



MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

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Ministry of Energy and Climate Solutions

Estimates Spring 2025

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MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

SECTION A: OVERARCHING/CROSS MINISTRY TOPICS

Section A Contents:

- Tariffs and Retaliatory Tariffs
- Fast Tracking Energy Projects
- Ministry Reorganization
- Columbia River Treaty
- Columbia Basin Trust and Columbia Power Corporation

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Tariffs and Retaliatory Tariffs

KEY FACTS:

- On March 4, 2024, President Trump implemented a 10 per cent tariff on energy imports from Canada. Two days later, on March 6, 2024, President Trump issued a one-month pause on tariffs impacting goods covered by the U.S.-Mexico-Canada Agreement (USMCA) on trade. It is unclear how this pause impacts the energy sector, since not all energy products exported by Canada are covered by USMCA.

Natural Gas, Oil, and Refined Petroleum Products

- Currently B.C. produces about 7 billion (B) cubic feet per day (Bcf/d) of natural gas. B.C. exports about 85 per cent of the natural gas it produces at a value of \$5B per year and it is estimated that about 50 per cent of this gas currently ends up in the United States (U.S.).
- The U.S. and Canadian markets are interdependent – so tariffs impacts are expected to be shared by suppliers and consumers. Suppliers could shift the burden to consumers by slowing growth or securing other international export opportunities.
- According to Wood Mackenzie, the tariffs could increase natural gas flows from western to eastern Canada as certain U.S. imports are cut. Exports to the western U.S. could remain stable due to limited price-competitive alternatives for western U.S. consumers¹.
- Currently LNG is not materially exported from B.C. If current and proposed LNG projects advance, it is estimated that by the middle of the next decade over 50 per cent of B.C.'s natural gas production could be destined for Asian markets.
- In addition to trade diversification, B.C. can employ strategies to support faster permitting, reducing investor uncertainty and building resiliency/redundancy in the distribution systems.
- The B.C. government is amending the *Low Carbon Fuel Act* to require made-in-Canada renewable fuels blended into gasoline and diesel. The changes will support B.C. and Canadian biofuel producers, protect local jobs across the supply chain and strengthen B.C.'s energy security.

¹ Wood Mackenzie (2025). How Would Energy Tariffs affect North American Gas Markets?

Electricity

- Since fall 2022, 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. being a net importer in 2023 and 2024.
- Over the past 2 years, BC Hydro used net imports to serve an average of 11 per cent of its domestic demand.
- In 2024, B.C. imported over 14,200 Gigawatt hours (GWh) of electricity from the U.S. at a cost of \$920M, mostly from Washington State. B.C. exported more than 6,300 GWh with sales to various U.S. states totalling just over \$920M.

ADDITIONAL INFORMATION:

- In response to President Trump's tariffs, Canada imposed retaliatory tariffs including components used as inputs to the production of oil and natural gas (e.g. pipe fittings).

Natural Gas, Oil, and Refined Petroleum Products

- B.C. is Canada's second largest producer of natural gas and in 2023 was the world's 12th largest natural gas producing jurisdiction (Alberta is 7th largest).
- According to Statistics Canada the petroleum and natural gas sector contributes \$15B (5 per cent) to Provincial gross domestic product and employs 73,000 workers at an average wage in excess of \$110,000 per year.
- Average royalties over the last 5 years have been \$740M per year, with a peak of \$2B recorded in 2022/23.
- By-products of natural gas production (propane, butane and condensate) are exported to Alberta and into Asian markets through two operating export terminals. According to Statistics Canada, in 2023, B.C. exported \$1.2B of propane primarily to Japan and South Korea.
- The Ridley Island Export Facility is currently under construction in the Port of Prince Rupert that will further expand B.C.'s ability to export propane and butane to Asian markets.
- The Trans Mountain Expansion Project (TMX) came online in May 2024 with a nameplate capacity of about 890 thousand barrels per day.
- Since TMX started operations, 50 per cent of exports have made their way to Asian markets.
- LNG projects complete or under construction represent \$41B of capital expenditures (capex) with an additional \$33-35B capex pending decisions in B.C.

- First Nations have or are currently negotiating benefits agreements with LNG companies. Some have equity or ownership.

Electricity

- In B.C., we trade electricity with neighbouring jurisdictions for two primary reasons:
 - to address any annual surplus and deficit due to variation in inflows to our hydro-based system; and,
 - to capture trade revenue from over or under supply in the U.S. and Alberta power markets.
- In 2024, B.C.'s electricity sales to the U.S. flowed primarily to Washington State (48 per cent); California (21 per cent); Arizona (12 per cent); Nevada (7.9 per cent); Montana (5 per cent); and Alaska, Idaho, Nebraska, New Mexico, Oregon, Texas, Utah, West Virginia, Wyoming (6.75 per cent collectively).
- BC Hydro's marketing subsidiary Powerex also has a portfolio of suppliers, customers and transmission contracts that allow it to transact wholly within the U.S. These activities are subject to a permit issued by the U.S. Department of Energy that allows Powerex to export power from the U.S. to B.C., and a Power Marketing Authorization from the U.S. Federal Energy Regulatory Commission that allows Powerex to transact at market-based rates.
- Powerex also markets the Canadian Entitlement (CE) to downstream power benefits under the Columbia River Treaty on behalf of the Province with proceeds deposited to the Province's Consolidated Revenue Fund. Revenues from the CE are forecast to be \$262M for 2024/25.
- The CE is currently delivered to the Canada-U.S. border where it may be sold to BC Hydro or re-exported. Powerex does have the ability to pick up the CE in the U.S., which could avoid tariffs on re-export from B.C.
- CleanBC and BC Hydro Power Smart provide consumer-facing incentives for a range of home energy retrofit and clean transportations measures.
- The incentives cover energy efficiency improvements, heat pumps, solar PV, home energy storage, zero emission vehicles and charging infrastructure.
- The Province and BC Hydro are taking action to preference Canadian goods in these programs going forward and to exclude, where practicable, U.S. produced good.
- To start as of March 12th all Tesla products are ineligible for either CleanBC and BC Hydro Power Smart programs.

FINANCIAL SUMMARY:

- The potential financial impact of tariffs and retaliatory tariffs on B.C.'s energy system are still being understood.
- A preliminary assessment by the B.C. Government estimated that 25% tariffs on all Canadian imports could result in the following impacts:
 - Reduced economic activity by \$69B between 2025 and 2028;
 - A drop in gross domestic product by 0.6 per cent annually in both 2025 and 2026;
 - Job losses of 124,000 by 2028, with the largest declines in the natural resource sector.
 - **Note:** these impacts are economy-wide and not specific to the energy sector.

ATTACHMENTS:

- Not applicable

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Rachel Shaw, ERD	250 507-6047
Nat Gosman, EDD	778 698-7282

Fast Tracking Energy Projects

KEY FACTS:

- We are streamlining and paying close attention to eighteen (18) priority projects announced by the Premier, to grow and diversify our economy. This is part of Government's response to threats from the U.S. around tariffs and trade.
- These projects represent approximately \$20 billion and will create 8,000 family supporting jobs, especially in rural and remote communities across B.C., while also strengthening and diversifying our economy for the long term.
- Nine (9) wind projects, one (1) solar project, and North Coast Transmission Line (NCTL) are part of the 18 projects and are expected to involve significant First Nations ownership (50% or more in all but one project, which will be at 49%).
- Government has announced and is proceeding with legislation to enable the BC Energy Regulator (BCER) to regulate renewable electricity, NCTL, and other major transmission lines. Government has also announced that wind projects, including the 9 announced in BC Hydro's recent call for power, and NCTL will not be subject to Environmental Assessment.
- BCER is an experienced organization that has demonstrated expertise in clean energy and is well positioned to deliver on consultation obligations and address First Nations' interests for key permitting decisions.
- It is important to note that the nature and scope of impacts from wind projects are well understood and can be appropriately addressed through permit-level regulatory processes.
- Environmental protection, Indigenous collaboration, and regulatory oversight remain fundamental to every decision we make, and we continue to modernize permitting and authorization systems to ensure a faster, more efficient process that maintains high environmental standards.

ADDITIONAL INFORMATION:

- The 18 priority projects include the following:
 - 11 clean electricity projects:
 - North Coast Transmission Line (NCTL) will bring electricity to the Northwest, by constructing a new transmission line running about 450 km between Prince George and Terrace.
 - 9 wind projects and 1 solar project are successful in BC Hydro's recent Call for Power.

- 3 natural gas projects:
 - Cedar Liquefied Natural Gas (LNG) is the world's first Indigenous-owned LNG facility and will export 3 million tonnes of LNG from B.C. to Asia-Pacific markets. The Haisla-led project is expected to be one of the lowest-emitting projects of its kind in the world and has a plan to be net-zero by 2050.
 - NEBC Connector is a plan to build two 213 km pipelines from Northeast B.C. to transport natural gas liquids and condensate to Alberta, strengthening interprovincial trades.
 - Aspen Point Program is an expansion of pipeline and power lines in Chetwynd and Hudson's Hope regions of Northeast B.C. to meet growing industrial demand.
- 4 mining projects:
 - Eskay Creek Gold/Silver Project in Northwest B.C.
 - Red Chris Gold and Copper Mine in Northwest B.C.
 - Highland Valley Copper Mine Extension in Logan Lake, B.C.
 - Mount Milligan Gold and Copper Mine in Fort St. James, B.C.

FINANCIAL SUMMARY:

- The 18 priority projects represent approximately \$20 billion in private-sector investments.
- The 9 wind projects alone represent between \$5 billion and \$6 billion in private-sector investments into B.C.
- Cedar LNG, the NEBC Connector project, and the Aspen Point Program represent over \$8 billion in new investments into British Columbia.

ATTACHMENTS:

- Appendix 1: List of Fast-Tracked Energy Projects

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Appendix 1: List of Fast-Tracked Energy Projects

- Eskay Creek Gold/Silver project: NW, Stewart
- Highland Valley Copper Expansion: SE, Logan Lake
- Red Chris Expansion: NW, Stewart
- Mount Milligan Copper and Gold: NW, Fort St. James
- Cedar LNG: NW, Kitimat
- NEBC Connector: NorthRiver Midstream: NE, Fort St. John area
- Enbridge T-North (Aspen Point): NE
- North Coast Transmission Line: NW, Prince George to Terrace
- BC Hydro Call for Power: 10 projects throughout the province
 - Brewster Wind Project - Campell River - Wind
 - Boulder and Elkhart Wind Project - Merritt - Wind
 - Highland Valley Wind Project - Logan Lake - Wind
 - K2 Wind Project – Kelowna - Wind
 - ShTSaQU Solar Project - Logan Lake - Solar
 - Mount Mabel Wind Project - Logan Lake - Wind
 - Nilhts'i Ecoener Project - Prince George - Wind
 - Nithi Mountain Wind Project - Fraser Lake - Wind
 - Stewart Creek Wind Project - Fort St. John - Wind
 - Taylor Wind Project – Taylor - Wind

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Ministry Reorganization

KEY FACTS:

- On November 18, 2024, the Ministries of Energy and Climate Solutions (ECS) and Mining and Critical Minerals (MCM) were established and replaced the former Ministry of Energy, Mines and Low Carbon Innovation (EMLI).
- Additionally, the Climate Action Secretariat (CAS) was moved into ECS to align provincial energy and climate action strategy, policy and programs.
- The creation of ECS reflects the government's commitment to leverage B.C.'s strength as a clean-energy superpower which is essential to the transition to a low-carbon economy.
- ECS is focused on taking opportunities to bolster the economy while ensuring energy development protects the environment and advances reconciliation with Indigenous people.

ADDITIONAL INFORMATION:

- ECS has four divisions to support the delivery of key responsibilities, priorities and programs as outlined in the 2025 Mandate Letter.
- These divisions are Electricity and Utility Regulation (EURD), Energy Decarbonization (EDD), Energy Resources (ERD) and Climate Action Secretariat (CAS).
 - EURD is responsible for regulating electric and gas utilities, electricity planning and policy frameworks, accelerating the generation and transmission of electricity, overseeing relevant crowns (BC Hydro, Columbia Power Corporation, Columbia Basin Trust) and coordinating B.C.'s participation in the Columbia River Treaty negotiation process.
 - EDD is responsible for decarbonizing energy use in the Province through energy efficiency standards, clean transportation, built environment policies and programs, remote community energy strategy, and utility demand-side regulations.
 - ERD is responsible for reducing the carbon footprint of the oil and gas industry to support economic stability and high environmental social and governance standards (ESG) through policy and regulatory frameworks (e.g., methane reductions, oil and gas cap), and overseeing the BC Energy Regulator (BCER).
 - CAS is responsible for leadership of climate policy across government, including mitigating and managing the risks and consequences from climate change.
- Additionally, MCM's Strategic and Indigenous Partnerships Division (SIPD) works in a shared services model to support both MCM and ECS. SIPD is responsible for corporate

services and support for initiatives that cut across multiple business lines such as strategic and corporate planning and reporting, intergovernmental relations, reporting processes, employee engagement and communications, and strategic Indigenous Relations, including corporate implementation of the *Declaration on the Rights of Indigenous Peoples Act*. SIPD also leads the work on the North Coast Transmission Line, Land Use Planning, and Northeast Initiatives, including for the Ministry's implementation of the Blueberry River First Nation Implementation Agreement and Treaty 8 Consensus Document.

FINANCIAL SUMMARY:

- As published in Budget 2025: Standing Strong for B.C., 2024/25 updated financial forecast (third quarterly report):
 - ECS's budget for year-to-date to December 31, 2024 for fiscal year (FY)2024/25 was budgeted for \$62M and actual expenditures were \$130M resulting in a variance of \$68M.
 - ECS's budget for the full year for FY2024/25 was budgeted for \$110M, forecasted at \$110M resulting in no variance.

ATTACHMENTS:

- Not applicable

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Columbia River Treaty

KEY FACTS:

Negotiations

- The British Columbia (B.C.) Columbia River Treaty (CRT) Team works closely and collaboratively with Global Affairs Canada, and the Ktunaxa, Secwepemc and Syilx Okanagan Nations, in preparing negotiating scenarios, positions and proposals for CRT modernization. BC Hydro, Fisheries and Oceans Canada and Environment and Climate Change Canada also support the negotiating team.
- The current chief negotiator for Canada is Stephen Gluck and for B.C. is Kathy Eichenberger. The current lead negotiator for the United States (U.S.) is Jill Smail who was appointed in August 2017 by the U.S. State Department.
- An Agreement-in-Principle (AIP) was reached in July of 2024, and the development of an amended Treaty text began thereafter.
- In August 2024, the Canadian negotiations team sent an outline of a proposal for modernized Treaty text which reflected the AIP for discussions with the U.S.; however, the U.S. did not respond until October 2024 when they transmitted their own proposal for consideration. Negotiations between the two teams continued into January 2025 in an effort to ratify amendments during the Biden administration.
- Since then, negotiations between Canada and the U.S. have paused as the U.S. government is evaluating all of its foreign relations files as is usual practice for incoming administrations.
- Since an AIP was reached, the countries are now in the “interim period” which is 1 August 2024 to the first 31 July after a modernized Treaty comes into force.
- BC Hydro, as the Canadian Entity, and Bonneville Power Administration and the U.S. Army Corps of Engineers, jointly the U.S. Entity, have entered into Entity Agreements made binding under the existing Treaty by Exchange of Diplomatic Notes to allow for continued operations and to implement components of the AIP including power benefits for 20 years and payments for flood risk management for 3 years.
- There is no timeline for the resumption of negotiations and the finalization of a modernized Treaty.
- Until a new amended Treaty is ratified, the current Treaty continues.

