help with regional permitting and all these positions have been filled.
- The new resources, along with the process improvements, are helping to reduce the backlog of files and are starting to improve permitting timelines.

Background/Status:

Mandate Commitment – Permitting Timelines:

- EMLI received funding for 13 new positions in 2021 to help with regional permitting and all these positions have been filled.
- The new resources and process improvements are having a positive impact on reducing the backlog of applications (currently down to 100, a reduction of 52 percent from the backlog of 208 in March 2022) and is starting to improve permitting timelines for new submissions (average is 150 days).
- EMLI has also made improvements to application forms and has provided guidance to industry to assist them in submitting high quality applications that can be processed faster.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Mandate Commitment – Transparency:

- EMLI has been providing permitting workshops at industry events around the province to ensure staff are accessible and transparent with requirements.
- Staff have been meeting with the leadership of the Association for Mineral Exploration B.C. and B.C. Stone, Sand, and Gravel Association regularly to share permitting data and to remain transparent with progress.
- A new permitting database is allowing data to be collected and analyzed in a timely manner so that adjustments can be made as needed to improve the process; this is improving internal transparency for decision making.
- A Public Engagement Portal has been developed to share information about Regional Mines; as well, the B.C. Mine Information website is utilized to share information about larger Regional Mine projects.
- Regional Operations Branch introduced a permit intake window (batching) process in the fall of 2022, for mineral exploration files. This new process provides a scheduled approach to permit reviews and provides proponents with more predictability with respect to when their applications will be reviewed and when feedback will be provided to them. Positive feedback has been received from industry regarding this approach.

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2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Major Mines Permitting Timelines

Drafted/Revised: January 31, 2024

Issue: Industry concerns regarding timelines for permitting major mines

Response:

- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is aware of industry concerns regarding the time required to review applications for major mines and is continuously working to improve industry guidance, reduce process requirements, and find efficiencies in required processes.
- Major Mines include producing mineral and coal mines and applications are typically technically complex, involve multiple agencies, and significant engagement with First Nations.
- Expected timeline for referral of Major Amendment Applications to Statutory Decision Making (SDM) is 6 to 12 months from acceptance of final application to permit referral.
- EMLI has increased the capacity of the Major Mines Office (MMO) staff to focus on amendment applications through the creation of a dedicated technical compliance and enforcement unit and an indigenous relations branch.
- EMLI staff have been improving application process and information requirement guidance for proponents to support clear, efficient process.
- EMLI has implemented the Departure from Approval Policy, with over 120 submissions being processed in an average of 22 days, since 2020.
- EMLI is continuously developing and implementing guidance and tools to ensure that the detailed requirements for amendment applications are clear and consistent for industry during the development of their applications, which will result in reduce review timelines.
- Ministry staff have implemented a streamlined review process for smaller amendment application that has reduced timelines by one to six months.
- Timeline Trend - Major project review timelines have reduced from an average of 259 business days to 164 business days since 2019.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Background/Status:

Timeline Trends

- Analysis of major mine permitting review timelines suggest a trend toward more efficient processes:
 - Prior to November 2019, completed major mine permitting review projects averaged 259 business days.
 - Since November 2019, completed major mine permitting review projects have averaged 164 business days.
 - This data pertains to proponent-initiated Major Amendment Applications, which involve mine expansions, mine restarts, or new mines.
 - Timelines are inclusive from when the final application is received from the proponent to when the permit is referred to Statutory Decision Makers.
- Major Amendment Applications are technically complex, require detailed review by technical staff, and are subject to timeline extensions created by the proponent or the resolution of Indigenous Nation concerns, which are outside the control of EMLI.
- The current expected timeline for the review of a Major Amendment Application is 6 to 12 months. Recent examples include Blackwater (10 months), New Afton C-Zone (10 months), Premier Mine Restart (7 months).
- To date, in 2023/24 18 Major Amendment Applications have been processed, an increase from the 12 processed in 2022/23.

Increased Capacity

- Prior to 2021, MMO staff held responsibilities for compliance and enforcement and Indigenous consultation.
- In 2021, the EMLI created the Technical Compliance Unit, which assumed most compliance and enforcement responsibilities from MMO technical staff ensuring they can remain focussed on permitting. This includes seven new FTEs in the past two years.
- In 2023, EMLI created the Priorities Advancement and Indigenous Relations Branch, which has assumed responsibility for leading consultation efforts on behalf of MMO. There are approximately 20 staff, include 5 new FTEs in the past three years, located across the Province that provide consultation and reconciliation leadership support from early exploration stages to advanced permitting stages of mining projects.

2023/24 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Tools and Procedures for Industry

- EMLI has developed both external and internal policies and procedures to assist in streamlining the application review process, including, updated application information requirements, an authorizations guide for proponents, and improved coordination with the Ministry of Environment and Climate Change Strategies (ENV) on joint applications.
- The Departure from Approval process, which provides the ability for proponents to self-assess proposed changes to their mine plans and identify those changes that are 'non-substantial' and do not require amendment applications. This process has reduced timelines for 120 'non-substantial' submissions to 22 business days since 2020.
- The new or updated industry guidance is increasing clarity for proponents to submit complete applications that will take less time to review: Joint Application Information Requirements guidance document, the Technology Readiness Levels (TRL) guidance for water treatment technologies, and the Materials Import Guidance document.
- MMO has developed and implemented a streamlined review process for small, narrowly scoped, and low risk applications. This includes expedited pre-application steps and shorter review timelines. Initial results have reduced process timelines by 1 to 6 months.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: BC Hydro Electrification Plan

Drafted/Revised: February 13, 2024

Issue: BC Hydro is continuing to implement its Electrification Plan in support of the province's CleanBC targets

Response:

- Electrification is one of the key pathways identified in the CleanBC Roadmap to 2030 to reduce or avoid building, transportation, and industrial emissions.
- BC Hydro's Electrification Plan (Plan) was released in September 2021 and positions BC Hydro as a leader in addressing climate change, driving clean economic development, while keeping rates low for British Columbians.
- The specific actions within the Plan were designed to complement and build upon existing government and BC Hydro initiatives.
- The Plan includes programs and incentives to promote the switch from fossil fuels to clean electricity in the transportation, building, and industrial sectors, and reduce the cost and time it takes for customers to connect to the BC Hydro grid.
- Electrification efforts will require significant growth of transmission infrastructure and investment in grid modernization. BC Hydro's 2024 Capital Plan, *Power Pathway: Building B.C.'s Energy Future* supports increased investments in electrification and replacement of aging assets to ensure a future-ready grid.
- In 2023, the Province and BC Hydro announced the first call for power in over 15 years to add 3,000 gigawatt hours of clean and renewable electricity. Increasing the clean energy generation will support electrification efforts in the built environment and greenhouse gas (GHG) emission reductions.
- The BC Hydro task force is also providing government with recommendations to support electrification efforts in the province – including on building infrastructure, modernizing the regulatory environment and pursuing new clean growth opportunities.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Background/Status:

- The Province's CleanBC Plan aims to reduce GHG emissions from transportation by up to 32%, and from buildings and communities by up to 64% by 2030.
- There is also a goal to reduce industrial emissions by 2.5 megatonnes per year.
- BC Hydro's Plan is a five-year plan to use B.C.'s clean electricity to reduce carbon emissions and build a clean economy in alignment with the province's CleanBC targets. The Plan and associated expenditures for Fiscal 2023 to Fiscal 2025 was filed with the BC Utilities Commission as part of the Revenue Requirements Application in August 2021.
- If the Plan is fully realized, domestic electricity sales will be 3,100 GWh higher, customer rates will be about 1.6% lower, and GHG emissions reduced or avoided by 930,000 tonnes/year by 2026 than without the Plan.
- The Plan outlines BC Hydro's commitment to invest \$260 million over five years to make it easier and more affordable for buildings, transportation, and industry to use B.C.'s clean electricity instead of fossil fuels with the following incentives:

\$26 million for the built environment

- Aims to increase the accessibility of heat pumps through rebates and support electrification in the commercial building sector.