First Nations

- B.C. and Canada are committed to seeking First Nations' free, prior, and informed consent on the outcome of the modernized Treaty negotiations, consistent with the respective governments' adoption of the United Nations Declaration on the Rights of Indigenous Peoples.
- Since early 2018, representatives of the Ktunaxa, Secwepemc and Syilx Okanagan Nations have worked closely with the governments of Canada and B.C. to develop and refine negotiating positions and strategies.
- As observers, First Nations are present at all negotiating meetings, make presentations on behalf of Canada, fully participate in caucus meetings with Canada and B.C. during negotiation sessions and debrief with Canada and B.C. after each negotiation round.
- Domestic interests of the First Nations associated with the CRT are the potential for future long-term revenue sharing, redress for past impacts created by CRT dams, and new governance arrangements for future CRT decisions.
- Currently, each First Nation currently receives five percent of the revenue generated from the sales of the Canadian Entitlement via an Interim Revenue Sharing Agreement which will end March 31, 2026.

Treaty Termination

- With the implementation of high tariffs on Canadian goods on March 4 of 2025, followed by Canadian counter tariffs, and public comments on Canada's water and natural resources by President Trump, there has been speculation that Canada or the U.S. may issue a notice of intent to terminate the Treaty.
- The CRT allows either country to unilaterally terminate the Treaty with a ten-year notice – the two countries could mutually agree to terminate the Treaty at any time.
- U.S. impacts of terminating the Treaty include: uncertainty for U.S. power producers to reliably meet customer load; increased flood risk in the lower Columbia; and negative impacts to U.S. navigation, recreation, agriculture, and fisheries interests.
- The U.S. would be required to continue to deliver the Canadian Entitlement for 10 years after the notice is given.
- Termination would give B.C. more flexibility to manage Canadian dams for optimal hydropower generation and to meet domestic other interests. However, once the Treaty is terminated, B.C. would no longer receive delivery of the Canadian Entitlement, or payment for Flood Risk Management.

Financial Information

- In 2019, the Treasury Board approved that as of 2020/21, CRT negotiating and ancillary costs be recovered from the revenues generated from the sale of the Canadian Entitlement (CE) that the Province receives.
- The Province has received on average \$140 million per year from the U.S. over the past 10 years through the CE, ranging from \$89 million (2012/13) to \$448 million (2023/24).
- The fluctuations in the cash value of the CE are due to variations in the market price of power and exchange rates. Factors such as high flow years, or unusually hot or cold weather and the price of natural gas can create variations in power market prices and the revenues from selling the power B.C. receives.
- Revenue from the CE is expected to decrease over time as the volume of power also declines as agreed to in the AIP. This is partially offset by the escalating annual cash payment for Flood Risk Management (and other benefits if a modernized Treaty based on the AIP is ratified).

FINANCIAL SUMMARY:

Table: Approved Funding for CRT Negotiations (\$millions)

Budget	2023/24 Actuals	2024/25 Forecast	2025/26 Estimates	2026/27 Plan	2027/28 Plan
Total	4.200	5.673	5.673	2.933	2.933

ATTACHMENTS:

- Not applicable

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Columbia Basin Trust & Columbia Power Corporation

KEY FACTS:

Columbia Power Corporation

- Columbia Power Corporation (CPC) is a Crown *Business Corporations Act* company wholly owned and controlled by the Province of British Columbia, reporting to the Minister of Energy and Climate Solutions.
- CPC jointly owns four large hydroelectric generating stations and associated transmission infrastructure (on a 50/50 basis with Columbia Basin Trust) in the Columbia region.
- CPC has the mandate to continue to ensure the long-term profitability, reliability, safety and environmental sustainability of the assets.
- The current 2024/25 forecast net income of \$60 million has decreased by \$0.2 million from the previous forecast provided in September 2024.

Waneta Expansion Solar Installation

- In the coming months work will commence on a solar installation at the site of the Waneta Expansion Generating Station.
- Power generated by the installation will largely offset the electricity required to operate Waneta Expansion, therefore freeing up more hydropower to be delivered to the grid.
- The installation will generate approximately 300,000 kWh/year.

Arrow Lakes Generating Station Turbine Failure

- To avoid similar failures as occurred in the Unit 1 turbine in 2023, repairs to Unit 2 turbine at Arrow Lakes are underway and expected to be completed in March 2025. The repairs were necessary to mitigate the risk of a far more costly unplanned forced outage in the future.
- The majority of lost revenue and increased repair expenses will be recovered by third party business interruption and property insurance.

Brilliant Power Spillway Upgrade Project

- Significant capital investment is required at Brilliant Dam and Generating Station for the Spillway Upgrade Project. This multiyear capital project is required to meet Dam Safety regulatory requirements, and total project costs are estimated in the range of \$75 to \$159 million over 12 to 15 years.

Brilliant Power Purchase Agreement

- The 60-year power sales agreement with FortisBC at the Brilliant Dam and Generating Station contains a market reset clause at the conclusion of the first 30 years (2026).
- The price received for power is anticipated to increase as a result of this clause, and dialogue with FortisBC on interpretation and application of the agreement is ongoing.

Brilliant Expansion Generating Station

- Power from Brilliant Expansion is currently sold under three separate agreements with terms coming to an end between 2027 and 2029.
- An assessment of sales opportunities is underway to ensure appropriate value for the power in the future.

Columbia Basin Trust

- Created in 1995 under the *Columbia Basin Trust Act*, Columbia Basin Trust (CBT) is a regional Crown corporation that manages its assets for the ongoing economic, environmental and social benefit of the Columbia Basin region most affected by the Columbia River Treaty. CBT reports to the Minister of Energy and Climate Solutions.
- Under the terms of two agreements, CBT acts as an agent on behalf of CPC in fulfilling the responsibilities of power project asset management, oversight, and associated responsibilities.
- CBT will continue to deliver on its mandate to support the social, economic and environmental well-being of Basin residents, consistent with the Columbia Basin Management Plan 2024-2034 (CBMP).

ADDITIONAL INFORMATION:

- Not applicable

FINANCIAL SUMMARY:

Columbia Power Corporation

Budget (\$000 000)	2023/24 Actuals	2024/25 Forecast	2025/26 Estimates	2026/27 Plan	2027/28 Plan
Expenses	27,134	27,529	27,945	28,167	28,422
Salaries	-	-	-	-	-
Revenues	85,919	87,495	96,472	97,837	99,334

Columbia Basin Trust

Budget (\$000 000)	2023/24 Actuals	2024/25 Forecast	2025/26 Estimates	2026/27 Plan	2027/28 Plan
Revenues	95,687	95,409	104,400	106,873	108,880
Operating Expenses	3,848	5,017	5,342	5,469	5,468
Salaries	9,853	10,636	11,749	12,219	12,708
Delivery of Benefits Expenses	53,084	54,000	61,500	63,500	65,000
Financing Costs	17,407	17,487	17,466	17,466	17,424
Surplus	11,495	8,269	8,343	8,239	8,280

ATTACHMENTS:

- Not applicable

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**MINISTRY OF ENERGY and
CLIMATE SOLUTIONS**

ESTIMATES SPRING 2025

**SECTION B:
RECONCILIATION AND
INDIGENOUS RELATIONS**

Section B Contents:

- UNDRIP Implementation
- Blueberry River First Nations Agreement Implementation
- Indigenous Clean Energy

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UNDRIP Implementation

KEY FACTS:

- In alignment with the Interim Approach to Implement the Requirements of the *Declaration on the Rights of Indigenous Peoples Act (DRIPA or Declaration Act)*, the Ministry of Energy and Climate Solutions (ECS) seeks early feedback from Indigenous partner organizations on climate and energy policies and initiatives.
 - Signed in September 2021, the Relationship Protocol creates structures for ECS and Ministry of Critical Minerals (MCM) to work with the First Nation Leadership Council (FNLC) and First Nations Energy and Mining Council (FNEMC) as a pathway to support a better future for Indigenous people on issues of common interest such as energy, mines, and low carbon innovation.
 - In March 2023, the former Ministry of Energy, Mines, and Low Carbon Innovation (EMLI) provided \$2.4M in funding to FNEMC (over three years, until March 31, 2026) to support the implementation of the Relationship Protocol through an annual workplan.
 - ECS has a Reconciliation Plan that supports the Implementation of the Province's Commitment to advance reconciliation. As part of the Ministries' commitments under the *Declaration Act*, ECS has adopted a Reconciliation Learning Plan to help staff better understand and advance reconciliation mandates in their work. The Reconciliation Learning Plan for fiscal year (FY)2025-26 includes opportunities for staff to participate in San'yas Cultural Safety Foundations and the Bystander to Ally Training, a book club, workshops, and keynote speaker events. The budget for FY2025-26 is \$52k.
 - Cabinet Confidences; Government Financial Information; Intergovernmental Communications
-
- The Climate Action Secretariat (CAS) coordinates the implementation of CleanBC, BC's plan to lower climate-changing emissions by 40% by 2030, and BC's Climate Preparedness and Adaptation Strategy (CPAS), in collaboration and cooperation with Indigenous partners.

- CAS leads ongoing collaboration with two Indigenous advisory/working groups:
 - 1) The First Nations Leadership Council - BC Technical Working Group on Climate Change (FNLBC-BC TWG), and
 - 2) The Indigenous Climate Adaptation Working Group (ICAWG).

These two groups facilitate dialogue and strategic advice on climate change, support Indigenous climate action and resilience, and ensure First Nations' perspectives are included in the CleanBC Roadmap to 2030 and CPAS.

ADDITIONAL INFORMATION:

- Intergovernmental Communications
-
-
- Within ECS, CAS is leading Action 2.12 to collaboratively develop and implement CleanBC and CPAS to support resilient communities and clean economic opportunities for Indigenous Peoples that benefit our shared climate and advance reconciliation.
- Within ECS, the Electricity and Utility Regulation Division is leading Action 4.43 of the Action Plan to co-develop recommendations on strategic policies and initiatives for clean and sustainable energy. This includes identifying and supporting First Nations-led clean energy opportunities related to CleanBC, the Comprehensive Review of BC Hydro, and the BC Utilities Commission Inquiry on the Regulation of Indigenous Utilities.
- 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.
- The Province is working with New Relationship Trust to design and deliver the BC Indigenous Clean Energy Initiative (BCICEI) and the Community Energy Diesel Reduction (CEDR) Program, administering \$140M over several years to support smaller Indigenous-led power projects. Funding dispersal will begin in 2026.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

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Blueberry River First Nations Agreement Implementation

KEY FACTS:

- **High Value 1 (HV1)/Watershed Management Basin (WMB) Planning**
 - Progress has been made in HV1C planning, with a more collaborative approach emerging between Blueberry River First Nations (BRFN) and B.C. teams.
 - On Sept 20, 2024, B.C. and BRFN leadership approved Terms of Reference (TOR) focused on co-development of the Priority WMB Plans (due by Dec 31, 2025) and new timelines for remaining HV1C (due by March 31, 2025) and HV1B Plans (due by July 31, 2025).
 - Concerns remain about missed planning milestones and the lack of iterative input from industry and other First Nations, impacting the feasibility of agreed-upon timelines.
 - The Province is working to ensure land use planning commitments are met while balancing cumulative effects management and economic development needs.
- **Implementation Progress**
 - The BRFN Implementation Agreement (IA) remains a key framework for reconciliation and economic stability in the region.
 - (C) The Province has confirmed it will proceed with the overdue ^{Intergovernmental Communications} restoration payment, reinforcing its commitment to implementation progress.
 - The upcoming three-year IA review (to be completed by December 15, 2025) provides an opportunity to refine implementation strategies and address outstanding challenges.
- **Predictability for Industry**
 - Delays in HV1 planning and restoration progress have affected predictability for new resource development. BRFN and B.C. are working under expedited planning and are on track to get the remainder of HV1 plans completed by July 31, 2025.
 - The BRFN IA, while challenging, provides an interim framework for durable permit decisions.
- **Issuing of Authorizations & Permits**
 - BRFN continues to engage in operational consultation with the BC Energy Regulator (BCER) on key permits.
 - BRFN has supported some priority permits in the Gundy Plan area, ensuring key projects remain on track. Since the signing of the BRFN IA on January 18, 2023, the BCER has consulted BRFN on 1,466 permit applications. Approximately 15% represent new Crown land development applications. BRFN expressed disagreement on nine applications.

- The Province is committed to streamlining permitting processes to provide greater predictability for industry while respecting Treaty 8 rights.
- **Restoration Funds**
 - The Blueberry River Restoration Society (BRRS) has initiated three restoration projects and is developing a ten-year Restoration Framework.
 - The Province has raised concerns over the lack of measurable restoration progress and is seeking greater transparency on how BRRS intends to allocate funds.
 - B.C. will be focusing over the coming year on advancement of restoration activities with Treaty 8 Nations to address the Court's finding of breach of treaty in *Yahey v. BC*.

ADDITIONAL INFORMATION:

- *Yahey v. British Columbia* Decision (2021): The BC Supreme Court ruled that the Province had breached the terms of Treaty 8 and unjustifiably infringed on BRFN's Treaty rights through authorizing development without appropriate consideration of the cumulative industrial impacts, leading to the negotiation of the BRFN Implementation Agreement (IA).
- BRFN IA (2023): Signed by the Province and BRFN in January 2023, the IA establishes new land use planning, restoration funding, and permitting processes to balance economic development and treaty rights.
- Three-Year Review Requirement: Under the IA, both parties must complete a review by December 15, 2025, to assess progress and, as needed, renegotiate elements of the IA or refine implementation strategies.
- Legal Information
 - The Ministry of Water, Land and Resource Stewardship is responsible for overseeing and coordinating the implementation of the BRFN IA in partnership with the Natural Resource sector.

FINANCIAL SUMMARY:

Advice/Recommendations; Intergovernmental Communications

ATTACHMENTS:

- Not applicable

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Indigenous Clean Energy

KEY FACTS:

- The Province provides funding for Indigenous clean energy projects through the:
 - BC Indigenous Clean Energy Initiative;
 - First Nations Clean Energy Business Fund; and
 - Community Energy Diesel Reduction Program.
- In 2023, the Province provided a \$140 million endowment to the New Relationship Trust to expand the B.C Indigenous Clean Energy Initiative (BCECEI) and further support small-scale, Indigenous-led clean energy projects.
- Since its inception, the First Nations Clean Energy Business Fund (FNCEBF) has provided over \$21 million to more than 150 First Nations' clean energy and energy efficiency projects.
- Since 2022, the Community Energy Diesel Reduction Program has provided \$23.6 million to 42 diesel-displacing projects in remote communities.
- Through the Indigenous Clean Energy Opportunities (ICEO) process, ECS and the First Nations Energy and Mining Council engage with First Nations to identify opportunities for First Nations in B.C.'s clean energy sector. The work seeks to align the Province's clean energy policy and legislation with the United Nations Declaration on the Rights of Indigenous People.

ADDITIONAL INFORMATION:

BC Indigenous Clean Energy Initiative

- The Province provided a \$140 million endowment to the New Relationship Trust to expand the B.C Indigenous Clean Energy Initiative and further support small-scale, Indigenous-led clean energy projects.
- Interest earned from the endowment is being used to support existing BCECEI funding streams for activities that advance projects to the construction stage
Government Financial Information
- The Province, New Relationship Trust, BC Hydro, and PacifiCan are currently working on a new program stream for distribution-scale renewable energy projects.
- Funding will help offset the higher anticipated capital cost per MW of small-scale clean energy projects. Once implemented, the new program stream will draw down the \$140 million over several years.

- The program development team continues to incorporate feedback from First Nations into program design and plan to begin releasing funding in 2026.

First Nations Clean Energy Business Fund

- 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.
- Since the First Nations Clean Energy Business Fund launched in 2011, more than 150 First Nations communities have benefited from more than \$21 million in funding for clean energy and energy-efficiency projects.
- Currently, 46 First Nations benefit from 71 clean-energy revenue sharing agreements with B.C. that are based on new incremental revenues to government derived from water and land rents.
- On April 1, 2024, responsibility for administering the fund was transferred from the Ministry of Indigenous Relations and Reconciliation to the Ministry of Energy and Climate Solutions (ECS) to leverage the Ministry's clean energy expertise.
- ECS 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.

Diesel Reduction

- The Remote Community Energy Strategy (RCES) is a multi-stakeholder initiative to achieve the goal of reducing diesel consumption for generating electricity and heating in remote communities by 80% by 2030 (see ECS G14 – Remote Community Energy Strategy).
- The Province has invested \$64M in RCES programs that support capacity building and clean energy development.
- Since 2022, the Community Energy Diesel Reduction Program has dispersed \$23.6 million to 42 projects in 22 remote communities.

Indigenous Clean Energy Opportunities Initiatives

- The Ministry is working with the First Nations Energy and Mining Council, Clean Energy BC, and the University of Victoria's research initiative Accelerating Community Energy Transformation to study the financial viability of First Nations owned utility models.
- The Province is providing \$200,000 in funding to support the participation of First Nations with the research.
- Research will support future engagement with rights holders to develop recommendations for a potential regulatory framework for First Nations utilities.

FINANCIAL SUMMARY:

- There are no new financial commitments for BCICEI or RCES in fiscal year 2025-26.
- The budget for the FNCEBF for fiscal year 2025-26 is \$10.359M.
- Funding for the ICEO is covered through the Relationship Protocol with the First Nations Leadership Council and First Nations Energy and Mining Council (see ECS - B1 UNDRIP Implementation).

ATTACHMENTS:

- Not applicable.

ADM(s) Responsible	Contact number
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MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

SECTION C: BC HYDRO

Section C Contents:

- BC Hydro Call for Power
- North Coast Transmission Line
- Power Trade and Imports
- Electricity Affordability
- Industrial Electrification
- Electricity Requirements for projects in Northeast B.C.
- BC Hydro Customer Crisis Fund

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BC Hydro Call for Power

KEY FACTS:

- Unlike BC Hydro's closed Standing Offer Program (SOP) that was intended to encourage development of small clean or renewable energy projects in the Province, the 2024 Call for Power (CfP) was a competitive, transparent and fair process with BC Hydro choosing the most cost-effective proposals submitted. The CfP has resulted in an increase to BC Hydro's current energy supply by 8% with a levelized bid price of \$74 per megawatt-hour (MWh).
- The combination of the CfP and Site C coming fully on line will provide an additional 16% of energy to BC Hydro's supply. BC Hydro has also committed to future and ongoing calls that will further add to this supply,
- Nine wind projects and one solar project were successful in the CfP, all of which involve significant First Nations ownership (50% or more in all but one project, which will be at 49%).
- The Province intends to exempt the nine wind projects from provincial environmental assessment (EA) processes to expedite the development of new sources of clean energy and meet BC Hydro timelines. The one successful solar project from the CfP will not be exempt from the EA process.
- The Province intends to shift the permitting and authorization of renewable energy projects, such as the ten CfP projects, to the authority of the BC Energy Regulator.
- CfP projects' electricity purchase agreements have been submitted to the BC Utilities Commission (BCUC), as required under section 71 of the *Utilities Commission Act*, and should reach a decision by August 1, 2025.
- The Ministry of Energy and Climate Solutions' Mandate Letter includes supporting BC Hydro in regular competitive calls for power, and they have committed to calls approximately every two years.
- (C) A 2025 Call for Power for new energy resources and a Request for Expressions of Interest for new capacity / firm power options in the future may be announced in the Spring of 2025. BC Hydro is initiating internal design work on the next Call for Power and plans to begin engagement on the design of the next call in the coming month if government decides to proceed with the Call.
- In line with the Updated 2021 Integrated Resource Plan, there will also be a need to procure additional capacity resources to meet future demand in the Province.
- Advice/Recommendations

ADDITIONAL INFORMATION:

- 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.
- The 2024 Call for Power resulted in the procurement of 4,830 gigawatt hours (GWh) annually of electricity from wind and solar producers in B.C., enough to power half a million new homes.
- These projects, spread across nearly every region in the Province, are expected to generate between \$5 billion and \$6 billion in private capital investment through development and construction.
- BC Hydro engaged extensively with First Nations on the design of the call for power, and included a requirement that projects must have a minimum 25% equity ownership held by First Nations. Eight of the 10 successful energy projects will have 51% equity ownership. This represents \$2.5 billion to \$3 billion of ownership by First Nations in new renewable energy projects in the Province.
- CfP project permitting, environmental assessment and construction timelines were projected at four to seven years, potentially placing the projects commercial operation dates beyond BC Hydro's target of 2028-2031. To help ensure projects can meet commercial operation dates as early as 2028, the Province has exempted all land-based wind projects from the environmental assessment process.
- A severe drought that started in fall 2022 resulted in reservoir inflows that were at approximately 79 percent of historical levels by Q3 of fiscal 2024 and 2025 and led to historically high levels of electricity imports in fiscal 2024 for British Columbia.
- This drought, concurrent with increased demand for electricity, has resulted in 13,600 GWh of imported electricity in fiscal 2024, costing \$1.377 billion dollars. Fiscal 2025 has seen a reduced reliance on imports due to higher reservoir inflows with market purchase equalling \$606 million through the first three quarters.

FINANCIAL SUMMARY:

- The levelized bid price of \$74/MWh for CfP projects is approximately 45% lower than the price from the 2010 Clean Power Call (~\$135) when adjusted for inflation.
- This is also lower than the SOP pricing which averaged \$133/MWh across variable pricing for eight different regions.

ATTACHMENTS:

- Advice/Recommendations; Government Financial Information

ADM(s) Responsible	Contact number
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Advice/Recommendations ; Government Financial Information

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Advice/Recommendations ; Government Financial Information

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North Coast Transmission Line

KEY FACTS:

- The North Coast Transmission Line (NCTL) twins an existing 500 kilovolt (kV) transmission line from Prince George to Terrace (Phases 1 and 2) and construct a new 500kV line North of Terrace up to Bob Quinn Lake (Phase 3), to support the electrification of industrial developments in the Northwest over the next decade.
- NCTL will support significant growth opportunities on the North Coast including ports, Critical minerals exploration, and mining and renewable energy projects.
- The Province and BC Hydro are working with Phase 1 and Phase 2 First Nations on a partnership approach to project development, including co-ownership and collaborative development of key environmental plans and conditions.

ADDITIONAL INFORMATION:

- Industrial proponents in the North and on the North Coast have expressed interest to BC Hydro (BCH) to electrify projects involving over 3,000 megawatts of incremental electricity demand, nearly half that demand is from new or expanded critical mineral and metal mining projects and port electrification.
- Indigenous leaders along the NCTL route have expressed significant interest in ownership opportunities. Co-ownership would provide First Nations with a low risk, long-term, stable source of revenue resulting from capital investment.
- Intergovernmental Communications
-
- Cabinet Confidences; Intergovernmental Communications
- Technical Working Groups have been established on key topics such as ownership, Indigenous participation, environmental protection, and beyond Terrace infrastructure with good participation and leadership from First Nations as well as technical experts from the Province and BCH.
- The Province is working with parties on proposed regulatory and legislative changes to accelerate clean energy and transmission line projects.

- Proposed regulatory and legislative changes would allow government to transfer permitting responsibility for major transmission lines from Natural Resource Ministries to the BC Energy Regulator, beginning with the NCTL.
- Advice/Recommendations; Government Financial Information
-
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FINANCIAL SUMMARY:

- The NCTL has an estimated capital cost of \$3B, although the Province is currently awaiting a revised cost estimate from BC Hydro.

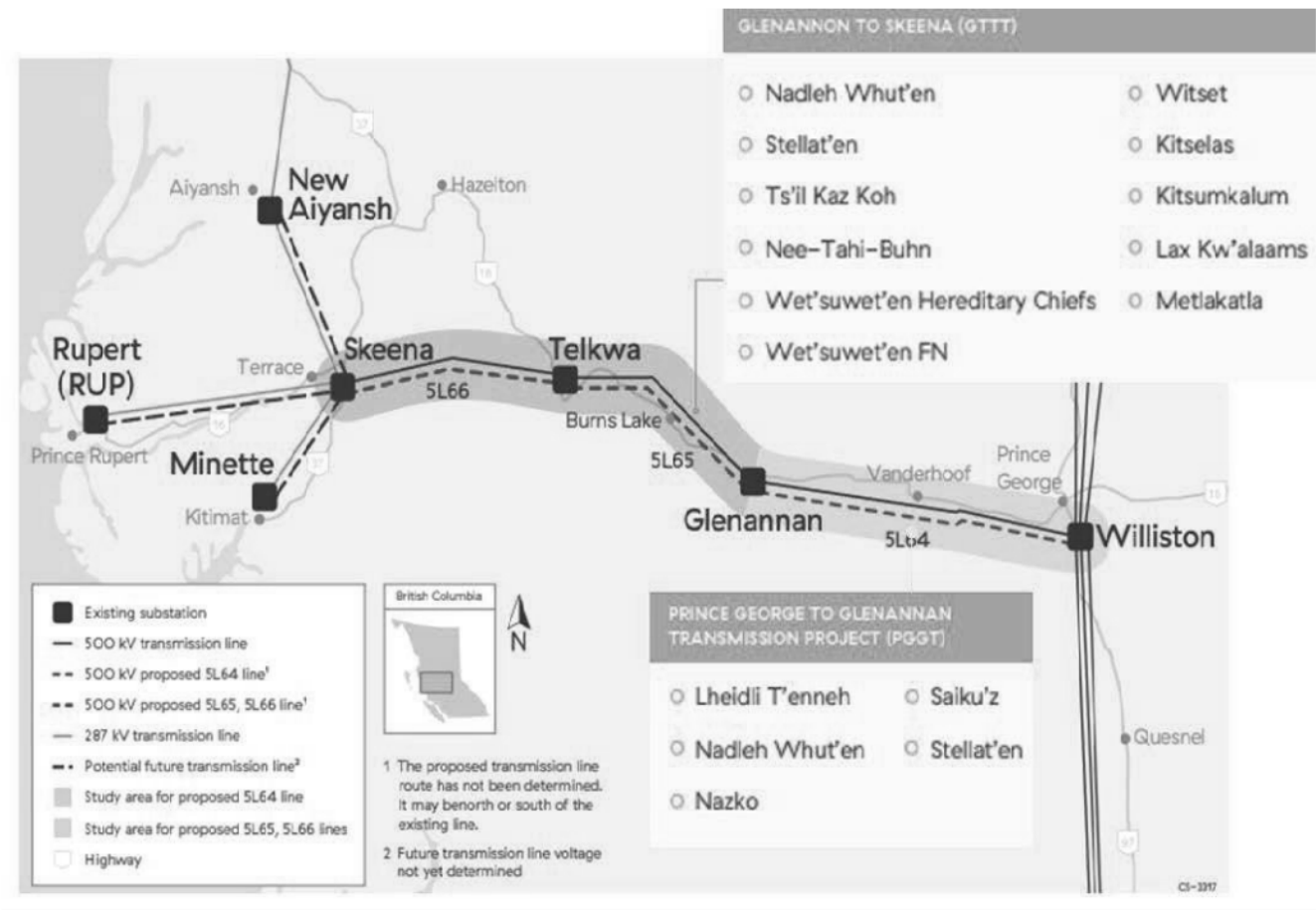
ATTACHMENT:

- Attachment 1 - Map of NCTL showing impacted First Nations

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Attachment 1:

North Coast Transmission Line Map: Location and Impacted First Nations



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Power Trade and Imports

KEY FACTS:

- Over the last 15 years (Fiscal 2010 to 2024), BC Hydro was a net importer of electricity in seven years and a net exporter in eight years.
 - The severe drought that started in fall 2022 resulted in reservoir inflows, associated with winter snowpack levels and seasonal precipitation, that were significantly below average and led to historically high electricity imports in fiscal 2024.
 - BC Hydro had net imports of 13,600 gigawatt hours (GWh) in fiscal 2024. This is approximately 25 per cent of BC Hydro's annual demand.
 - So far in Fiscal 2025, BC Hydro had net electricity imports of 5,923 GWh for the nine months ending December 2024.
 - Over the past three years BC Hydro has used net imports to serve an average of 11 per cent of total domestic load.
 - Powerex's trading activities result in significant revenue that is passed onto BC Hydro to keep rates lower for its customers. In total, Powerex's trade income over the last five fiscal years was \$2.485 billion.
 - Powerex's wholesale imports from the United States (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.
 - Approximately 90 per cent of Powerex's US trade is with Washington state, Oregon, and California. As of March 2024, 63 per cent of the electricity generated on these grids was from non-emitting resources.
 - Even as a net importer, B.C.'s overall supply of electricity is cleaner than every other state and Province in Western North America.
 - Advice/Recommendations: Government Financial Information
-
- The nine renewable energy projects selected through the 2024 call for power will provide nearly 5,000 gigawatt hours (GWh) of clean power per year once installed. Site C has also reached completion and combined, these projects will boost the Province's clean generation by roughly 16 per cent.

- Further purchases of domestically generated electricity can help to reduce the Province's exposure to drought and the associated reliance on imports.

ADDITIONAL INFORMATION:

- 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, Mexico, and 14 US states.
- Since the Fall 2022, B.C. has experienced severe and widespread drought. This drought, concurrent with increased demand, resulted in an energy shortfall in the BC Hydro system and has led to historically high levels of imports in fiscal 2024.
- Powerex can import electricity two ways: under the Columbia River Treaty's Canadian Entitlement with clean electricity returned to Canada; or from wholesale markets which are a blend of all the resources available in the market.
- Powerex continues to prioritize power imports from trading partners during hours of surplus clean energy production (e.g., solar from California/Arizona during the day). Powerex's import and export activity helps BC Hydro manage its system and keep rates affordable for customers. Imports of electricity from the US allow BC Hydro to conserve and store water in its reservoirs and export electricity to the US when the market price is high.
- While impact of tariffs on Powerex's energy trade with the US are still uncertain. Powerex is monitoring the situation closely and will look to mitigate any tariff impacts to the extent possible.
- All emissions associated with electricity used by B.C. customers on the interconnected grid, including Powerex's imports and exports, are reported to the Climate Action Secretariat who publishes an Electricity Emission Intensity Factor (EEIF).
- In 2024, BC Hydro's EEIF was 9.9 tonnes of CO₂ equivalent per GWh (tCO₂e/GWh), which is a small fraction of the emissions intensity of natural gas or coal generation at 500 or 1,000 tCO₂e/GWh, respectively.
- This emissions factor includes the associated emissions of imported electricity.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
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Electricity Affordability

KEY FACTS:

- BC Hydro charges among the lowest prices for electricity in North America. Among 22 utilities surveyed by Hydro Quebec in 2024, BC Hydro's rates were the third lowest for residential customers.
- Since 2017/18, BC Hydro's rates have increased by 15.5% less than inflation.
- The 3.75% increase in BC Hydro's rates in 2025/26 will increase the average residential customer's annual electricity expenditures by approximately \$45.
- BC Hydro provided customer affordability credits worth an average of \$100 per residential customer between April 1, 2024, and March 31, 2025, while the Province funded equivalent credits for customers at other electric utilities in British Columbia (B.C.).
- BC Hydro customers can choose between an existing tiered rate that encourages energy conservation and a new optional flat rate, as well as an optional time of day rate that works with either of these rates.
- British Columbians can also reduce their energy bills by participating in self-generation or net metering programs, and by taking advantage of utility rebates for energy-saving investments.
- BC Hydro offers a Customer Crisis fund for residential customers facing imminent disconnection due to an unexpected life crisis.