\$30 million for the transportation sector

- Support the expansion of public charging infrastructure for electric vehicles and promote fuel switching of medium and heavy-duty vehicles.
- Collaboration with large customers on the development of future electrification projects for public transit, including buses and ferries.

\$105 million for industrial electrification

- Over \$60 million in incentives for fuel switching initiatives;
- Up to \$25 million in incentives for study funding for new customers; and
- Up to \$20 million in incentives for studies to support hydrogen production.

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Methane Regulations

Drafted: January 31, 2024

Issue: Oil and gas sector methane emissions reduction targets, regulatory development and federal-provincial equivalency.

Response:

- Methane regulations are a key policy instrument for achieving our oil and gas sector methane reduction targets.
- BC is on track to exceed our CleanBC oil and gas sector methane emissions reduction target of 45% below 2014 levels by 2025. The 2021 provincial inventory shows sectoral methane emissions have decreased by 47 percent below 2014 levels and more recent data shows methane emissions continuing to decrease.
- BC's natural gas production has one of the lowest methane emissions intensities in the world.
- We have consulted with First Nations and engaged with stakeholders on new stronger methane regulations that will get us to our 75 percent reduction target by 2030 and ensure ongoing equivalency with the federal government's proposed methane regulations.
- BC is working with experts, industry, non-profits and environmental groups to make sure we have an accurate picture of methane emissions in the oil and gas sector.
- Examples of this work include collaborative research partnerships and the use of advanced methane detection technologies.
- This work adds insight that is essential for effective regulatory development and achieving BC's methane reduction targets.

Background/Status:

- Through CleanBC, BC has committed to reducing oil and gas sector methane emissions by 45 percent below 2014 levels by 2025, 75 percent below 2014 levels by 2030 and near elimination of industrial methane emissions by 2035.
- BC is on track to meet provincial methane emissions reduction targets for 2025.
- BC's oil and gas sector methane emissions reductions contribute to the 2030 oil and gas sector greenhouse gas (GHG) reduction target of 33 to 38 percent below 2007 levels, as well as the provincewide GHG reduction targets.

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Minister Responsible: Josie Osborne

Regulatory Development

- In April 2020, BC signed an equivalency agreement with the federal government as a result of their determination that provincial methane regulations would achieve greater reductions than the national regulations. The agreement, the first for any province, is for five years (2020 to 2025).
- A regulatory review was conducted in 2022 to assess the effectiveness of BC's methane regulation requirements. This resulted in updates to the Drilling and Production Regulation and the Oil and Gas Processing Facility Regulation which came into effect January 1 of this year.
- In 2023 the Ministries of Energy, Mines and Low Carbon Innovation and Environment and Climate Change Strategy worked in collaboration with the British Columbia Energy Regulator (BCER) to develop enhanced methane regulations. Proposed changes are designed to: achieve the province's 2030 target; build towards near elimination by 2035; and achieve reductions aligned with federal regulations so that continued equivalency can be determined.
- Pending approval by the BCER Board, the enhanced methane regulations will come into effect in 2025 and set industry on track to meeting provincial methane reduction targets for 2030 and beyond.
- BC's methane regulations are developed within a suite of complementary policies that drive GHG reductions and support progress to near elimination of methane emissions by 2035 (e.g., increasing carbon price).

Methane Emissions Intensity

- In April 2023, the Energy and Emissions Research Laboratory at Carleton University published a journal article that found the methane emissions intensity of produced natural gas in BC to be less than 0.5 percent in 2021. This emissions intensity compares favourably to other North American producing areas and jurisdictions where research has found intensities ranging from 0.6 percent to 5.6 percent.
- BC's methane emissions intensity is one of the lowest in the world. This is evident when comparing BC's 2021 methane emissions intensity to the countries included in the International Energy Agency's Global Methane Tracker 2023.
- As additional policy is implemented to achieve the 2030 methane target, BC is modeled to have a methane emissions intensity of approximately 0.1 percent.

Improving Understanding of Methane Emissions Inventory

- BC is working with experts, industry, non-profits and environmental groups to make sure we have an accurate picture of methane emissions in the oil and gas sector. Examples of funded initiatives include:

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- Research, publications and information sharing through the BC Methane Emissions Research Collaborative.
- Ongoing aerial surveys to advance world leading measurement research done through Carleton University, co-funded with the United Nations Environment Programme International Methane Emissions Observatory.
- A research project to monitor provincial methane emissions and detect any large methane sources with satellites.

Cross Reference: Petroleum and Natural Gas Sector Emissions and Initiatives

Contact:

Nathaniel Amann-Blake ADM Energy Resources Division 250 889-1990

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Clean Transportation Action Plan

Drafted/Revised: February 20, 2024

Issue: Clean Transportation Action Plan, a commitment under the CleanBC Roadmap to 2030

Response:

- CleanBC's Roadmap to 2030 (Roadmap) committed to developing a Clean Transportation Action Plan (CTAP).
- CTAP is part of a comprehensive approach to work towards achieving British Columbia's (BC) transportation sector greenhouse gas (GHG) reduction target of 27-32% below 2007 levels by 2030.
- It also aims to achieve net-zero GHG emissions by 2050, as well as to work toward transportation-related targets outlined in the Roadmap (e.g. vehicle kilometres travelled [VKT] reductions for passenger vehicles).
- The Province is already taking many actions to reduce transportation GHG emissions, including through programs, policies and regulations that support active transportation, zero-emission vehicles (ZEV), and clean fuel adoption. Examples include: the suite of Go Electric programs, the *Zero Emission Vehicles Act*, and the Low Carbon Fuel Standard (LCFS).
- Building upon existing work across Ministries, the CTAP will profile actions currently underway and identify new actions to support progress toward GHG and transportation targets.
- These actions seek five key outcomes: (1) supporting the creation of clean transportation infrastructure; (2) moving people via more affordable and efficient modes; (3) moving goods more efficiently; (4) making ZEVs and low carbon fuels more accessible; (5) and enhancing clean transportation data collection and dissemination.
- Decarbonizing and increasing energy efficiency in B.C.'s transportation sector helps to achieve Government priorities such as supporting clean jobs and increased affordability, all while stimulating province-wide economic activity.

Background:

- The Ministry plays a leading role in developing policies, programs and standards that improve the energy efficiency and reduce GHG emissions in the transportation sector.