ADDITIONAL INFORMATION:

- While BC Hydro's rates are set to increase 3.75% in each of 2025/26 and 2026/27, these increases are lower than recent increases in natural gas bills, as well as proposed residential rate increases at neighbouring utilities such as Seattle City Light (4.3% in 2025 and 4.9% in 2026) and PacifiCorp (8.5% in 2025), which serves Portland, Oregon.
- BC Hydro's existing tiered rate offers a low rate of 11.72 cents for consumption below a threshold of 1,350 kWh per two-month billing period and a higher rate of 14.08 cents/kWh for consumption above this threshold to encourage conservation. Customers in apartments or without electric heat are more likely to consume below or near the threshold and save under this rate.
- BC Hydro's proposal for an optional flat rate was accepted by the British Columbia Utilities Commission in February, and customers will be able to choose this option on April 1. Under this rate, customers pay 12.67 cents/kWh no matter how much energy they use. This rate can result in lower bills for customers

with electric heat or who purchase an electric vehicle than the current stepped residential rate.

- BC Hydro's optional time of day rate applies a five cent surcharge on electricity consumed between 4pm and 9pm in exchange for a five cent discount from 11pm to 7am. This rate provides savings for customers who can shift some of their energy use into overnight hours.
- Customers whose bills would be lower under a flat rate are expected to save an average of around \$60 per year, while customers with electric vehicles who opt in to the time of day rate can save an average of \$60 and up to \$125 per year by charging overnight.
- An income-tested Energy Savings Program provides rebates of up to \$44,900, including up to \$19,000 for heat pumps, \$9,500 for windows and doors, and \$5,500 for insulation, to British Columbians in eligible homes.
- Under BC Hydro's Customer Crisis Fund (CCF), regardless of income, residential customers can apply for a grant equal to the lesser of the amount owing on their account or \$800 (\$700 if their home is not electrically heated) if their account is overdue due to a temporary financial crisis and they are facing disconnection.
- BC Hydro projects that Government's direction to allocate an additional \$1.9 million for the CCF will extend the program's lifespan until the end of Fiscal Year 2025/26, providing over 4,000 additional grants during this time.
- See the Clean/Low Carbon Competitiveness Estimates note for BC Hydro's rates for businesses and the BC Hydro Customer Crisis Note.

FINANCIAL SUMMARY:

- Not applicable

ATTCHMENTS:

- Appendix 1 - Residential Energy Charges.

ADM(s) Responsible	Contact number
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Appendix 1 - Electricity Affordability

The table below shows the key energy charges paid by BC Hydro's residential customers, before and after rate riders. BC Hydro publishes their electricity rates on their website without adjusting for the rate rider. The rate rider currently reduces the bills that BC Hydro customers actually pay, by returning deferrals of differences between forecast and actual costs and revenues. The combination of the general rate increase and the change in the rate rider result in the 3.75% net rate increases.

	2024/25	2025/26	2026/27
General Rate Increase		3.42%	0.59%
Tier 1 charge (cents/kWh)	10.97	11.72	11.87
Tier 2 charge (cents/kWh)	14.08	14.08	14.08
Flat energy charge (cents/kWh)	12.21	12.63	12.70
Rate Rider (negative equals lower bills)	-4.80%	-4.50%	-1.50%
Tier 1 Energy Cost (after rate rider, cents/kWh)	10.44	11.19	11.69
Tier 2 Energy Cost (after rate rider, cents/kWh)	13.40	13.45	13.87
Flat Energy Cost (after rate rider, cents/kWh)	11.62	12.06	12.51
Rate Increase including Rate Rider		3.75%	3.75%

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Industrial Electrification

KEY FACTS:

- British Columbia's (B.C.) 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 sector¹. Industry represents the largest electrification opportunity to reduce emissions in B.C.
- BC Hydro is aware of an increasing and unprecedented number of proposed large industrial projects in B.C. requiring over 150 megawatts (MW) of electrical capacity.
- Advice/Recommendations
 - To meet the need for power, BC Hydro proposes a mix of near-term actions and potential resources that will allow it to meet expected growth in electricity using a mix of energy efficiency, renewals of existing clean energy projects, refurbishment of BC Hydro facilities, and new generation resources acquired through calls for power.
 - *Powering our Future: B.C.'s Clean Energy Strategy* commits Government to "develop and engage with industry on innovative approaches for connecting new, large industrial customers."
 - The Minister's Mandate Letter prioritizes the need to "Ensure BC Hydro is responsive to changing market conditions and demands for large load capacity from potential local and international investors to grow our economy and reduce our emissions while protecting residential ratepayers."

ADDITIONAL INFORMATION:

- Electrification is one of the pathways identified in the CleanBC Roadmap to 2030, leading to reduced or avoided emissions in the industrial sector.
- In 2024, the CleanBC Industry Fund (CIF) piloted an Industrial Electrification funding stream in partnership with BC Hydro to support large electrification projects that require a new or upgraded connection to the integrated grid. Additional information on CIF is available in the ECS Estimates 2025 Note Section G Tab 6: 'CleanBC Program for Industry'.

¹ [CleanBC – Industry](#)

- Introduced in 1991, Tariff Supplement 6 (TS 6) requires that projects requesting over 150 MW of capacity pay the cost of any incremental generation needed to serve their load.

Advice/Recommendations

Advice/Recommendations

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- In February 2025, the BC Utilities Commission (BCUC) ordered a review of TS 6 and directed BC Hydro to file an application by September 30, 2025.

North Montney

- The North Montney natural gas field, located in northeast B.C., is one of the main sources of natural gas for LNG Canada and other proposed LNG facilities, and has the potential to produce 449 trillion cubic feet of natural gas.
- The oil and gas sector are currently responsible for 19% of B.C.'s emissions and 48% of industrial emissions².
- There is currently no electrical transmission infrastructure in the North Montney region that would allow upstream gas producers to electrify their facilities.
- In 2021, a BC Hydro project to investigate building a shared transmission line in the North Montney was put on hold pending negotiations between the Province and Blueberry River First Nation following the June 2021 Yahey decision.
- On January 18, 2023, the Province reached an agreement with the Blueberry River First Nation, and North Montney electrification planning restarted with BC Hydro supporting industry efforts to build their own transmission lines to connect to the BC Hydro system.
- Advice/Recommendations; Government Financial Information

- Next steps include continuing to work with BC Hydro, industry, and First Nations to coordinate transmission development that minimizes cumulative impacts, explores equity ownership opportunities, and ensures the timely advancement of oil and gas projects.

² 2021 Provincial Inventory data.

Cryptocurrency

- In December 2022, Cabinet enacted a regulation under the *Utilities Commission Act* (UCA) that directed the BCUC to relieve BC Hydro of its obligation to serve certain classes of cryptocurrency customers for 18 months (temporary pause).
- In May 2024, the UCA was amended to provide Cabinet with regulation-making authority regarding the provision of public utility electricity service for cryptocurrency mining, enabling the implementation of a permanent policy.
- In June 2024, Cabinet extended, via the enactment of the Cryptocurrency Power Regulation, the temporary pause from 18 to 36 months to provide additional time for policy development and engagement.
- Additional policy action on cryptocurrency is required before the expiry of the temporary pause in December 2025.
- In March 2025, the BC Court of Appeal dismissed a legal challenge from Conifex Timber Inc. regarding the authority of Cabinet to use Section 3 of the UCA to enact a temporary pause on BC Hydro cryptocurrency connections.
- Advice/Recommendations

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Cross Reference:
 - BC Hydro Note – Cryptocurrency, Data Centres and AI
 - BC Hydro Note – North Montney

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Electricity Requirements for Projects in Northeast B.C

KEY FACTS:

- The North Montney natural gas field, located in northeast British Columbia (B.C.), is one of the main sources of natural gas for liquified natural gas (LNG) Canada and other proposed LNG facilities.
- The oil and gas sector is currently responsible for 19 per cent of B.C.'s emissions and 48 per cent of industrial emissions.
- Electrification of gas production facilities is the most practical option to achieve significant emission reductions without curtailing natural gas production.
- There is currently no electricity transmission infrastructure in North Montney, north of the Peace River, that would allow upstream gas producers to electrify their facilities.
 - In South Montney, new BC Hydro infrastructure has facilitated electrification of approximately 30 per cent of oil and gas development.
- The Province, along with support from BC Hydro (BCH), is encouraging industry collaboration to build the infrastructure needed to connect North Montney producers to BC Hydro's clean electricity grid and reduce cumulative effects in the region.
- Transmission line routing will be determined based on consultation with First Nations and communities and assessing land use, geotechnical, and environmental considerations.
- Advice/Recommendations
-

ADDITIONAL INFORMATION:

- The Montney region has the potential to produce a total of 449 trillion cubic feet (Tcf) of natural gas with modern technology, making it one of the biggest gas resources in North America.
- An opportunity exists to electrify this natural gas-powered generation and reduce

potential GHG emissions associated with operating their facilities.

- In 2021, a BC Hydro project to investigate building a shared transmission line in the North Montney was put on hold pending negotiations between the Province and Blueberry River First Nation (BRFN) following the June 2021 BC Supreme Court decision *Yahey v. British Columbia* (Yahey decision) relating to the cumulative effects of development in the region.
- On January 18, 2023, the Province reached an agreement with BRFN, and North Montney electrification planning restarted with BC Hydro supporting industry efforts to build their own transmission lines to connect to the BC Hydro system.
- Advice/Recommendations; Government Financial Information

- The Province along with BC Hydro are now working with prospective customers to coordinate the development of shared infrastructure and reduce its cumulative effects in the region.
- Advice/Recommendations; Government Financial Information

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- Separate planning and pre-engagement work is ongoing for the West Corridor.

FINANCIAL SUMMARY:

- Not Applicable

ATTACHMENTS:

- Not applicable

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BC Hydro Customer Crisis Fund

KEY FACTS:

- In 2018, BC Hydro launched the Customer Crisis Fund (CCF) pilot program to provide bill relief to residential customers facing imminent disconnection due to an unexpected life crisis. This was funded via a small rate rider on residential bills.
- Under the CCF, eligible customers may receive a grant equal to the amount owing on their account, up to maximum grants of \$800 for customers who heat their homes with electricity, and \$700 for customers with non-electrically heated homes (e.g. natural gas heat).
- As of January 2025, BC Hydro's Customer Crisis Fund has provided over 26,420 grants totaling \$11.2 million to customers in need.
- The CCF pilot program ended in May 2021 however Government directed the British Columbia Utilities Commission (BCUC) to allow the CCF to temporarily continue.
- This continuation was initially funded with approximately \$5 million from unspent funds collected through the rate rider in June 2021, followed by around \$6 million ^{Advice/Recommendations; Cabinet Confidences} and most recently, in March 2025, with approximately \$1.9 million ^{Advice/Recommendations; Cabinet Confidences}
^{Advice/Recommendations; Cabinet Confidences}
- BC Hydro projects that Government's direction to allocate an additional \$1.9 million for the CCF will extend the program's lifespan until the end of Fiscal Year 2025/26, which could provide around 4,000 to 4,700 additional grants during this time.

ADDITIONAL INFORMATION:

- The Customer Crisis Fund is BC's only energy affordability support that is not income-tested, meaning that any BC Hydro residential account holder that meets the criteria can apply for the grant.
- The CCF allows for residential account holders to apply for a grant of up to \$800 per year if (1) their account is in arrears, (2) they are in a temporary financial crisis, and (3) they are facing disconnection.
- The CCF pilot was initially funded by a rate rider on every residential customer's bill of \$0.25 per month; however, this was discontinued after the BCUC found, following the CCF Pilot Evaluation, that there was no economic or cost of service justification for the program.

- Advice/Recommendations

Table 1: CCF Funding History

Date	Decision	Details
November 17, 2017	BCUC Order No. G-166-17	The BC Utilities Commission (BCUC) approved the CCF pilot program on a three-year basis, funded by a surcharge (rate rider) on every residential customer's bill of \$0.25 per month.
May 7, 2021	BCUC Order No. G-144-21	- The BCUC found, following the CCF Pilot Evaluation, that there was no economic or cost of service justification for the program and ordered BC Hydro to terminate the CCF Pilot Program effective May 31, 2021. - Shortly thereafter, BC Hydro's CCF rate rider was rescinded.
June 21, 2021	B.C. Reg. 163/2021 Order in Council 365/2021	Government directed the BCUC to allow the CCF to continue temporarily, using the unspent funds of approximately \$5 million collected through the rate rider.
November 18, 2022	B.C. Reg. 224/2022 Order in Council 571/2022	Government directed the BCUC to enable BC Hydro to add an additional \$6 million Advice/Recommendations; Cabinet Confidences
March 3, 2025	Order in Council 94/2024	Government directed the BCUC to allow the CCF to continue using Advice/Recommendations; Cabinet Confidences approximately \$1.9 million Advice/Recommendations; Cabinet Confidences

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

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MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

SECTION D: ENERGY RESOURCES

Section D Contents:

- Petroleum and Natural Gas Sector Overview
- LNG Canada and Coast Gaslink
- Ksi Lisms LNG and Prince Rupert Gas Transmission
- Other Significant Energy Projects
- Petroleum and Natural Gas Tenuring
- Geothermal
- Methane Regulations

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Petroleum and Natural Gas Overview

KEY FACTS:

- 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 twelfth largest natural gas producing jurisdiction.
- British Columbia currently produces about 7 billion cubic feet per day (Bcf/d) of marketable natural gas and according to the BC Energy Regulator's Production Dashboard, there are just under 9,000 producing wells in the Province, with 539 new wells drilled in the last 12 months.
- BC exports approximately 85% of the natural gas it produces at a value of \$5B/yr. About 50% of BC's natural gas is estimated to end up in the US.
- According to Statistics Canada (2023 data), British Columbia's oil and natural gas sector contributes significant benefits to the economy:
 - Nearly \$15 billion or 5 per cent to provincial gross domestic product.
 - 73,000 workers at an average wage of over \$110,000 per year.
- Nearly 30 per cent of the energy used in British Columbia comes from natural gas, according to the Canada Energy Regulator. FortisBC supplies natural gas to about 1.2 million customers (households & businesses), with Pacific Northern Gas (PNG) supplying another 39,100 customers 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 the *Provincial Inventory of Greenhouse Gas Emissions*, emissions from British Columbia's oil and gas sector totaled 14.6 million tonnes in 2022, which is 22 per cent of British Columbia's total emissions.

ADDITIONAL INFORMATION:

- Natural gas is produced in the northeastern part of British Columbia, predominantly from the Montney Formation. The ability to develop 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 (current production is 7 Bcf/d).
- 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 PNG. FortisBC and PNG supply natural gas to most

of the domestic, commercial, and industrial users in the Province and are regulated by the British Columbia Utilities Commission. The Coastal GasLink pipeline, which will supply gas to LNG Canada, is complete with the first LNG shipment expected later this year.

- By-products of natural gas production (propane, butane and condensate) are exported to Alberta and into Asian markets through two operating export terminals. According to Statistics Canada, in 2023 British Columbia exported \$1.2 billion of propane primarily to Japan and South Korea.
- The Trans Mountain pipeline is the primary source of crude oil for British Columbia, which is supplied to the Parkland refinery in Burnaby as well as refineries in Washington state. The pipeline, along with these refineries, provide British Columbia with its refined petroleum products (gasoline and diesel). The Trans Mountain expansion project commenced operations in May 2024, expanding the capacity from 300,000 barrels per day to 890,000 barrels per day. Since starting operations, 50 per cent of the project's exports have made their way to Asian markets.
- FortisBC operates two smaller scale LNG facilities: Tilbury LNG, on Tilbury Island near Vancouver, and Mt. Hayes, near Ladysmith on Vancouver Island. These facilities provide B.C. with energy security.
- According to Statistics Canada, British Columbia's oil and natural gas sector directly employed nearly 73,000 individuals in 2023. Many of these 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 2023, the oil and gas sector contributed \$14.8 Billion (2017 dollars), or about 5 per cent, directly to British Columbia's gross domestic product. Companies in British Columbia's oil and gas sector regularly invest between \$5 billion 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.
- 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 took 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 have a credible plan to achieve net zero emissions by 2030.

FINANCIAL SUMMARY:

- 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 prices, revenues decreased to \$823 million in 2023/24 and are projected to fall further to \$576 million in 2024/25.
- Over the next two years, royalties are expected to be higher due to increased royalties from natural gas liquids, inclusion of increased natural gas volumes related to production requirements of LNG, higher natural gas prices, and decreased utilization of royalty credit programs.

ATTACHMENTS:

- Not applicable

ADM Responsible	Contact number
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LNG Canada and Coast Gaslink

KEY FACTS:

- The LNG Canada export facility is nearly complete. Commissioning and start-up activities started in September 2024. The facility is scheduled to start exporting around mid-2025.
- The Coastal GasLink (CGL) pipeline project construction is finished and will supply the LNG Canada facility with natural gas.
- Both the LNG Canada facility and the CGL pipeline have the permits required to build Phase 2.
- LNG Canada's joint venture partners (JVPs) are assessing the economics of a Phase 2 investment. The expansion would double the export capacity of the project from 14 million tonnes per annum (MTPA) to 28 MTPA.

ADDITIONAL INFORMATION:

- The LNG Canada project is a joint venture comprised of Shell Canada (40%), PETRONAS (25%), PetroChina (15%), Mitsubishi Corporation (15%) and KOGAS (5%).
- To date, work on LNG Canada has resulted in over \$5.5 billion in contracts and procurement to business in British Columbia. Of that amount, more than \$4.6 billion has been awarded to First Nations-owned businesses and local area businesses.
- At peak construction last year, over 9,000 people were working at the export site in Kitimat. More than 40,000 Canadians have directly contributed to building Phase 1.
- For CGL, more than \$1.8 billion in contracts have been awarded to Indigenous and local businesses.
- More than 25,700 full time-equivalent jobs were created in British Columbia during CGL's construction.
- The provincial government has signed benefit agreements with the majority of First Nations impacted by the two projects. LNG Canada has agreements with all affected First Nations. CGL has agreements in place with all 20 elected Indigenous bands along the pipeline route. Benefits agreements were not reached with the Wet'suwet'en Hereditary Chiefs.
- Since 2013, LNG Canada has directly contributed more than \$11 million to programs and equipment benefitting Kitimat, Terrace, and First Nations communities.

- The emissions profile of Phase 1 is accounted for in CleanBC. It will be one of the lowest carbon LNG facilities in the world for its size.
- Any final investment decision (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.
- Shell’s recently published 2025 outlook (February 2025) indicates global demand for LNG is forecast to rise by around 60% by 2040, largely driven by economic growth in Asia.

FINANCIAL SUMMARY:

- LNG Canada Phase 1 is expected to generate \$23 billion in public revenue over the life of the project (40 years). Phase 2 investment would represent significant financial benefits also.

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
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Ksi Lisims LNG and Prince Rupert Gas Transmission

KEY FACTS:

- Ksi Lisims is a proposed Liquefied Natural Gas (LNG) export facility planned for a site owned by the Nisga'a Nation near the community of Gingolx (Kincolith). The project would receive its natural gas from the proposed Prince Rupert Gas Transmission (PRGT) pipeline.
- Both Ksi Lisims and PRGT require regulatory approvals before either can advance. Ksi Lisims LNG requires its Environmental Assessment Certificate (EAC) and PRGT requires the Environmental Assessment Office (EAO) to find it has substantially started constructing its project, in order for its EAC to remain valid.
- As a part of the Province's Energy Action Framework, Ksi Lisims will need to pass an emissions test with a credible plan to be net zero by 2030.
- If built, Ksi Lisims will export upwards of 12 million tons per annum (MTPA).
- Ksi Lisims is being co-developed by the Nisga'a Nation, Western LNG, and Rockies LNG, and has estimated capital expenditures of \$10 billion (facility only).
- On June 30, 2024 the Nisga'a Nation and Western LNG LLC purchased the PRGT from TC Energy.

ADDITIONAL INFORMATION:

- Ksi Lisims LNG is currently undergoing the Environmental Assessment (EA) process, with a dispute resolution process underway initiated by Lax Kw'alaams Band and Metlakatla First Nation.
- A facilitator for both dispute resolution processes is in place as of February 21, 2025. Dispute resolution is a formal, non-binding process, supported by a third-party facilitator who has 90 days to work with the parties to seek a resolution and develop a report on the process.
- After conclusion of the dispute resolution processes, the EAO will finalize its assessment report and provide it, along with other materials from the EA to the Ministers of Environment and Parks, and the Minister of Energy and Climate Solutions, to inform their decision on whether or not to approve the Ksi Lisims LNG project to proceed.
- Gitga'a First Nation had also initiated a dispute resolution process, however on February 28, 2025, the BC EAO was informed that the Gitga'at First Nation was ending their dispute resolution process regarding the project.
- Ksi Lisims LNG project intends to be powered by BC Hydro but new infrastructure is needed to supply Ksi Lisims with the electricity it will need to be a net zero facility.

- Ksi Lisims LNG has received a 40-year export license from the Canada Energy Regulator that would allow the facility to export up to 12 MTPA.
- On December 30, 2024, Western LNG LLC secured US\$150 million through a private placement of equity securities to support the remaining development activities for the projects, with a Final Investment Decision projected by late 2025.
- In January 2024, Ksi Lisims LNG signed a sales and purchase agreement with Shell, securing a commitment for the annual purchase of 2 million tonnes of LNG on a free-on-board basis.
- The PRGT project requires a substantial start decision for its EAC to remain valid. PRGT has also applied for two amendments to its certificate. The Eastern and Marine (Western) Amendments are currently under review with the EAO.
- Gitanyow Hereditary Chiefs (GHC) have opposed the PRGT, establishing a checkpoint along a forest service road in August 2024 which closed off equipment from reaching construction activities. The GHC have argued the Gitanyow Natural Gas Pipeline Benefits Agreement, signed with the Province in 2014, is no longer in effect. In October 2024 the GHC initiated a legal challenge against the EAO's EAC after submitting an application for judicial review with the BC Supreme Court.
- The Ministry of Energy and Climate Solutions is working closely with other agencies across government to address issues and ensure that project will meet government's expectations.

FINANCIAL SUMMARY:

- As a part of Ksi Lisims LNG application for an EAC, it has stated that the project will generate approximately \$2.5 billion in annual gross domestic product, 21,000 employment opportunities, and \$890 million in annual provincial and federal tax revenues in Canada over the construction and operating life of the project.

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
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Other Significant Energy Projects

KEY FACTS:

- As a small open-market economy, and as Canada's gateway to the Pacific, trade is a critical part of B.C.'s economy. Exports of energy along with metallic/mineral commodities play a key and increasing role, accounting for nearly 50% of the value of B.C.'s exports in 2023.
- The Trans Mountain Expansion Project came online on 1 May 2024 and the Expanded System now has a nameplate capacity of approximately 890 thousand barrels per day (Mb/d), an increase of 590 Mb/d.
- The B.C. natural gas and Liquefied Natural Gas (LNG) sector has among the lowest carbon emissions in the world and has provided significant contributions to B.C.'s economy during the construction of facilities and pipelines, such as LNG Canada and Coastal GasLink.
- LNG Projects complete or under construction represent \$41B of capital expenditures (capex) with an additional \$33-35B capex pending decisions in B.C.
- There are three LNG export projects under construction in British Columbia: the LNG Canada project in Kitimat (Haisla territory), the Woodfibre LNG project in the Squamish area, and the Haisla led Cedar LNG project. LNG Canada and Cedar LNG are supported by the Coastal Gaslink Pipeline and Woodfibre LNG is supported by the Eagle Mountain Pipeline (under construction).
- The Province announced that it will be fast-tracking 18 resource projects in order to reduce reliance on trade with the United States. Projects named include Cedar LNG, NEBC Connector, Aspen Point Program, North Coast Transmission Line and several wind power projects throughout B.C.
- By-products of natural gas production (propane, butane and condensate) are also exported to Alberta and into Asian markets through two operating export terminals. In 2023, B.C. exported \$1.2B of propane primarily to Japan and South Korea.
- A third terminal called the Ridley Island Energy Export Facility (REEF) that will export propane and butane is being currently being constructed in Prince Rupert and is scheduled to commence operations late in 2026.

ADDITIONAL INFORMATION:

- Specific project details for LNG projects can be found in Attachment#1.

LNG Canada (Shell, Petronas, Mitsubishi, PetroChina, KOGAS)

- Refer to note ECS – D2

Woodfibre LNG (Pacific Energy, Enbridge)

- Estimated capital expenditure of \$5.1 Billion for both the liquefaction facility and the associated pipeline.
- Expected to have approximately 800 people working on site at peak construction, and about 100 long-term operations roles.
- Woodfibre LNG received its Environmental Assessment Certificate (EAC) in 2015, after going through Sk̓wx̓wú7mesh Úxwumixw (Squamish Nation)'s environmental assessment (EA) process. This first legally-binding Indigenous-led EA process in Canada resulted in conditions applicable to Woodfibre LNG, FortisBC, and the Province of British Columbia. Woodfibre LNG is responsible for 13 of the conditions and is actively working with Squamish Nation to ensure that each of these conditions is fully met.
- Woodfibre LNG issued a Notice to Proceed (FID) in 2022. Early construction work began in fall 2023, and the project is expected to be completed in 2027.

Cedar LNG (Haisla Nation, Pembina Pipelines)

- Announced FID on June 25, 2024 and is now under construction.
- Expected to create 500 jobs during peak construction and approximately 100 full-time jobs during operations.
- Advice/Recommendations
- TC Energy announced a \$1.6 billion (USD \$1.2 billion) expansion to the Coastal GasLink pipeline that will support Cedar LNG, called Cedar Link. At peak construction, Cedar Link is expected to create 350 jobs.

Ksi Lisims LNG (Nisga'a Nation, Western LNG, Rockies LNG)

- Refer to note ECS – D3

Tilbury LNG (Fortis BC)

- Advice/Recommendations; Government Financial Information

- An application for an EAC for Phase 2 is currently being reviewed by the BC Environmental Assessment Office (EAO).

Summit LNG (JX LNG Canada)

- Project is at the very early stages of applying for its EAC.

Aspen Point Program (Enbridge)

- A 500 million cubic feet per day expansion to the existing T-North pipeline.
- Estimated capital expenditure of \$1.2 Billion.

Sunrise Expansion (Enbridge)

- A 300 million cubic feet per day expansion to the existing T-South pipeline.
- Estimated capital expenditure of \$4 Billion.
- Currently in regulatory approval process with the Canada Energy Regulator.

Birch Grove (Enbridge)

- A 200 million cubic feet per day expansion to the existing T-North pipeline.
- Estimated capital expenditure of \$0.4 Billion.
- Requires regulatory approval from the Canada Energy Regulator.

NEBC (NorthRiver Midstream)

- Two 213-kilometre pipelines from the Montney region of northeast B.C. to transport natural gas liquids and condensate to Alberta.
- Estimated capital expenditure of \$0.3 Billion.

Taylor to Gordondale (Pembina Pipeline)

- 89 km of 16 in pipeline to natural gas liquids to petrochemical and diluent markets in AB.
- Currently in regulatory approval process with the Canada Energy Regulator.

REEF – Ridley Island Energy Export Facility (AltaGas, Vopak)

- Storage, loading, and export of liquified petroleum gas and bulk liquids and refined products. Currently under construction.
- Estimated capital expenditure \$1.35 billion.

FINANCIAL SUMMARY:

- Large energy projects will provide short-term economic growth for the province during their construction, and longer-term revenues (royalties, carbon compliance charges, etc.) over their operating lifetime.

ATTACHMENTS:

- (C) Attachment 1 - Current LNG Summary Table and Key Statistics

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Government Financial Information

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Petroleum and Natural Gas Tenuring

KEY FACTS:

- The Ministry is responsible for administering petroleum and natural gas (PNG) subsurface tenures on behalf of the Province, ensuring that the Province's PNG resources are managed in a responsible and sustainable manner for the benefit of all British Columbians.
- A subsurface tenure grants the right to use the Province's PNG resources under certain terms and conditions.
- When a PNG subsurface tenure is issued, either through a competitive public tender process, i.e., Crown sale, or an alternative disposition process, the tenure holder must apply to the BC Energy Regulator to conduct any surface-related activities to access the subsurface tenure for purposes of exploring and producing PNG resources.
- Crown sales of PNG subsurface tenure resumed in December 2024, after being paused for over 3 years to better align process steps with negotiated outcomes associated with Treaty 8 First Nations (e.g., Blueberry River First Nation Implementation Agreement).

ADDITIONAL INFORMATION:

- The administration of PNG subsurface tenure generates revenue for the Province. Refer to Financial Summary and Attachment 1 for more information.
- There are two types of PNG subsurface 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.
 - 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.
- 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 subsurface tenure is issued by the Minister under special terms and for the price approved by the Lieutenant Governor in Council. This process is known as an alternative disposition and sometimes used for unique situations to support First Nations initiatives (e.g., direct award) or company specific interests where different tenure terms are needed or where a Crown sale is not appropriate.

- In 2024, the Ministry direct awarded a PNG tenure to Halfway River First Nation (Halfway) to advance reconciliation and provide opportunities for business-to-business relationships with companies to develop the tenure.
- The Halfway tenure is approximately 34,000 hectares ^{Intergovernmental Communications}
Intergovernmental Communications
- The Ministry is currently working with other Treaty 8 First Nations on direct award PNG tenure proposals.
- As of March 6, 2025, the Ministry is managing 11,013 leases and 42 drilling licenses, covering approximately 5.69 million hectares.

FINANCIAL SUMMARY:

- Tenure revenue components are in the form of rental payments issued on existing tenure, including bonus bids, i.e., what industry pays at a Crown sale over and above rentals when initially acquiring tenure. See Attachment 1 for details.
- Revenue from bonus bids and rents on drilling licences and leases is forecast to increase over the next three years, from \$37 million in 2024/25 to \$40 million in 2027/28. See Attachment 1 for details.