- B.C.'s transportation sector accounts for approximately 41% of provincial GHG emissions: approximately 37% of transport emissions from light-duty vehicles, 21% from on-road medium- and heavy-duty vehicles, 23% from off-road vehicles and equipment, and 19% from marine vessels, rail, and aircraft (2021 emissions inventory, latest data available).
- In 2021, transportation emissions had risen 8% in B.C. since 2007, largely due to increasing emissions from medium- and heavy-duty vehicles, rising vehicle populations, and increasing fuel consumption.
- CleanBC and the CleanBC Roadmap to 2030 identify additional transportation targets including:
 - ZEV targets:
 - accelerated *Zero Emission Vehicle Act* targets - 26% of new light-duty vehicles by 2026, 90% by 2030, 100% by 2035; and
 - new ZEV targets for medium- and heavy-duty vehicles aligned with California or leading jurisdictions.
 - Vehicle kilometres travelled (VKT) reduction targets: reduce light-duty VKT by 25% by 2030, compared to 2020.
 - Mode share targets: increase share of trips (e.g., commuting for work and personal activities) made by walking, cycling, transit to 30% by 2030, 40% by 2040, and 50% by 2050.
 - Energy intensity targets for commercial transportation: reduce the energy intensity of goods movement (tonne-kilometres) by at least 10% by 2030, 30% by 2040, and 50% by 2050, relative to 2020.
- CTAP will include short-term actions and a long-term view, which is necessary to work toward 2030, 2040 and 2050 targets.
- CTAP is being developed by the Ministry of Energy, Mines, and Low Carbon Innovation and the Ministry of Transportation and Infrastructure, with support from the Ministry of Environment and Climate Change Strategy and Ministry of Housing.
- Ongoing engagement with First Nations on CTAP started in Summer 2022. Engagement with local governments started in Fall 2022. A consultation paper was issued to technical stakeholders in February 2023. Ministry-specific engagement on commercial ZEV requirements has been underway since spring 2023.
- CTAP is anticipated to be released as a public document in spring 2024.

Cross Reference:

- 03 - CleanBC Go Electric Vehicle and Industry
- 04 - CleanBC Go Electric Infrastructure Training
- 05 - Zero-Emission Vehicles Act & Regulation

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Evolving the Role of the British Columbia Utilities Commission (BCUC)

Drafted/Revised: February 12, 2024

Issue: Adapting the role of the BCUC to support BC's clean energy transition.

Response:

- In the same way we are taking active steps to align British Columbia's (BC) energy system with our climate targets and other key priorities, the Province is committed to working with the BC Utilities Commission (BCUC) in determining their role in the clean energy transition.
- As an independent agency, the BCUC serves as an economic regulator of public energy utilities, with a focus on the benefits and costs to ratepayers.
- In February 2024, we updated the energy objectives in the Clean Energy Act, providing a clear signal to the commission regarding the Province's climate and affordability goals.
- As we move forward, Government will be working closely with the BCUC and others to determine how its powers and mandate can be adapted to incorporate new responsibilities to support the energy transition.

Background/Status:

- The Minister's Mandate letter includes the priority to "Work with the BC Utilities Commission in supporting BC's clean energy transition, in alignment with our province's climate goals to achieve net zero by 2050, and affordability objectives."
- The Climate Solutions Council (CSC) supports this and recommends Government consider a fundamental transformation of the BCUC to align decision-making with decarbonizing the energy system.
- As an economic regulator, the BCUC ensures that customers have access to safe, reliable energy service rates, while allowing the utility the opportunity to earn a fair rate of return on its investment. The BCUC conducts public, open and transparent review processes of energy utility applications.
- Additionally, the BCUC was designated as the administrator of the Fuel Transparency Act to promote market competitiveness and to support public confidence in the fair and transparent functioning of the market.

2024/25 Estimates Note

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- Achieving BC’s greenhouse gas (GHG) reduction targets will require a fundamental realigning of BC’s energy system, including a re-think of the roles of electricity, gas, and other public utilities. This includes opportunities to leverage utility spending, and utilities’ close relationship with their customers, to implement GHG reduction initiatives and influence customer behaviour.
- The BCUC is a critical partner in the energy transition. As such, a revaluation of their role is required to support the Province’s climate ambitions while also protecting ratepayers from rising costs and ensuring reliable access to energy.
- The Province has taken initial steps by prioritizing emission reduction and affordability among the *Clean Energy Act* energy objectives the BCUC must consider in making decision on utility resource plans, capital projects, expenditure schedules and supply contracts.
- Modernizing the BCUC will be informed by the direction set under the Climate Aligned Energy Framework (CAEF), which will articulate the Province’s overall vision and priority areas for an energy plan next mandate.

Cross Reference: #22 Decarbonizing BC’s Gas Grid (GRR)
#25 Climate Aligned Energy Framework (CAEF)

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity Utility Regulation Division	778-698-7183
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Implementation of BC's New Oil and Gas Royalty Framework

Drafted/Revised: January 29, 2024

Issue: Implementation Timelines

Response:

- The new royalty framework, announced in May 2022, has already eliminated several royalty incentive programs including the Deep Well Royalty Program.
- Transition to the new royalty framework began September 1, 2022 and is being phased in over two years to give industry enough time to upgrade their systems.
- Work is underway to finalize policies, systems development and bring forward regulations to implement the new system.
- The new system will eliminate the largest fossil fuel subsidy, the Deep Well Royalty Program by September 1, 2026.
- The transition includes developing a new program that aims to help heal the land and reduce emissions with unused deep well deductions.

Background/Status:

- When oil and natural gas resources are produced in B.C., the Province charges either a royalty or a freehold production tax (collectively called the royalty system) on behalf of British Columbians.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) is responsible for oil and natural gas royalty policy while Ministry of Finance (FIN) administers the collection of revenues under the royalty system.
- A comprehensive review of B.C.'s legacy petroleum and natural gas royalty system was launched by EMLI in 2021 the first in 30 years.
- On May 19, 2022, the Province announced a new oil and gas royalty system that is a revenue minus cost (RMC) framework with price sensitive royalty rates.
- A transition to the new framework began September 1, 2022, with an initial set of regulation amendments that eliminated several royalty incentive programs identified as inefficient and a transition rate of 5% for new gas wells to provide a bridge to the new system.

2024/25 Estimates Note

Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Implementing the new royalty system

- The New Royalty Framework will require either an amendment to existing *Petroleum and Natural Gas Royalty and Freehold Production Tax Regulation*, or to repeal and replace that Regulation with a new one.
- Collaboration between EMLI and FIN continues to make the administrative changes and information technology enhancements necessary to ensure that the new royalty systems as well as the proposed Healing the Land and Emissions Reduction (HLER) program are in place on implementation.
- EMLI continues to engage with First Nations on the development on the proposed policies to address concerns and incorporate their feedback into the design.
- Additional engagement with industry will take place to ensure industry has time to update their systems and become familiar with the new requirements prior to implementation.

Healing the Land and Emissions Reduction

- Implementation of the Healing the Land and Emissions Reduction program HLER is occurring on a longer timeline than originally anticipated to ensure that the program aligns with interests of First Nations as well as the Province.
- As announced in May 2022, producers will have until September 1, 2026, to move their deductions to the HLER or they will expire.
- The HLER program will support work that goes above and beyond regulatory requirements to reduce emissions or cumulative impacts on the land base.

Royalty Rates

- As announced in May 2022, the new royalty system will use price-sensitive royalty rates with a goal of achieving a return of 50% of profits on the public resource after costs are accounted for.
- This target has been the focus of recent work between the Treaty 8 Nations and the Province.
- While initial modelling has shown that under certain circumstances it may be challenging for the Province to achieve the target, this will be better understood once the new system is in place and has been operational for a sufficient period of time.

Contact:

Nathaniel Amann-Blake	Assistant Deputy Minister	Energy Resource Division	250 889-1990
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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne
Title: Critical Minerals Strategy

Drafted/Revised: March 26, 2024

Issue: Update on the BC Critical Minerals Strategy

Response:

- British Columbia's (BC) mining sector provides many of the critical minerals and metals needed to fight climate change, like the integral components of technologies such as electric cars, wind turbines and solar power.
- Global demand for critical minerals is growing substantially and BC has the potential to be a supplier of choice for many of these minerals.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) has announced Phase 1 of the BC Critical Minerals Strategy to capitalize on this opportunity.
- Phase 1 takes impactful actions focussed on unlocking critical minerals opportunities throughout the value chain. EMLI will build on this momentum by releasing Phase 2 of the Strategy in the coming months. Phase 1 is centred on a made-in-BC approach that incorporates input from an expert advisory committee, rightsholder and stakeholder engagement, and economic and geoscience analysis.
- Phase 1 builds on the foundation of and aligns with related government priorities including *Declaration Act* commitments, land-use planning and conservation, Mineral Tenure Act reform, CleanBC and StrongerBC.