ATTACHMENTS:

- Attachment 1 – Petroleum and Natural Gas Tenure Revenue

ADM(s) Responsible	Contact number
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Attachment 1 – Petroleum and Natural Gas Tenure Revenue

Table 1: Bonus bid revenue generated from Crown sales of petroleum and natural gas tenure for each fiscal year between 1978 to 2025.

Fiscal Year	Hectares Disposed	Total Bonus Bid	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

Fiscal Year	Hectares Disposed	Total Bonus Bid	Average Price (\$/ha)
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	\$140,930,897.59	\$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	5,729	\$3,782,616.79	\$660.26
2022-2023	0	\$0.00	\$0.00
2023-2024	0	\$0.00	\$0.00
2024-2025 (current to February 12/25)	1,844	\$332,101.24	\$180.10
5 yr. avg. (2019/20-2023/24)	5,266	\$3,312,655.27	\$258.38
10 yr. avg. (2014/15-2023/24)	45,785	\$61,979,050.83	\$796.97
15 yr. avg. (2009/10-2023/24)	110,199	\$197,104,630.07	\$1,119.63
20 yr. avg. (2004/05-2023/24)	236,864	\$402,317,394.57	\$1,238.84

Table 2: Petroleum and natural gas tenure revenue forecast.

Components of Tenure Revenue (\$ millions unless otherwise specified)	Updated Forecast 2024/25	Budget Estimate 2025/26	Plan 2026/27	Plan 2027/28
Bonus Bid Cash Sales	1	4	6	6
Fees and Rentals	36	36	36	34
Total bonus bids, fees and rentals	37	40	42	40

Geothermal

KEY FACTS:

- British Columbia has significant geothermal energy potential.
- Geothermal resources are defined under the *Geothermal Resources Act* (GRA), as water or steam that is greater than 80°C when produced at surface.
- The Ministry can issue geothermal permits/leases, i.e., tenure, either through a competitive public tender process or by direct award through an agreement approved by the Lieutenant Governor in Council (LGIC).
- Geothermal permits provide right to explore for geothermal resources, while a geothermal lease provides the right to develop and produce.
- As of March 10, 2025, the Ministry is managing four geothermal exploration permits and one geothermal lease.
- The Ministry has recently completed a consultation process on a geothermal permit near Lower Post, B.C.
- The BC Energy Regulator (BCER) is responsible for authorizing exploration, evaluation and development activities including drilling and geophysical operations.
- As BC Hydro seeks future capacity energy resources in the future, geothermal projects are a low carbon option to potential serve future energy demands.

ADDITIONAL INFORMATION:

Notable Geothermal Projects

1. Tu Deh-Kah (Clarke Lake) - Fort Nelson (<https://tudehkah.com/>)

- Two exploration permits have been awarded to Deh Tai GP, a development corporation of the Fort Nelson First Nation (FNFN) through an agreement approved by the LGIC (January 2020 and March 2022).
- (CI) The proposed pilot scale geothermal energy plant (with a capacity of approximately 10 megawatts (MW) would provide electricity to Fort Nelson which is not integrated into the B.C. electricity transmission system.
- The Fort Nelson region is served by the BC Hydro operated 73 MW natural gas-fired generating facility, the Fort Nelson Generating Station (FNGS).
- The FNGS generates excess electricity that is exported along an interconnection into Northern Alberta. With average annual greenhouse gas emissions of 185 kilotonnes, FNGS is one of the largest single sources of BC Hydro's emissions.

- The confirmed geothermal resource at Clarke Lake is much larger than the proposed pilot scale plant and, if developed, has the potential to supply the electricity needs of the region.
 - In March 2021 the federal government announced \$40.5 million in funding for this project, primarily through the Natural Resources Canada Emerging Renewable Power Program.

2. Lakelse Lake – Terrace (<https://www.kitselasgeo.ca/>)

- Borealis Geopower in partnership with the Kitselas First Nation acquired a geothermal permit at a public tender auction in January 2014 and formed a joint development company, Kitselas Geothermal Inc. (KGI).
- KGI requested a new geothermal permit based on their exploration. The Ministry issued KGI a geothermal permit in February 2023 to allow them to advance their exploration efforts.

3. Lease at Mount Meager – Pemberton – (<https://meagercreek.ca/>)

- The only geothermal lease in B.C. was first issued in 1987 to BC Hydro on the south side of Mount Meager.
- Several wells have been drilled at Mount Meager, with the most recent in 2004. The wells have confirmed a heat resource but have not encountered a commercially viable reservoir.
- The lease was renewed in December 2017 under the terms of the lease for an additional 20-year term.
- (C) Ownership of the lease was recently transferred. The project developers have been in contact with BC Hydro and Ministry staff to discuss options for a future energy purchase agreement.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

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Methane Regulations

KEY FACTS:

- Under CleanBC, the Province established ambitious methane emission reduction targets of 45% below 2014 levels by 2025, 75% below by 2030 and a near elimination of all industrial methane by 2035.
- The Province regulates oil and gas sector methane emissions primarily under the Drilling and Production Regulation (DPR) to achieve our CleanBC targets.
- Regulations are complemented by industrial carbon pricing and industrial funding programs like the CleanBC Industry Fund.
- In 2024, the BC Energy Regulator passed enhanced methane regulations to address the 2030 methane target. The first set of new requirements took effect in January 2025. These enhanced requirements build upon existing regulations that were designed to address the 2025 target.
- B.C.'s regulations are evidence-based. They incorporate provincially- and industry-funded research developed in collaboration with academia, industry and environmental groups to determine the most effective, lowest-cost mitigation options.
- According to the latest Provincial Inventory report, which uses data co-developed with the federal government, B.C. is on track to meet its 2025 oil and gas sector methane target and has established a clear pathway forward to meeting its 2030 (75% reduction) and 2035 (near-elimination) targets¹.
- Relative to North American and global oil and gas production, B.C.'s oil and gas sector has one of the lowest methane emissions intensity levels (methane emissions per unit of natural gas produced).
- In 2020, the Province signed an equivalency agreement (term: 2020-2025) with the federal government as a result of their determination that provincial methane regulations would achieve greater reductions than the national regulations.
- The Province has signed an updated equivalency agreement with the federal government for the years 2025-2030. It remains highly uncertain whether federal methane regulations (to achieve 75%) will be finalized this year.

ADDITIONAL INFORMATION:

- Methane is a potent but short-lived greenhouse gas.

¹ The 2024 National Inventory Report showed a 14% decrease in B.C. oil and gas methane emissions from 2014 levels. The 2024 Provincial Inventory, using updated federal data, showed a 27% reduction in B.C. oil and gas methane emissions.

- Reducing methane emissions represents a significant opportunity to slow the pace of climate change.
- The Province is committed to enhancing its understanding of the oil and gas sector's methane emissions inventory through the use of advanced methane detection technologies. Examples of initiatives include:
 - Research on key methane emission sources through the BC Methane Emissions Research Collaborative.
 - Aerial surveys through Carleton University to develop a measurement-based methane inventory of the B.C. oil and gas sector.
- Drawing on insights from oil and gas methane emission studies, research is expanding to coal mining, industrial wood waste and forestry sectors. This is to support the 2035 target of a near elimination of all industrial methane emissions.

FINANCIAL SUMMARY:

Topic	Amount
Methane inventory study	\$1,640,000
Natural gas distribution methane study	\$50,000
Coal mining methane study	\$150,000
Slash pile methane study	\$120,000
Industrial wood waste methane study	\$32,500
Total spending	\$1,992,500

ATTACHMENTS:

- Not applicable

ADMsResponsible	Contact number
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Adria Fradley, CAS	250 893 4329



MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

SECTION E: TAX/ROYALTY POLICIES/ PROGRAMS

Section E Contents:

- Carbon Tax and B.C. Output Based Pricing System
- Oil and Gas Emissions Cap
- Implementation of the New Royalty Framework
- Petroleum and Natural Gas Royalty Revenue
- Carbon Offset Update
- Net Zero for New Industry

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Carbon Tax and B.C. Output-Based Pricing System (B.C. OBPS)

KEY FACTS:

- In March 2025, both the Government of Canada and the Province announced intentions to repeal the consumer carbon tax as an affordability measure. Prime Minister Mark Carney signed an Order in Council on March 14, 2025, to remove the consumer carbon tax as of April 1, 2025. In B.C., the consumer carbon tax is expected to be repealed in the spring 2025 session.
- British Columbia's (B.C.) carbon tax is set to increase by \$15/tonnes of carbon dioxide equivalent (tCO₂e) to \$95/tCO₂e on April 1, 2025, until it reaches \$170/tCO₂e in 2030. The Province intends to freeze B.C.'s carbon tax rate at \$80/tCO₂e until the consumer carbon tax is repealed through legislation.
- In 2019, the federal government announced minimum national stringency standards known as the federal 'benchmark' that all carbon pricing systems are required to meet to ensure they are comparable and effective in reducing GHG emissions. Despite the planned repeal of the consumer carbon tax, the federal government maintains its commitment to industrial carbon pricing.
- The B.C. Output-Based Pricing system for large industrial facilities that emit over 10,000 tCO₂e will also remain in place to maintain an effective price on carbon for large emitters and where the rate is set to increase from \$95 per tonne in 2025/26 to \$125 per tonne of CO₂ equivalent emissions in 2027/28 aligning with federal industrial carbon pricing requirements.
- Large industrial facilities can emit up to a product-specific emissions limit without any cost. Any excess emissions above their emissions limit are subject to a carbon price and are required to pay a compliance obligation.
- Despite the Province's announced intent to freeze the carbon tax increase on April 1, 2025, and to remove it in the 2024/25 fiscal year, revenues forecasted in Budget 2025 from the Carbon Tax and the B.C. OBPS are:

\$ (millions)	2024/25	2025/26	2026/27	2027/28
Carbon Tax	2,359	2,760	3,108	3,368
B.C. OBPS	199	286	373	431
Total	2,558	3,046	3,481	3,799

- The removal of the carbon tax will significantly reduce government revenues. The B.C. OBPS revenue is a small portion of the carbon pricing revenue in Budget 2025.

ADDITIONAL INFORMATION:

Carbon Tax Introduction and Changes

- B.C. introduced a carbon tax in 2008 at \$10/tCO₂e to provide a price signal for emission reductions across the economy and encourage sustainable economic activity and green jobs.
- In the CleanBC Roadmap to 2030 and Budget 2022, B.C. committed to meet or exceed the federal carbon price trajectory to \$170/tonne by 2030, as required by federal government regulation.
- In April 2024, B.C. transitioned from the CleanBC Industrial Incentive Program (CIIP) to the B.C. OBPS, changing the way it prices GHG emissions from industrial operations.

Carbon Tax Administration:

- Tax policy decisions are the responsibility of the Minister of Finance.
- Budget 2025 confirms government's commitment to direct revenue from carbon tax increases into relief for people through the Climate Action Tax Credit (CATC).
- Effective July 1, 2024, the maximum annual climate action tax credit increased from \$447 to \$504 for an adult, from \$223.50 to \$252 for a spouse or common-law partner, and from \$111.50 to \$126 per child.
- Given the intent to repeal the provincial consumer carbon tax, the status of CATC and any associated relief will be determined by the Ministry of Finance.

B.C. OBPS:

- In 2018, the Province developed the CleanBC Programs for Industry (CPI) to support B.C.'s industry to reduce emissions.
 - The CleanBC Industry Fund, which invests directly in emission-reduction projects.
 - The CleanBC Industrial Incentive Program (CIIP), which rewards operators based on how their emissions intensities compare to leading emissions benchmarks.
- In response to new federal requirements and a commitment in the CleanBC Roadmap to 2030, the Ministry of Environment and Climate Change Strategy (now the Ministry of Energy and Climate Solutions or ECS) and the Ministry of Finance (FIN) conducted a Carbon Pricing Review throughout 2021-2022. During the review, industry voiced support for a made-in-B.C. OBPS.

- Budget 2023 announced B.C.'s intent to transition away from the CIIP to the B.C. OBPS that supports competitiveness and emissions reductions by incentivizing industrial emitters to reduce their GHG emissions by using a performance-based system.
- Since Budget 2023, engagement on the B.C. OBPS included a series of information sessions with industrial operators and associations, a virtual workshop with 220 representatives from various industrial sectors, an information session in July with 62 First Nations and Indigenous attendees, and several senior level meetings with industrial associations and leadership from operations and covered facilities.
- Advice/Recommendations

- The B.C. OBPS began on April 1, 2024, for industrial operators. The CleanBC Industry Fund, which funds emissions reductions projects together with industry, remains in place.
- Emissions limits are calculated using provincial production weighted average emissions intensity data collected over three years (2019-2021) from CIIP.
- In the B.C. OBPS, an emissions limit is based on the following formula:

Emission limit per product = Annual Production * Reduction Factor * Production Weighted Average Emissions Intensity

- The reduction factor determines the percentage of priced emissions for a specific product. See Appendix 1 for sector-specific reduction factors and other B.C. OBPS stringency details (i.e., amount of priced emissions).
- The production weighted average is calculated as the total emissions of the products divided by the total production amount of the product.
- If a facility's emissions exceed their limit, then it can use a combination of compliance mechanisms to meet their compliance obligations:
 - **Earned Credits:** Credits that are issued to a facility when its emissions are verified to be below their emission limit. An earned credit can be used to meet future compliance obligations or sold to another operation.
 - **Offset Units:** Verified units that represent emission reductions and removals generated from approved B.C. carbon offset projects. The number of offsets that can be used against a facility's compliance obligation will be limited.

- **Direct Payment:** Is a monetary payment to meet the facility's compliance obligations at the full carbon price for that year (e.g., \$170/tCO₂e for 2030).
- Planned, yearly, gradual increases to B.C. OBPS stringency will happen through the established tightening rate. See Appendix 1.
- All new operations, including LNG operations, will be eligible to participate as a “new entrant” under the B.C. OBPS during the start-up period of their facilities. New entrants are not required to pay for their emissions (and cannot earn performance credits) for the first two years of operations to allow their emissions to stabilize from start-up conditions.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Appendix 1 – B.C. OBPS Stringency Details

ADM Responsible	Contact number
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Appendix 1 – B.C. OBPS Stringency Details

Parameter		Rate
Tightening Rate	Non-industrial process emissions	1% per year, starting in 2025
	Industrial process emissions	0%
Reduction factor	Aluminum	95%
	Cement, Chemicals, Lime	90%
	Critical Mineral Smelting and Refining	85%
	Lead-Zinc	85%
	Copper Mining	80%
	Critical Mineral Mining	80%
	Other sectors	65%
Expiry of Offset Credits	3 years	
Compliance Units Allowance	2024	50%
	2025	40%
	2026	30%
	2027	30%
	2028	30%
	2029	30%
	2030	30%

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Oil and Gas Emissions Cap

KEY FACTS:

- The Province has been working to reduce emissions from all sectors – including oil and gas – with targeted actions through the CleanBC Roadmap to 2030 (Roadmap).
- B.C. is committed to establishing a cap on oil and gas greenhouse gas (GHG) emissions – not production – to achieve a 33-38% reduction over 2007 levels by 2030 in line with our sectoral emissions reduction targets.
- B.C. is monitoring development of the national oil and gas emissions cap regulations, and will continue working with Canada to cap emissions from the oil and gas sector.

ADDITIONAL INFORMATION:

- According to the 2024 Provincial Inventory, B.C.'s upstream oil and gas sector accounted for 13.3 million tonnes carbon dioxide equivalent (Mt CO₂e) emissions in 2022—about 20% of B.C.'s total emissions, and 50% of industrial emissions.
- The 2024 Provincial Inventory also reports that 70% of oil and gas emissions are from stationary combustion and pipeline transportation and 30% are from fugitive sources. Venting and flaring are the major parts of fugitive sources and constitute respectively 19% and 5% of the oil and gas sector total.
- According to the provincial inventory, oil and gas sector emissions have decreased since 2007 while natural gas production more than doubled over the same period.
- The liquefied natural gas sector (LNG) is expected to add to sector emissions.
 - LNG Canada Phase 1 is expected to add 2.1 Mt CO₂e from the facility and 1.35 Mt CO₂e from the midstream and upstream.
 - Woodfibre LNG is expected to add 0.08 Mt CO₂e from the facility and 0.20 Mt CO₂e from the midstream and upstream.

Federal emissions cap for oil and gas:

- The federal government released draft regulations to establish a nation-wide oil and gas sector cap in December 2024.
- The system is designed to allow for trading under an emissions limit across operators in Canada to cap emissions from the oil and gas sector in line with Canada's 2030 emissions targets.

Actions to reduce emissions in the oil and gas sector:

- Methane:
 - In 2018, B.C. amended the Drilling and Production Regulation to achieve a 45%

reduction in oil and gas sector methane venting and fugitive emissions from 2014 levels by 2025. Modeling indicates that we are on track to meet or exceed those targets.

- Updated regulations are now in place to address the CleanBC Roadmap’s increased ambition of a 75% reduction by 2030.
- Carbon pricing:
 - The oil and gas sector is covered by a carbon price increasing to \$170/tonne in 2030 under the new B.C. Output-Based Pricing System.
- Net Zero for New Industry:
 - B.C. requires new industrial facilities to develop net-zero plans to demonstrate how they align with 2030 and 2040 emission reduction targets and achieve net-zero emissions by 2050.
 - All new LNG projects in the Environmental Assessment process must be net zero by 2030.
- Electrification:
 - Estimates Note C2 - North Coast Transmission Line
 - Estimates Note C5 - BC Hydro industrial electrification.
- CleanBC Industry Fund:
 - The fund supports projects to reduce emissions and accelerate innovation for decarbonization of large industrial emitters, including oil and gas.
 - The CleanBC Industry Fund has partnered with BC Hydro to launch a streamlined process to align and leverage funding for industrial electrification in 2024.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
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Implementation of the New Royalty Framework

KEY FACTS:

- When oil and natural gas are produced in B.C., the Province charges either a royalty or freehold production tax (collectively called the royalty system).
- The Ministry of Energy and Climate Solutions (ECS) oversees royalty policy while the Ministry of Finance (FIN) administers revenue collection.
- A comprehensive review of BC's legacy petroleum and natural gas system was launched by ECS in 2021 – the first in nearly 30 years.
- On May 19, 2022, the Province announced a new oil and gas royalty system that is a revenue minus cost framework with price-sensitive royalty rates.
- Transition to the new framework began on 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 newly drilled wells.

ADDITIONAL INFORMATION:

Implementing the new royalty system

- The New Royalty Framework will require either an amendment to, or a replacement of, the *Petroleum and Natural Gas and Freehold Production Tax Regulation*.
- Collaboration between ECS and FIN continues to make administrative changes and information technology enhancements necessary to ensure the new royalty system is in place on final implementation, currently scheduled for January 1, 2027.
- ECS has engaged with affected First Nations on the development of the proposed policies to address concerns and incorporate feedback into the design.
- Additional engagement with industry is taking place to ensure industry has time to update their systems and become familiar with new requirements.

Royalty Rates: new wells drilled on or after September 1, 2024

- New oil wells pay a 5% royalty rate for the first 6 months of production. At the end of this period, these wells pay royalties based on the current royalty system.
- New gas wells pay royalties at a 5% rate for the first 12 production months. At the end of this period, natural gas wells are evaluated and categorized into two tranches based on the ratio of natural gas liquids (propane, butane, pentane) to raw wellhead methane gas produced during this period.

- Gas wells that produce 0.05618 cubic meters of condensate, or more, per 1,000 cubic meters of raw gas, will revert to the current royalty system.
- Gas wells that produce less than 0.05618 cubic meters of condensate per 1,000 cubic meters of raw gas are granted an additional 5 producing months at a 5% royalty rate. These wells pay royalties based on the current royalty system after 17 months of production.
- Wells drilled before September 1, 2022 continue to pay royalties based on the current royalty framework until the new system is in effect January 1, 2027.

Healing the Land and Emissions Reduction (HLER)

- The HLER program will repurpose previously allocated Deep Well Royalty Deductions to be used for land restoration and emissions reduction projects.
- Implementation of the HLER program is occurring on a longer timeline than originally anticipated to ensure that the program aligns with First Nations interests as well as those of the Province.
- The HLER program will support work that goes above and beyond regulatory requirements to reduce emissions or address cumulative impacts on the land base.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

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Petroleum and Natural Gas Royalty Revenue

KEY FACTS:

- 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 2022 that balances BC's goals for economic development, a fair return on natural resources and environmental protection. This new framework will take effect January 1, 2027.
- 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 2024/25 has resulted in 30 percent (\$247 million) decrease in the overall royalties collected by the Province.

ADDITIONAL INFORMATION:

- The existing royalty system has been in place for over 30 years. The way natural gas is produced has changed over this time, as has 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 and Climate Solutions (ECS) and Finance (FIN), and the BC Energy Regulator (BCER). ECS is the lead in setting royalty policy. FIN operationalizes the policy set by ECS, 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 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.
- Royalties are payable across multiple products — natural gas (methane), natural gas liquids (ethane, propane, butane, and pentane), sulphur, gas condensates, and oil.
- Royalties are price sensitive.
- Natural gas royalty revenues (including sulphur) for 2024/25 are estimated at \$576.2 million and for 2025/26 at \$918.2 million, compared with \$817 million in 2023/24.

- 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 above the five-year average (2020–2024).
- 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 2024/25 and 2025/26, 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, Delaware and Eagle Ford in Texas, and Montney in B.C. and Alberta.
- Gross royalties from Natural Gas Liquids (NGLs) are forecast to account for 87% of total natural gas and NGL gross royalties for 2024/25 and between 61% and 87% each year for the five-year revenue forecast starting in 2025/26.

FINANCIAL SUMMARY:

Natural Resource Revenue (\$ millions)	Updated Forecast 2024/25	Budget Estimate 2025/26	Plan 2026/27	Plan 2027/28
Natural gas price - Plant inlet, \$C/gigajoule	0.61	1.30	1.69	1.75
Oil price (\$US/bbl at Cushing, OK)	74.57	70.78	73.72	75.25
Natural gas production volumes				
Billion cubic metres	3,035	3,157	3,222	3,372
Annual per cent change	3.3%	4.0%	2.1%	4.7%
<u>Gross royalties prior to deductions and allowances</u>				
Gross natural gas revenue	182	443	702	485
Gross natural gas liquids royalty revenue	644	775	852	1,058
<u>Royalty programs and infrastructure credits</u>				
Deep drilling	(76)	(74)	(33)	-
Road, pipeline, Clean Growth Infrastructure	(96)	(124)	(131)	(54)
Royalty and other infrastructure programs				
Natural gas royalties after deductions and allowances	576	920	1,209	1,143
Total bonus bids, fees and rentals	37	40	42	40
Petroleum royalties	63	47	47	46

Sources: [BC Budget 2025: Budget and Fiscal Plan, 2025/26 – 2027/28](#), Table A5 Material Assumptions - Revenue (page 139)

ATTACHMENTS:

- Not applicable

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Carbon Offset Update

KEY FACTS:

- Carbon offsets (or offset units) are a market-based mechanism that incentivize and deliver economically efficient climate action whilst providing significant environmental and socio-economic co-benefits.
- An offset protocol sets out instructions to quantify greenhouse gas emission reductions from a project class.
- B.C.'s approved offset protocols include the Forest Carbon Offset Protocol (FCOP), and the Methane from Organic Waste Protocol (MOWOP), with other offset protocols under development.
- The Carbon Capture and Sequestration (CCS) Offset Protocol is currently under development and is expected to be released by Summer 2025.
- A compliance carbon market for industrial operators, mandated through GGIRCA and its regulations, began in 2024 with the introduction of B.C.'s output-based pricing system (B.C. OBPS).
- Demand for BC offset units have more than quadrupled since 2021. With the introduction of the B.C. OBPS, demand for offset units is expected to increase.

ADDITIONAL INFORMATION:

General Information

- A B.C. offset unit represents a tonne of carbon dioxide equivalent that was either removed from the atmosphere or not released into the atmosphere as the result of direct, beyond business-as-usual action by a project proponent. These actions are validated and verified by an independent, accredited third-party to ensure they are real, permanent and additional.
- The Greenhouse Gas Industrial Reporting and Control Act (GGIRCA) establishes the regulatory framework and provides statutory decision-making authority to the Director to approve B.C. offset protocols and projects. The Emission Project Offset Regulation (EOPR) under GGIRCA sets requirements for the development of offset projects and the issuance of offset units in the B.C. Offset Program.
- Since the onset of the B.C. Offset Program, the Ministry has issued over 15 million offset units and retired over 8 million of them. All issuances and

retirements are publicly viewable on the BC Carbon Registry.

Carbon Offset Retirements and OBPS Compliance

- Offsets generated in B.C. under GGIRCA have, until the introduction of the B.C. OBPS in April 2024, only been used for Carbon Neutral Government (CNG) purposes and voluntary market sales. Voluntary Carbon Market (VCM) offset retirements on the B.C. Carbon Registry have increased by 471% since 2021.

Table 1.CNG and VCM retirements from 2020-2024

	2020	2021	2022	2023	2024
CNG	640,305	632,204	642,947	648,933	623,231
VCM	14,286	171,698	470,197	484,854	979,797
Total	654,591	803,902	1,113,144	1,133,787	1,603,028

- The B.C. OBPS is a performance-based carbon pricing model for industrial emitters to reduce their GHG emissions. A regulated operation's emissions are assessed against an operation-specific emission limit for a compliance period.
- Under the B.C. OBPS, regulated operations can meet a portion of their compliance obligation by retiring eligible compliance units, including offset units.
- The B.C. Carbon Registry (BCCR) facilitates the issuance, transfer and retirement of compliance units, including offset units.

Advice/Recommendations

Offset Projects

- Every offset project is audited by third-party accredited bodies to ensure it meets the requirements of GGIRCA and the Emission Offset Project Regulation. This approach is consistent with offset systems developed and implemented in Quebec, California, China, South Korea and elsewhere.
- Projects must undergo regulatory reviews by the Ministry and receive approval from the Director under the GGIRCA to have their emission reductions recognized as B.C. Offset Units.
- Together, these third-party audits and regulatory reviews help ensure the resulting offsets are incremental and verifiable – requirements common to leading offset systems worldwide.

Offset Protocols

- The Ministry published the Methane from Organic Waste Offset Protocol (MOWOP) in August 2022. Projects approved under B.C.'s MOWOP reduce or avoid methane emissions by local governments and the agricultural sector.
- The Ministry published the Forest Carbon Offset Protocol (FCOP) in spring 2024 after two rounds of public consultation in 2021 and 2023.
- Projects approved under B.C.'s FCOP can offer environmental and socio-economic co-benefits including advancing Indigenous reconciliation, biodiversity protection, and the conservation of old growth forests.
- The Federal GHG Offset System (operating in conjunction with the Federal OBPS) recognizes the B.C. Offset Program. The Federal government recently approved FCOP as the first recognized B.C. offset protocol in the Federal GHG Offset System.
- The Ministry released a new draft Carbon Capture and Sequestration (CCS) Offset Protocol for two rounds of public consultation in Fall 2023 and February 2025. The finalized CCS Protocol is expected to be released by Summer 2025.
- Projects approved under B.C.'s CCS Protocol will incentivize the permanent sequestration of carbon dioxide emissions from B.C.'s industrial sector and present a very low risk of emission reversals.
- Advice/Recommendations

Auditor General Report on Calculating Carbon Projections

- The Ministry of Forests use carbon modelling to how forest carbon stored in provincial forests and in harvested wood products change over time.
- The Auditor General conducted an audit on the methodologies the Ministry of

Forests use to calculate consistent and transparent forest carbon projections to inform forest management decisions.

- The audit period was from April 1, 2022, to December 31, 2024.
- The Auditor General concluded that the Ministry of Forests did not use defined methodologies to calculate consistent and transparent forest carbon projections to inform forest management decisions Related to FOR’s Forest Investment Program (FIP).
- The audit report acknowledges the Ministry of Forests has developed a methodology to calculate carbon projections to inform forest landscape planning and that the methodology contains all required elements to provide consistent and transparent projections.
- The Ministry of Forests has accepted the results of the audit.
- The Ministry is taking steps to review and release the methodologies for calculating carbon projections.
- The audit findings do not apply to the FCOP. The criticized methodology is reported only within FOR’s Service Plan and is separate from the methodologies used in the FCOP.
- The forest carbon calculation requirements outlined in the FCOP are designed to align with the BC Emission Offsets Project Regulation and the ISO 14064 standard. This ensures that all issued offset units are real, additional, verifiable, and permanent. The FCOP has also undergone internal expert review and two rounds of public consultation to support the quality, rigor, and transparency of its methodology.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

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Net Zero New Industry

KEY FACTS:

- British Columbia is committed to ensuring new industrial facilities do not hinder the Province's commitment to achieve net-zero emissions province-wide by 2050.
- The Net-Zero New Industry (NZNI) Policy brings together commitments under the CleanBC Roadmap to 2030 and the New Energy Action Framework to drive investment in low-carbon facilities that support economic growth in line with our climate change goals.
- Emissions reductions are achieved most cost-effectively when they are planned for in initial facility design. The Net-Zero New Industry Policy will drive deep decarbonization from the outset of operations to allow sustainable growth of B.C.'s clean, competitive economy.
- The Policy requires all new industrial facilities with anticipated annual emissions over 10,000 tonnes of carbon dioxide equivalent (tCO₂-e) to:
 - develop an approved net-zero plan that prioritizes on-site emission reductions by using best available technologies and practices
 - review and update the plan every five years to consider any new best available technologies and/or practices that can further reduce emissions
 - achieve net-zero emissions in 2050 (2030 for new LNG projects) and each year thereafter
- The Policy is currently being implemented to projects in or entering the Environmental Assessment Process.
- The net-zero pathways assessment, committed to under *Powering Our Future* and currently in the early scoping stage, is intended to inform long-term energy system planning and policy; this planning will assist with consideration of credible net-zero approaches at the facility level under the NZNI Policy.