Status:

- In Budget 2023, EMLI was given six million over three years to conduct First Nations and public engagement, geoscience and economic analysis and establish a Critical Minerals Advisory Committee, to inform strategy development.
- On January 22, 2024, the Premier announced Phase 1 of the BC Critical Minerals Strategy (Attachment 1).
- Phase 1 includes 11 actions (Attachment 2) that will be impactful first steps to support the development and growth of the critical minerals sector, attract investment, and ensure a stable workforce in a competitive jurisdiction.
- These actions begin to address the barriers to critical-mineral project development, as well as the conditions to enable development. They also align with the Province's commitments to the UN Declaration on the Rights of Indigenous Peoples and BC's Declaration Act, and other government priorities such as land use planning, conservation commitments, CleanBC and StrongerBC.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

• Advice/Recommendations

To inform

- Phase 2, EMLI will be continuing engagement with rightsholders, economic and geoscience analysis and continued input from the Critical Minerals Advisory Committee.
- Phase 1 actions are a starting point to build strong partnerships and unlock critical mineral opportunities throughout the value chain, and we will continue this momentum through Phase 2 of the BC Critical Minerals Strategy in the coming months.
- Phase 1 includes a commitment to align the BC Strategy with the First Nations Critical Minerals Strategy, which was released by the First Nations Energy and Mining Council in March 2024. This work will take place over the next several months.

Background:

- The International Energy Agency estimates that demand for critical minerals is projected to increase by 6x by 2050 to meet increased demand for green technologies and infrastructure.
- BC hosts at least 16 of the 31 identified critical minerals in the Canadian Critical Minerals List. Of these, copper, molybdenum, and magnesium are already being produced at nine of BC's operating mines, and there is significant potential in the further development of these and other critical minerals, such as nickel and cobalt.
- BC has substantial potential to produce additional critical minerals and develop greater critical mineral processing, manufacturing, and recycling capacity.
- Canada announced \$3.8 billion over eight years (commencing in 2022-23) in Budget 2022 to implement Canada's first Critical Minerals Strategy to capitalize on the growing need for these minerals. The Strategy was launched in December 2022.
- EMLI sees the BC Critical Minerals Strategy as complementary to the federal strategy while advancing provincial interests. EMLI is exploring BC is engaging with federal counterparts to explore opportunities for collaboration and to secure federal funding for BC projects and priorities.
- Critical minerals are a key area of focus for the recently initiated Regional Energy and Resources Table (RERT) between BC and Canada to seize on economic opportunities enabled by the global low-carbon transition.

Attachments: Attachment 1 – Phase 1 BC Critical Minerals Strategy
Attachment 2 – Phase 1 Actions

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

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PHASE
1

B.C.'S CRITICAL MINERALS STRATEGY

UNLOCKING A GENERATIONAL OPPORTUNITY

Critical minerals like copper, cobalt, and nickel are vital building blocks for green technologies needed to decarbonize our economy and achieve net-zero emissions by 2050. British Columbia is a world-class mining jurisdiction with **16 of Canada's 31 critical minerals** and is Canada's largest copper and only molybdenum producer.

A FOCUS ON BRITISH COLUMBIANS:

The B.C. Critical Minerals Strategy will support a sustainable economy to deliver the jobs, opportunities and services that people need to build good lives and support their families.

B.C. MINING REPRESENTS:



35,000+
Rural & urban jobs...

... with an average salary of
\$129,500


\$7.3 BILLION
to provincial GDP

28%
of B.C.'s
export value

Approximately
\$1 BILLION
in provincial government
revenue to support services



Ministry of
Energy, Mines and
Low Carbon Innovation



The B.C. Critical Minerals Strategy lays the foundations for strong partnerships between First Nations, government and industry that will encourage investment and sustainable economic growth that advances climate action. **This is a generational opportunity to strengthen our critical minerals sector, access global markets, and secure new jobs across the province.**



WORLD-CLASS GEOSCIENCE

- New investment in the BC Geological Survey will ensure world-class geoscience data is current and available, including B.C.'s Critical Minerals Atlas.



INVESTING IN THE FUTURE

- Existing B.C. programs such as the BC Mining Exploration Tax Credit, Innovative Clean Energy Fund and CleanBC Industry Fund will help to support a competitive and innovative sector.
- In partnership with the Province, lithium-ion battery company E-One Moli Energy is investing in Maple Ridge, B.C., for its new \$1.05 billion manufacturing plant.



A WORLD LEADER IN ESG

- The establishment of an ESG Centre of Excellence will support B.C. businesses to build and promote their environmental and social credentials and help the province attract global ESG-focused investment.
- A global leader in climate action, B.C. implemented North America's first carbon tax and is committed to achieving net-zero emissions by 2050.



MEANINGFUL PARTNERSHIPS WITH FIRST NATIONS

- B.C. has a legislated framework for Indigenous reconciliation that aligns with the UN Declaration on the Rights of Indigenous Peoples. This includes negotiating consent-based decision-making agreements with First Nations for mining projects in B.C.

OUR NATURAL BUSINESS ADVANTAGES:

- ✓ Access to fully integrated port, rail and road transportation systems
- ✓ Strong collaboration across all levels of government, including First Nations partners
- ✓ Our energy comes from 98% renewable sources
- ✓ Competitive taxes and strong fiscal incentives
- ✓ Diverse, skilled, highly educated and multilingual workforce

PHASE 1 OF A MADE-IN-B.C. STRATEGY

VISION:

Responsible critical minerals development drives B.C.'s clean economy, delivering jobs and benefits for all British Columbians, while advancing reconciliation goals.



The B.C. Critical Minerals Strategy has three overarching goals:

GOAL 1:

Expand First Nations partnerships, shared decision making and reconciliation.

GOAL 2:

Increase business certainty to attract investment.

GOAL 3:

Establish funding partnerships to advance critical mineral projects.

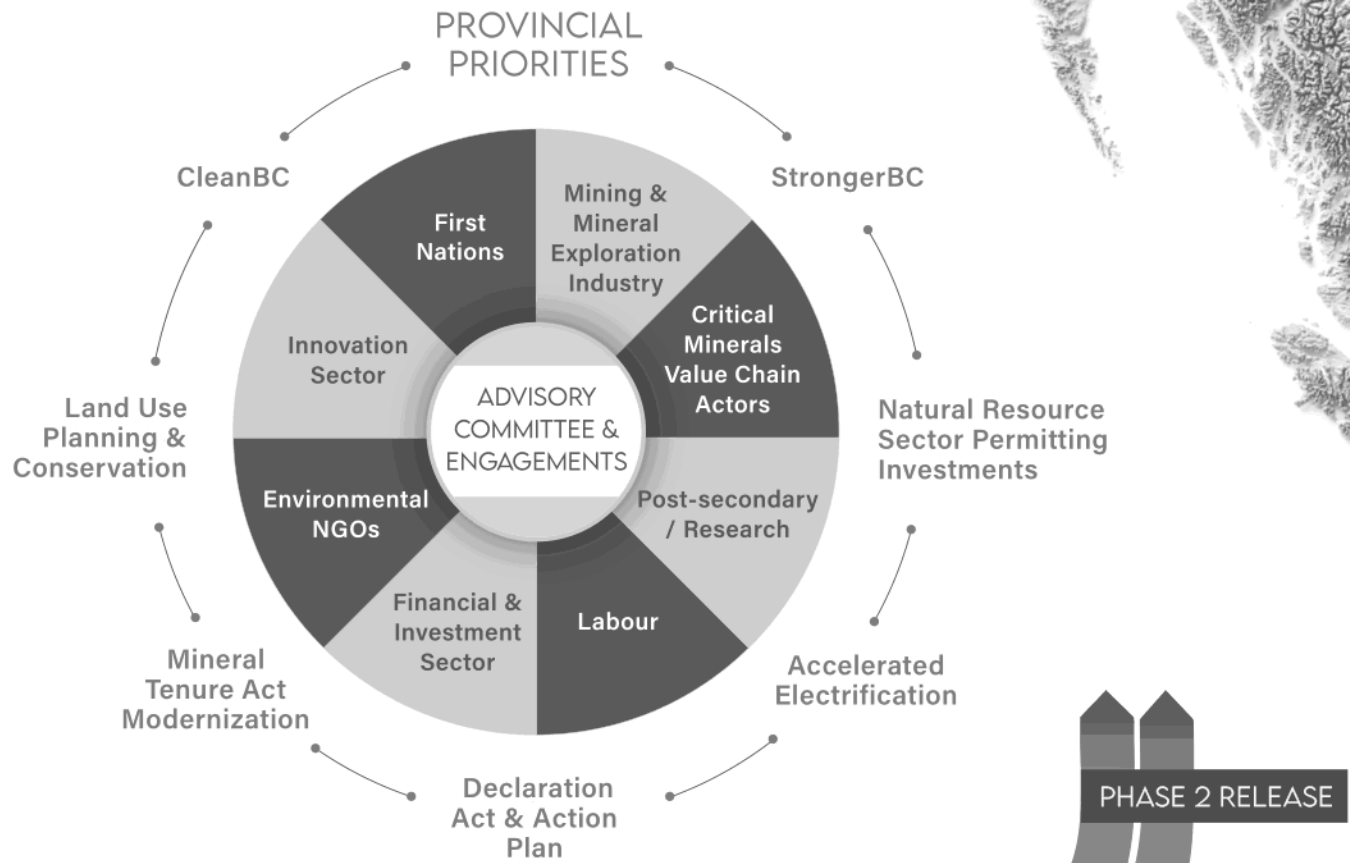
B.C. TAKING ACTION

- **Critical Minerals Project Advancement Office** – dedicated staff to prioritize critical minerals project advancement.
- **Dedicated Permitting Resources** – to ensure efficient permit processing to bolster business certainty, reduce development times and attract long-term investment.
- **Critical Minerals Atlas** – evaluates B.C.'s critical mineral endowment and builds awareness about opportunities for industry, First Nations and the public.
- **Work with First Nations on Critical Minerals** – continue to engage with First Nations and align B.C.'s Strategy with the First Nations Energy and Mining Council's First Nations Critical Minerals Strategy.
- **Mineral Tenure Act Modernization** – in cooperation and collaboration with First Nations and First Nations organizations.
- **Energy & Mines Digital Trust** – promotes B.C.'s ESG advantage and provides greater transparency for investors through B.C. government supported digital certificates.
- **Infrastructure & Electrification Gap Assessment** – to identify and develop business cases to address infrastructure gaps and barriers to critical mineral value chain development.
- **Critical Minerals Infrastructure Partnership Development** – partner with the federal government and First Nations to identify and advance high priority regional infrastructure projects.
- **Invest in Strategic Regional Critical Minerals Projects** – leverage federal funding to enable critical minerals processing, manufacturing, and circular economy projects.
- **Fiscal Environment Assessment and Targeted Incentive Programs** – to drive investment throughout the value chain, incent production, and maintain competitiveness.
- **StrongerBC: Future Ready Action Plan Skills Training & Workforce Development** – optimize programs to meet workers and critical minerals sector skills and training needs.

COLLABORATIVE APPROACH

B.C.'s Critical Minerals Strategy is being developed through an inclusive, collaborative and data-driven approach informed by First Nations engagement, public engagement, economic analysis and the work of a multi-sectoral Critical Minerals Advisory Committee.

B.C.'s Critical Minerals Strategy was developed in alignment with the Province's long-term priorities, which are foundational to achieving our goals.



Ministry of Energy, Mines and Low Carbon Innovation

Email: critical.minerals@gov.bc.ca

Website: <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/criticalminerals>

Attachment 2: Phase 1 Actions

The 11 key Phase 1 actions of the B.C. Critical Minerals Strategy are:

Critical Minerals Project Advancement Office:

The Critical Minerals Project Advancement Office is a foundational strategy action to support prioritization of critical-minerals projects in B.C. It is being put in place to centralize and expedite the advancement of priority critical-minerals projects, and lead the assessment of B.C.'s fiscal environment to ensure that B.C. leverages critical-mineral federal-funding opportunities like the Critical Mineral Infrastructure Fund and Strategic Innovation Fund's critical-minerals offering. The office will feature:

- a concierge service for critical-minerals projects with support for issues resolution, funding opportunities and regulatory processes;
- project management support on permitting and regulatory processes, including federal processes; and
- dedicated First Nations negotiators to help develop agreements, and advise and guide project proponents.

Investments in geoscience:

New investments in the B.C. geological survey will build provincial geoscience capacity to better support exploration and land-use planning efforts, including direct outreach with First Nations to share geoscience data and expertise. B.C. is committed to engaging First Nations and seeking partnership opportunities in geoscience activities.

The Province is investing \$3.9 million to advance critical-mineral geoscience over four years, starting fiscal year 2022-23.

As British Columbia continues to pursue the generational economic growth and jobs opportunities that critical minerals present, it is more important than ever that the mineral exploration sector and First Nations have current, accessible and ongoing access to world-class geoscience. The first-ever B.C. Critical Minerals Atlas provides a comprehensive overview of the types of minerals found in B.C. and in what quantities. The atlas is ready to be shared with mining professionals in B.C., whose work demands that they have convenient access to comprehensive and user-friendly critical-mineral data.

The atlas supports the CleanBC Roadmap to 2030 as a key step in evaluating the critical-mineral endowment of the province, and building awareness of critical-mineral opportunities for the mineral-exploration industry and First Nations.

Promotion of B.C.'s ESG advantage:

British Columbia is already recognized globally as a hub of mining expertise and innovation, and a global leader in ESG standards. The Province is committed to achieving a globally recognized standard of ESG and has established an ESG Centre of Excellence. The centre is supporting B.C. businesses and entrepreneurs to promote, develop and market environmentally friendly and socially responsible goods, resources and services.

Under this strategy action, the Province will increase investment attraction and promote B.C. businesses through a new Energy and Mines Digital Trust project (EMDT). The EMDT provides a transparent platform to manage companies' credentials for ESG strengths. These credentials, which cannot be forged, prove where the product originated and how it was produced. This allows companies to demonstrate to investors that their products meet the highest global standards, meaning increased awareness of B.C.'s ESG strengths and traceability of B.C. critical minerals throughout the critical-minerals lifecycle.

If widely adopted, this technology has the potential to improve regulatory efficiency and transparency, leading to new market opportunities for B.C.'s natural-resource industry.

Priority critical-mineral infrastructure:

To secure critical-minerals growth in northwest British Columbia, the Province will partner with the federal government and First Nations to advance and identify funding for high-priority strategic regional infrastructure projects. These projects are essential to critical-mineral growth and meeting CleanBC goals such as clean-energy projects, roads, port upgrades and the North Coast Transmission Line. B.C. is preparing funding for these projects, including the recently announced BC Hydro 10-year capital plan.

This strategy action will support and build on an existing process to secure federal co-funding and First Nations equity opportunities in the North Coast Transmission Line, and to advance line construction that will enable critical-minerals growth in northwest B.C.

Invest in strategic regional critical-minerals projects:

In 2023, the Province announced a \$1.05-billion partnership between E-One Moli and the governments of B.C. and Canada to bring lithium-ion battery cell production to Maple Ridge and create 450 high-quality, permanent jobs that are key to growing the province's clean economy.

This strategy action will build on this approach to advance opportunities to leverage federal funding to enable critical-minerals processing, manufacturing, and circular-economy projects.

Infrastructure and electrification gap assessment:

To reach its CleanBC net zero by 2050 goals, the Province must make the transition to cleaner technologies and energy usage. This means ramping up the development of critical minerals to meet supply needs. This strategy action is a detailed provincewide assessment, that will identify and make plans to address infrastructure gaps that are barriers to critical-mineral development. The assessment will focus heavily on opportunities along the entire value spectrum of critical minerals, from extraction to processing, manufacturing and recycling.

First Nations partners and industry are anticipated to participate in the assessment. This action will complement government's \$36-billion investment through the BC Hydro 10-year capital plan for community and regional infrastructure projects, that will deliver clean, affordable electricity to people and businesses in the future.

Commitment to First Nations on continued critical-minerals development:

B.C.'s Critical Minerals Strategy will serve the mining and mineral exploration sectors, First Nations and people in British Columbia with an evergreen approach, with further development and implementation based on ongoing analysis and engagement with First Nations and First Nations organizations.

Engagement with rights holders is vital to informing strategy development and ensuring that a wide range of perspectives are reflected. First Nations engagement will be taking place throughout 2024, as the Province builds the next phase of the strategy.

This strategy action also includes a plan to work together with the B.C. First Nations Energy and Mining Council (FNEMC) to identify synergies between Phase 1 strategy actions and FNEMC's B.C. First Nations Critical Mineral Strategy, as part of an evergreen approach to B.C.'s strategy implementation.

Continued commitment to reform Mineral Tenure Act:

Ongoing initiatives, such as Mineral Tenure Act (MTA) reform, are foundational to the success of the strategy. Collaboration between the Province and First Nations, and engagement with industry stakeholders is underway to modernize the MTA in alignment with the UN Declaration on the Rights of Indigenous Peoples.

This work will continue over the next 15 months with a goal of implementing the new act in spring 2025. The Province is building on the collaboration it has already undertaken, ensuring transparent and consistent communication, and cooperation between B.C., First Nations rights and title holders, and the First Nations Leadership Council. MTA reform will help continue to build a responsible and healthy mining sector that upholds and respects First Nations rights and title, and creates best practices that improve certainty for all.

Fiscal environment assessment:

The Province will conduct a business case analysis to assess the need for targeted incentive programs, that can drive investment throughout the critical-mineral lifecycle, incentivize production and maintain competitiveness. This work will identify barriers to attracting investment and recommends next steps to mitigate those barriers, as well as potential fiscal measures.

StrongerBC: Future Ready Action Plan skills training and workforce development:

The ministries of Energy, Mines and Low Carbon Innovation, and Post-Secondary Education and Future Skills, will partner to optimize programs to meet workers and critical-minerals sector skills and training needs. This work includes assessing existing programming and identifying and addressing gaps, including engagement with First Nations regarding specific training-program needs to build expertise necessary in critical-minerals exploration, mining and throughout the value chain.

Alignment of B.C. and First Nations Energy and Mining Council Critical Mineral Strategies, and continued engagement with First Nations.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mineral Tenure Act (MTA) Reform

Drafted/Revised: March 13, 2024

Issue: Reforming the MTA in consultation and collaboration with First Nations and First Nation organizations

Response:

- Reforming the *Mineral Tenure Act* (MTA) is a longstanding priority shared by First Nations, First Nations organizations, and the Province.
- British Columbia's (BC) *Declaration Act* Action Plan includes a commitment to work in consultation and co-operation with First Nations and First Nations organizations to align the MTA with the UN Declaration on the Rights of Indigenous Peoples (UN Declaration).
- We are working with First Nations and First Nations organizations to develop the vision and process for MTA reform.
- Direct input from First Nations rights and title holders is critical in shaping MTA reform including legislative, policy and operational changes.
- There will also be engagement with industry and stakeholders, including the mineral exploration and mining sector and environmental non-governmental organizations.
- This vital work is an opportunity to advance the social, environmental, and economic priorities of First Nations, the Province, and industry – and to support a healthy, responsible, and progressive mineral exploration and mining sector in BC.
- BC welcomes business and companies that share our commitment to respecting and upholding First Nations right and title.
- The recent BC Supreme Court ruling on the MTA is an important decision for First Nations rights and provides important context and timeline for this work.
- Legislative reform is targeted by Spring 2025 to address the court ruling.
- MTA reform is about more than responding to a court decision – it is a key step toward aligning BC's laws with the UN Declaration.
- Our work over the next several months will build on the collaboration to date between the Province, First Nations, and First Nations organizations.

Background/Status:

- The MTA and the Mineral Tenure Act Regulation (MTAR) establish BC's mineral tenure framework - which is the system for registering and maintaining mineral titles (i.e., claims and leases).

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

- Under the current mineral tenure system, claims are registered automatically through Mineral Titles Online without First Nations consultation.
- In the March 2022 Declaration Act Action Plan, the Ministry of Energy, Mines and Low Carbon Innovation (EMLI) committed to working in consultation and cooperation with First Nations and First Nations Organizations to reform the MTA in alignment with the UN Declaration.
- In addition to UN Declaration alignment, MTA reform is also expected to address important issues such as
 - 1) adding clarity and predictability in mineral tenure decision-making and regulatory processes including responding to the BC court case; and,
 - 2) changing economics and realities including responsible mining and global interest in critical minerals; and
 - 3) new approaches to land use planning, environmental stewardship and management.
- Current collaborative work between BC, First Nations, and First Nations organizations such as the First Nations Leadership Council (FNLC) includes:
 - 1) developing a reform vision (e.g., establishing reform scope, priorities, and approach, etc.),
 - 2) reviewing the BC Supreme Court’s decision in *Gitxaala v. British Columbia* and how to incorporate it into MTA reform, and
 - 3) establishing an engagement plan.
 - 4) Legislative reforms are targeted for Spring 2025.
- At this stage, reforms are focused on the MTA – however, any feedback and learnings related to other areas for reform within the mining space will be considered for future initiatives.

Gitxaala v. British Columbia:

- On September 26, 2023, the BC Supreme Court (BCSC) released its decision in *Gitxaala v. British Columbia*, brought by the Ehattesaht and Gitxaala First Nations (the petitioners).
- The BCSC found that the duty to consult is triggered because automatic mineral claim registration causes adverse impacts on First Nations’ areas of significant cultural and spiritual importance, and their right to “own, and achieve the financial benefit from, the minerals on their asserted territories.”
- The BCSC suspended the decision for 18 months (by Spring 2025) to allow time to address the ruling.

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- EMLI is monitoring claim registration and maintaining open dialogue with First Nations in the interim to help address their concerns on a rights holder's basis.
- On March 7th 2024, Environment and Land Use Orders were put in place for Ehattesaht and parts of Gitxaala territories which suspend mineral claim registrations and mining activities.
- The interim measures follow an agreement between BC and the two Nations after an appeal was filed following the failure of the court to quash specific tenures and prevent new claim registrations until a consultation regime is in place.
- The agreements reached between BC and the two Nations do not address the petitioners appeal related to the ruling on the application of the *Declaration on the Rights of Indigenous Peoples Act* or the UN Declaration to the laws of BC.

Cross Reference: Yellow Giant Mine (Banks Island)

Contact:

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2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Title: Mineral Tenure Compensation Framework

Drafted/Revised: February 16, 2024

Issue: Policy and process guidance related to mineral tenure compensation

Response:

- The Province is committed to responsible use of public funds, including in relation to mineral tenure compensation.
- Provincial commitments to protect and conserve of 30 percent of provincial lands and waters by 2030 are expected to include the provision, where appropriate, of associated compensation for impacted mineral tenures.
- Legal requirements related to mineral tenure compensation are enshrined in the *Mineral Tenure Act* (MTA) and associated regulations. The Province has committed to modernizing the MTA in consultation and cooperation with First Nations and First Nations organizations.
- The Ministry of Energy, Mines and Low Carbon Innovation (EMLI) has identified key gaps and challenges associated with mineral tenure compensation in relation to land use initiatives, that can be addressed through the MTA reform process.
- The Mineral Tenure Compensation Framework (Framework) is a suite of proposed policies, as well as process guidance to support increased utility and effectiveness of regulatory tools. The Framework is intended to guide and clarify existing processes, develop regulatory recommendations, and ultimately align with legislative amendments that will come by way of the MTA amendment process.
- Policy and process guidance developed as part of the Framework are intended to balance multiple Provincial interests and priorities. These include maintaining mining competitiveness and investment certainty, supporting land conservation in appropriate areas, supporting critical mineral development in appropriate areas, ensuring administrative fairness, and responsible use of public funds.

Background/Status:

- The Province has limited legislative, regulatory and policy tools to address mineral tenure expropriation¹ and compensation² in response to increasing land protection initiatives.

¹ 'Expropriation' refers to an action taken by the Province to take property or rights from their owner through the use of legislative tools, including potentially without that owner's consent.

² 'Compensation' refers to provision of something – often money – to counterbalance or make recompense for the loss of (or injury to) something of value. It can be provided on a willing basis.

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
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- Tools in need of development range from codified process guidance (i.e. step-by-step instructions written down for staff use to avoid inefficiency or duplicated efforts) to legislative/regulatory mechanisms (i.e. legal tools that can be used to achieve a specific desired effect or outcome).

Advice/Recommendations

- Updates to the Framework will include consideration of both landbase-wide factors (with the intent of limiting future expropriation and compensation exposure at a macro level) and factors relevant to individual tenure transactions (which may inform or affect the approach to, and cost of, compensation for individual tenure transactions).

Advice/Recommendations

Alignment with MTA Modernization:

- In September 2023, the Supreme Court of British Columbia issued a decision with respect to *Gitxaala v. British Columbia (Chief Gold Commissioner)* holding that the issuance of mineral tenures triggers the duty to consult. The court provided 18 months for the Province to develop and implement a new consultation process.
- MTA Modernization is targeting completion within the next 14 months, at which time legislative changes to the provincial compensation and expropriation regime can be undertaken.
- Policy development under the Framework is anticipated to inform and support the upcoming MTA amendments. This is expected to include the identification of proposed regulatory changes to key MTA regulations related to compensation, such as the Mining Rights Compensation Regulation and Mineral Tenure Act Regulation.
- It is anticipated that regulatory amendments identified will go forward as part of legislative amendments to the MTA

2024/25 Estimates Note Advice to the Minister

Ministry: Ministry of Energy, Mines and Low Carbon Innovation
Minister Responsible: Josie Osborne

Contact:

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TABLE 1: Ministry of Energy, Mines and Low Carbon Innovation

**KEY STATISTICS
09-Mar-24**

Oil and Gas Activity	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total Employment*	33,605	28,870	39,570	34,705	51,385	53,090	63,340	78,030				
Extraction*	1,435	1,455	1,405	1,475	1,585	1,470	1,540	2,270				
Support Activities for Extraction*	2,955	2,540	2,695	2,770	2,805	2,240	2,490	2,800				
Engineering and Construction*	26,015	21,765	32,345	27,440	44,120	46,650	56,105	69,950				
Transportation and Distribution*	3,200	3,110	3,125	3,020	2,875	2,730	3,205	3,010				
Source: Statistics Canada Labour statistics consistent with the System of National Accounts (https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3610048901)												
GDP at basic prices (millions)*	6,975	6,531	7,966	8,477	9,981	11,306	12,689	14,102				
Extraction*	2,773	3,062	3,311	4,098	3,763	3,901	4,115	4,542				
Support Activities for Extraction*	243	197	246	278	291	210	256	287				
Engineering and Construction*	2,565	1,861	3,004	2,583	4,386	5,643	6,716	7,663				
Transportation and Distribution*	1,394	1,411	1,405	1,518	1,541	1,553	1,602	1,610				
Percent of BC's Total GDP*	2.9%	2.6%	3.1%	3.1%	3.6%	4.2%	4.4%	4.7%				
Source: Statistics Canada GDP at basic prices, by industry, provinces and territories, Chained 2017 Dollars (https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3610040201)												
Production of Natural Gas (million cubic meters)*	43,339	46,166	46,497	53,137	53,173	55,447	59,413	64,603	69,043			
Production of Natural Gas (billion cubic feet per day) *	4.19	4.47	4.5	5.14	5.14	5.36	5.75	6.25	6.68			
Source: BCER 2021 Oil and Gas Reserves and Production Report / 2022 data Statistics Canada Supply and Disposition of Natural Gas, month												
Total Emissions (millions tonnes co2e)*	13.62	13.43	13.37	13.29	12.79	12.88	11.89					
Oil and Gas Extraction*	6.79	7.21	7.38	7.44	6.79	7.00	6.76					
Pipeline Transport*	1.31	1.39	1.43	1.34	1.38	1.31	1.3					
Oil and Natural Gas Fugitive*	4.99	4.2	4.06	4.13	4.15	4.19	3.39					
Petroleum Refining*	0.5	0.6	0.5	0.4	0.5	0.4	0.4					
*Source: Provincial Inventory												
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Royalties (millions)	\$ 130	\$ 146	\$ 161	\$ 199	\$ 118	\$ 196	\$ 920	\$ 2,255	\$ 685			
Source: Ministry of Finance												
Mining		2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2024
							Actual	Forecast	Actual/Forecast	Forecast	Forecast	Forecast
Exploration Spending (\$Millions)*		205	246	331.3	329.5	422.7	659.8	740.4	643.5			
New Mineral Claim Units Registered*		5,031	5,583	5,776	5,998	4,979	5,062	7,496	6,300			
Industry Investment (\$Millions)*		1,916	1,988	2,139	2,291	2,171	2,985	2,981	4,130			
Number of Metal and Coal Mines*		13	16	18	15	14	15	17	17			
Number of Aggregate Pits and Quarries*		337	389	444	510	564	587	867	769			
Value of Production (\$Billions)*		6.7	9.2	9.8	8.9	8.1	13.3	17.5	15.9			
Direct Mining Employment (Persons)*		10,057	11,033	11,960	12,244	11,293	12,466	14,332	14,000			
Total Minerals Sector Employment (Persons)*		34,910	36,844	39,292	39,150	36,261	39,525	39,702	35,000			
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2024-2025	2024-2025
							Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Total Mineral Revenue (\$Millions)		258.2	483.2	404.2	250	75.5	660.2	732.5	588			
Electricity		2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2024
							Actual	Actual	Forecast	Forecast	Forecast	Forecast
Total Generation (GWh)*		69779	74586	69781	64782	70947	74228	69832				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2024-2025	2024-2025
							Actual	forecast	Forecast	Forecast	Forecast	Forecast
BC Hydro net Income Before Transfers (\$M)		995	826	519	-43	1416	2034	1804	-55			
BC Hydro net Income (\$M)		684	684	-428	705	688	668	360	314			
*Data are in calendar years. All others fiscal.												

Advice/Recommendations:

Advice/Re

Advice/Re

**TABLE 1: Ministry of Energy, Mines and Low Carbon Innovation
YEAR OVER YEAR PERCENTAGE CHANGE
09-Mar-23**

Oil and Gas Activity	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
							Actual	Forecast	Forecast	Forecast
Total Employment*		-14%	37%	-12%	48%	3%	19%			
Extraction*		1%	-3%	5%	7%	-7%	5%			
Support Activities for Extraction*		-14%	6%	3%	1%	-20%	11%			
Engineering and Construction*		-16%	49%	-15%	61%	6%	20%			
Transportation and Distribution*		-3%	0%	-3%	-5%	-5%	17%			
Source: Statistics Canada Labour statistics consistent with the System of National Accounts (https://www150.statcan.gc.ca/t1/tb1/en/cv.action?pid=3610048901)										
GDP at basic prices (millions) - Oil and Gas*		-6%	22%	6%	18%	13%	12%			
Percent of Total GDP*		n/a	n/a	n/a	n/a	n/a	n/a			
Source: Statistics Canada GDP at basic prices, by industry, provinces and territories (https://www150.statcan.gc.ca/t1/tb1/en/cv.action?pid=3610040201)										
Production of Natural Gas (million cubic meters)*		7%	1%	14%	0%	4%	7%	9%		
Production of Natural Gas (billion cubic feet per day)*		7%	1%	14%	0%	4%	7%	9%		
Source: BCER 2021 Oil and Gas Reserves and Production Report / 2022 data Statistics Canada Supply and Disposition of Natural Gas, month ¹										
Total Emissions (millions tonnes co2e)*		-1%	0%	-1%	-4%	1%				
Oil and Gas Extraction*		6%	2%	1%	-9%	3%				
Pipeline Transport*		6%	3%	-6%	3%	-5%				
Oil and Natural Gas Fugitive*		-16%	-3%	2%	0%	1%				
Petroleum Refining*		19%	-21%	-25%	26%	-19%				
*Source: Provincial Inventory										
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Royalties (millions)		12%	10%	24%	-41%	66%	369%	145%	-70%	
Source: Ministry of Finance										
Mining		2016	2017	Jul-05	2019	2020	2021	2022	2023	2024
							Actual	Forecast	Forecast	Forecast
Exploration Spending (\$Millions)*		-24.63%	20.00%	34.67%	-0.54%	28.29%	56.09%	12.22%		
New Mineral Claim Units Registered*		9.75%	10.97%	3.46%	3.84%	-16.99%	1.67%	48.08%	-33.30%	
Industry Investment (\$Millions)*		22.21%	3.76%	7.60%	7.12%	-5.27%	37.54%	-0.14%	19.62%	
Number of Metal and Coal Mines*		-7.14%	23.08%	12.50%	-16.67%	-6.67%	7.14%	6.67%	0.00%	
Number of Aggregate Pits and Quarries*		6.65%	15.43%	14.14%	14.86%	10.59%	4.08%	4.77%	-10.73%	
Value of Production (\$Billions)*		8.06%	37.31%	6.52%	-9.18%	-8.99%	59.51%	39.11%		
Direct Mining Employment (Persons)*		-7.09%	9.70%	8.40%	2.37%	-7.77%	10.39%			
Total Minerals Sector Employment (Persons)*		-2.61%	5.54%	6.65%	-0.36%	-7.38%	9.00%			
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Total Mineral Revenue (\$Millions)		151.90%	87.14%	-16.35%	-38.15%	-69.80%	774.44%	10.95%	-19.73%	
Electricity		2016	2017	Jul-05	2019	2020	2021	2022	2023	2024
							Actual	Forecast	Forecast	Forecast
Total Generation (GWh)*		6.9%	-6.4%	-7.2%	9.5%	4.6%	-7.2%			
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
BC Hydro net Income Before Transfers (\$M)			-20.1%	9.3%	-155.1%	-439.1%	-1.2%			
*Data are in calendar years. All others fiscal.										

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION

Date: March 19, 2024

PREPARED FOR: Honourable Josie Osborne, Minister of Energy, Mines and Low Carbon Innovation

SUBJECT: EY Report “BC tracks third highest expenditure in mineral exploration in a decade – Insights from the BC Mineral and Coal Exploration Survey 2023”

BULLET RESPONSE:

- The [British Columbia Mineral and Coal Exploration Survey](#) is a joint initiative between the Government of British Columbia’s Ministry of Energy, Mines and Low Carbon Innovation (EMLI), the Association for Mineral Exploration (AME) and EY. This year represents the eighth survey conducted.
- The survey provides a view of the current state of the mineral and coal exploration industry in British Columbia (BC) and data presented is from January 1 through to December 31, 2023 and is based on survey responses and information collected from financial reports and press releases from 175 companies in BC, which collectively represent 244 projects.
- Facing global geopolitical and economic pressures British Columbia saw its first year-over-year exploration expenditure decline since 2016, however, 2023 was still the fourth highest year on record for BC and the third highest in the last decade.
- Tightening financial conditions, spurred by central bank rate hikes, geopolitical tensions and macroeconomic headwinds significantly impacted exploration activity globally, across Canada and in BC.
- There was a worldwide trend of later stage projects receiving the higher percentage spend on exploration as compared to grassroots projects.
- Companies reported \$28 million in expenditures on First Nations community consultation.
- Based on the 2023 preliminary estimates from NRCan, overall exploration expenditures are expected to decrease in Canada from \$4.4 billion in 2022 (actual figures) to an estimated \$3.9 billion in 2023 (preliminary estimates).
 - Exploration expenditures in BC were \$643.5 million, a 13 percent decrease from the \$740.4 million record amount reported in 2022.
 - Exploration expenditures in Ontario are expected to drop (by 13 percent) from \$1.1 billion in 2022 to \$952.2 million in 2023.
 - Exploration expenditures in Quebec are expected to drop (by 9 percent) from \$913.8 million in 2022 to \$834.7 million in 2023.

Exploration by the numbers:

- \$643.5 million, a 13 percent decrease from the \$740.4 million record amount reported in 2022.

- 69 percent (\$441 million) of the total expenditures occurred in the Northwest region of the province.
- Total metres drilled decreased by 35 percent from 2022, falling from 1,150,000 metres in 2022 to 748,000 metres in 2023.
- Copper exploration saw a 4 percent increase in spending from \$235 million in 2022 to \$244 million in 2023.
- Coal exploration saw an uptick in spending with expenditures more than doubling year over year. The sector saw a 108 percent increase in spending from \$12.5 million in 2022 to \$26 million in 2023.
- Lower gold exploration expenditures had the most significant impact on the overall decline. Even with high prices, exploration for gold as the primary target was down 23 percent, from \$422 million in 2022 to \$326.5 million in 2023.

Critical Minerals focus:

- Over 40 percent of mineral exploration expenditures were used to explore for critical minerals.
- Critical minerals spend totaled around \$267 million which represents around 42 percent of total BC expenditures and is broken down by minerals as follows:
 - Copper (91 percent), Nickel (3 percent), Zinc (2 percent) and other (3 percent).
- Copper accounted for 38 percent of all exploration spending in 2023, and the amount of copper exploration spending has continued to increase since 2017 (when it was \$35 million).
- Critical metals exploration in BC maintained similar levels of spending in 2023 as in 2022. Overall critical minerals spending increased by around 3 percent, from \$259 million in 2022 to around \$267 million in 2023.
- Compared to 2021, when tracking for critical minerals commenced, the level of spending increased by 83 percent from \$146 million in 2021 to \$267 million we see today.

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