ADDITIONAL INFORMATION:

- The Net-Zero New Industry Policy provides an opportunity for B.C. to position itself as a provider of low-carbon products by leveraging its clean electricity to power industrial processes.
 - Advice/Recommendations; Intergovernmental Communications

- Intergovernmental Communications
- Where emissions cannot be reduced, facilities will need to consider technologies like carbon capture and storage or purchase B.C. eligible carbon offsets to achieve net-zero emissions on the required timeframe.
- Investment in forest carbon offset projects provides an opportunity to increase B.C. jobs, particularly for Indigenous Peoples.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
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MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

SECTION F: ELECTRICITY AND UTILITY REGULATION

Section F Contents:

- Powering our Future: B.C.'s Clean Energy Strategy
- Evolving Role of BCER
- Evolving Role of the BCUC
- Fuel Price Transparency Act
- Innovative Clean Energy Fund
- LNG Bunkering (Tilbury)
- Natural Gas Utility Rates

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Powering Our Future: BC's Clean Energy Strategy

KEY FACTS:

- Powering our Future: British Columbia's (BC) Clean Energy Strategy (Strategy), provides of vision for BC's clean energy transition that utilizes and builds out our clean electricity resources and leverages low carbon fuels.
- The Strategy positions BC's clean energy transition as an opportunity to support economic growth and create jobs, achieve a net zero future, and support meaningful partnerships with First Nations and expand opportunities for Indigenous peoples.
- The Strategy recognizes that to transition from fossil fuels and achieve net zero emissions by 2050, electricity demand in B.C. could increase by 1.5 to 2 times BC Hydro's current domestic demand.
- To meet this demand, the Strategy highlights the need for a significant expansion of energy infrastructure, including BC Hydro's \$36 billion Capital Plan, calls for power every two years, and investment in the production of clean fuels.
- The Strategy discusses that while electricity and gas can complement each other as energy sources, their planning processes are currently independent and use different assumptions and inputs.
- To address this, the Strategy commits to the need to advance integrated utility planning (IUP) to optimize investments, reduce emissions, and maintain energy affordability as BC's energy mix evolves.
- The Strategy also commits to developing independent net zero pathway assessments, to provide a comprehensive study of all the credible pathways for achieving a net zero economy by 2050.

ADDITIONAL INFORMATION:

- The Strategy's ten areas of focus include: energy efficiency, affordability, increasing electricity production, increasing clean fuel production, electricity infrastructure, opportunities for Indigenous people, planning for a resilient future, creating jobs, innovation in clean technology, and the benefits of energy trading.
- Advice/Recommendations

- Advice/Recommendations

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Attachment 1 - Powering our Future: BC’s Clean Energy Strategy (39 page booklet)

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StrongerBC

for everyone

POWERING OUR FUTURE: BC's Clean Energy Strategy



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LAND ACKNOWLEDGEMENT

We acknowledge with respect and gratitude that this report was produced on the territories of First Nations around BC and the Government of British Columbia is grateful to carry out our work on these lands.



Message from the Minister

Energy powers the economy. Each of us relies on it every day – to heat our homes, to move our vehicles, and to run businesses and industries.

Energy is also at the root of the climate crisis. Burning fossil fuels is changing our climate – creating more extreme weather, bigger forest fires, deeper droughts and more frequent flooding throughout BC.

Climate change has created an urgent need to move away from reliance on fossil fuels and make the switch to powering our economy with clean energy. That's why we have committed to building a net zero economy by 2050.

While BC has a head start – with a heritage hydro-electric system that is almost entirely powered by clean and renewable energy sources – the vast majority of energy powering BC today still comes from fossil fuels.

Replacing fossil fuels with a mix of clean and low-carbon energy sources will require a massive expansion of clean energy infrastructure. It could require a doubling of the province's capacity to generate electricity by 2050, even with increased investments efforts to waste less energy and improve the efficiency of our homes and buildings.

It will also require building up BC's capacity to produce clean fuels like renewable natural gas, hydrogen, and biofuels. That's why we're working to produce at least 1.5 billion litres per year of renewable fuels by 2030 as we work toward our net zero goals in 2050.

We must upgrade our energy transmission and distribution systems to not only accommodate new sources of energy, but also to withstand greater extremes in weather and temperature and become more resilient and reliable for people and communities. That's why BC Hydro's \$36 billion ten-year capital plan is so critical to BC's future – it is the backbone of the province's efforts to build a clean economy.

The scale and scope of the work that is needed to power our future will require a whole-of-BC effort that will create jobs, spark new industries, and drive innovation for decades to come, in every part of the province.

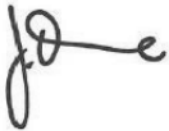
Building an economy powered by clean energy is one of the job-creation opportunities of our generation. It will drive economic growth as we work together to fight climate change and make our energy system more resilient, reliable and secure for today and generations to come.

People throughout the province are doing their part – by making the switch at record numbers to powering their homes, their vehicles and their businesses with clean electricity.

This document outlines what government is doing to power our future with clean energy while maintaining affordable electricity rates for people and businesses, addressing energy poverty, and continuing to advance reconciliation with First Nations.

Thank you to the many individuals, Indigenous governing bodies and organizations, businesses, interest groups, and others that have contributed to this document through roundtables and other engagement forums over the past year.

I look forward to continuing this dialogue with people all over the province to achieve our vision for a clean, competitive and inclusive British Columbia that is powered by made-in-BC clean energy and achieves net zero emissions by 2050.

A handwritten signature in black ink, appearing to read 'Josie', with a stylized flourish extending to the right.

Josie Osborne

Minister of Energy, Mines and Low Carbon Innovation

Introduction

Powering Our Future: BC's Clean Energy Strategy outlines the actions that we are – and will be – taking in ten areas of focus to accelerate the shift to clean energy and create new opportunities for people and communities throughout BC. It builds on and complements work that's being done across government to create jobs, open up opportunities, and support the growth of key industries throughout BC while tackling climate change, including through CleanBC, the FutureReady Action Plan, and *Clean and Competitive: A Blueprint for BC's Industrial Future*.

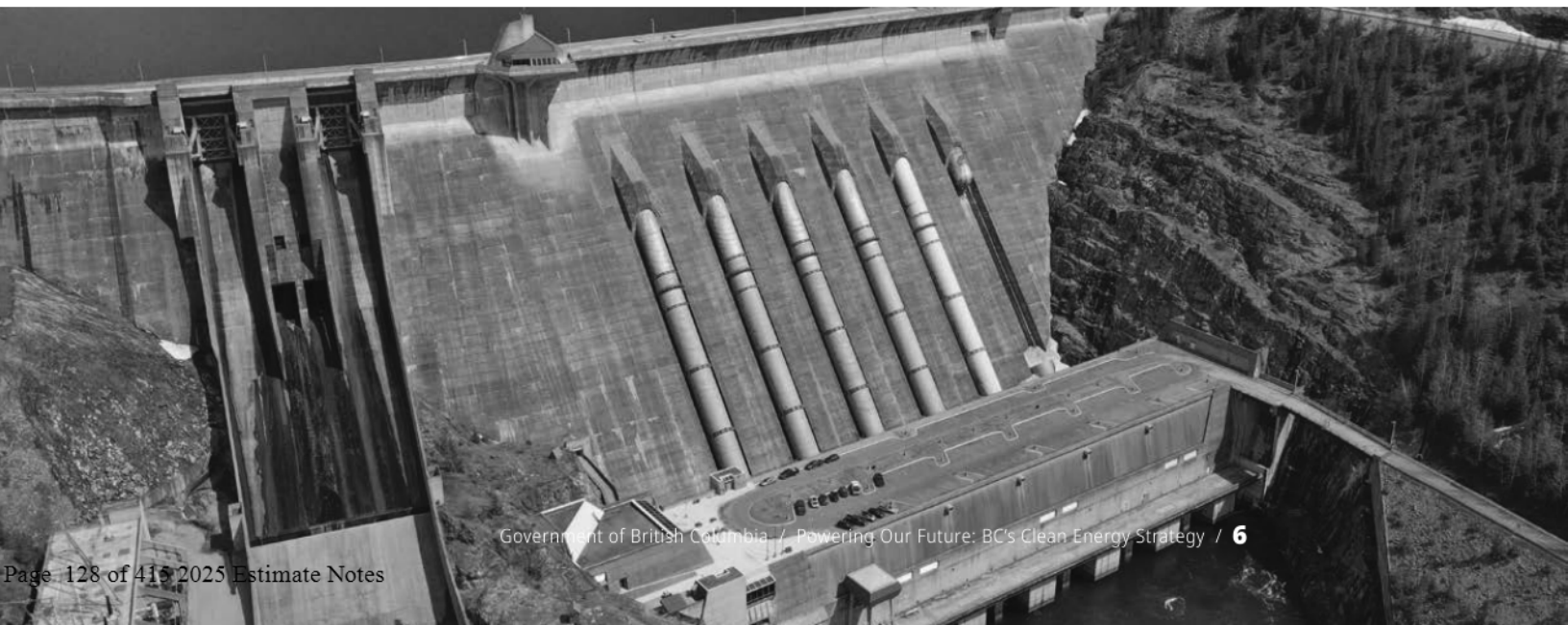
BC is already a clean energy superpower. But to build a clean economy and support growing communities, we need to produce even more clean electricity in the years and decades to come. That means building out the electricity grid and issuing regular, competitive calls for power to increase and diversify BC's electricity production, creating thousands of good jobs.

While a net zero future means increasing amounts of electrification, there are many parts of the economy that cannot easily be powered by electricity. That's why we need to ramp up BC's production of clean fuels in emerging industries like hydrogen, renewable natural gas and biofuels.

Efficiency is, however, often our best energy resource. By investing in energy efficiency, we can waste less energy, save people and businesses on their energy bills, and reduce harmful pollution. We need to make sure that cleaner and more energy efficient options – like heat pumps – are available, affordable and accessible for people and businesses. And we need to provide support for those who need it most, ensuring that no one is left behind in the transition to clean energy.

A focus on people and communities also means recognizing regional differences. What makes sense for people and businesses in Vancouver or Victoria may not in 100 Mile House, Prince George or other colder climates, let alone for remote communities not connected to the electricity grid.

Building an economy powered by clean energy will create new opportunities for people and communities across the province, including for First Nations that are already leaders in the clean energy sector. By supporting meaningful partnerships and expanding opportunities for Indigenous Peoples, we can achieve our clean energy goals while advancing reconciliation.





Vision and Principles

Vision Statement

A clean, competitive and inclusive British Columbia that is powered by made-in-BC clean energy and achieves net zero emissions by 2050.

Guiding Principles

Advance reconciliation with Indigenous Peoples

Put energy efficiency first

Reduce emissions and support climate action

Embrace innovation and new technology

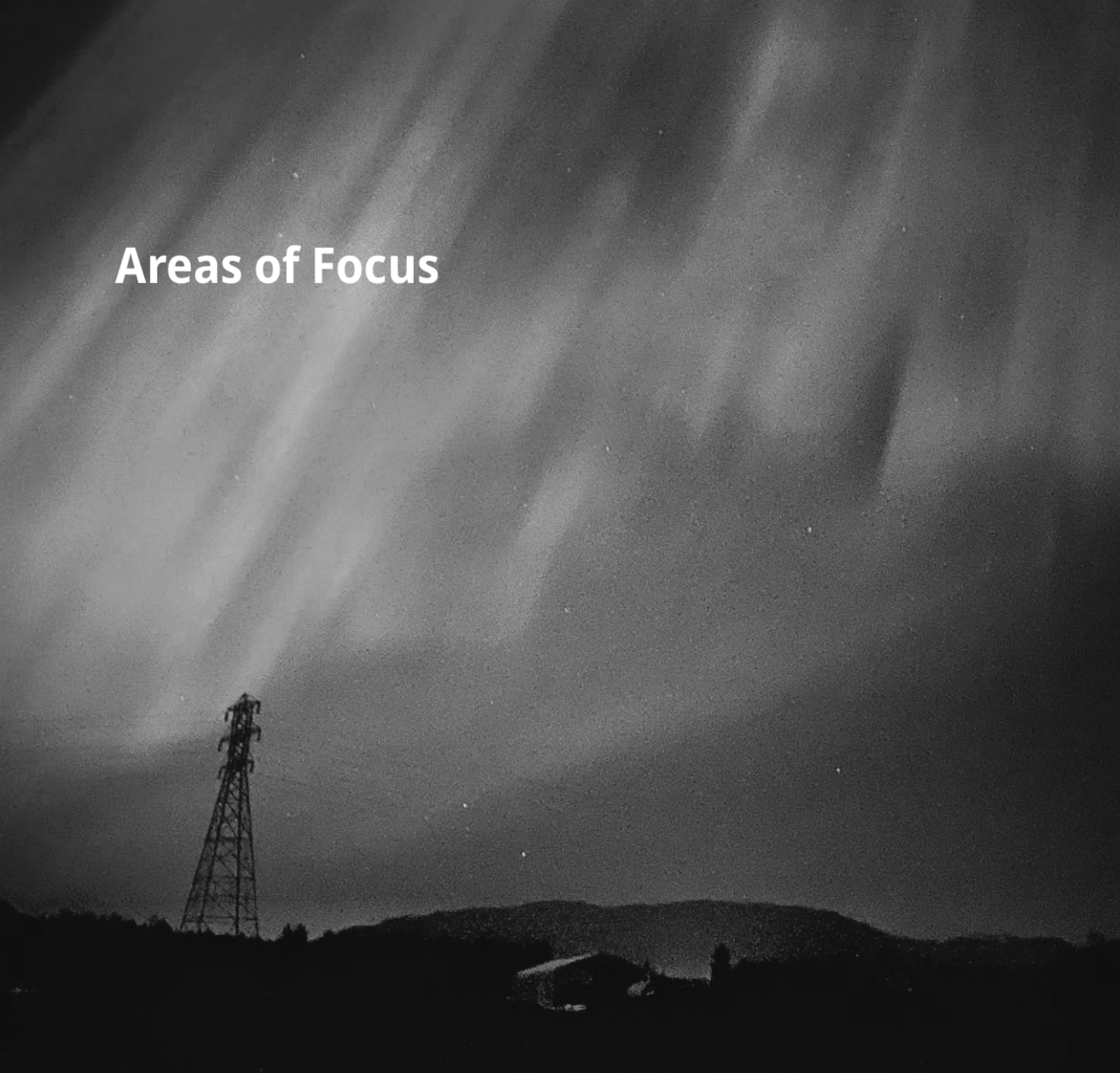
Ensure safety and reliability

Protect energy affordability and reduce energy poverty

Promote sustainable economic growth

Recognize regional differences across BC

Build healthy and resilient communities



Areas of Focus

Both BC Hydro and FortisBC are making record investments in energy efficiency programs. BC Hydro's updated Energy Efficiency Plan includes over \$700 million in three years – an increase of 60% from the previous budget – and is estimated to save its customers about \$80 million per year starting in 2026. FortisBC will invest \$695 million over four years to help its customers use less energy while reducing carbon emissions by 740,000 tonnes.

Using energy more efficiently

Energy efficiency can be the best and most cost-effective way for BC to meet future energy demand – while also lowering energy bills for people and businesses. By helping people use less energy, we can better manage the energy system and avoid unnecessary and expensive infrastructure upgrades. When investments in energy efficiency – often referred to as “demand-side management” – also reduce the use of fossil fuels, they can also be one of the easiest ways to lower emissions and meet our climate goals. That’s why *Powering Our Future* is committed to an “efficiency first” approach.

From better insulation and energy-saving windows to LED lightbulbs and high-efficiency heat pumps, energy efficiency technology continues to improve and become more affordable year after year. In fact, improvements in energy efficiency are a large part of the reason why electricity demand in BC has stayed relatively flat over the past couple decades, despite increases in population and a growing economy. British Columbians have achieved over 7,000 gigawatt hours (GWh) per year in energy savings through BC Hydro’s energy efficiency programs. That’s equivalent to the energy consumption of over 700,000 homes and about 35% more energy than what Site C will generate.

HELPING FAMILIES SAVE MONEY WITH ENERGY SAVING RETROFITS

Households that switch from fossil fuel heating to electric heat pumps can see energy savings of as much as 80%. Heat pumps also keep homes comfortable year-round, doubling as air conditioners that provide efficient cooling in summer, in addition to keeping people warm in winter.

Heat pumps are a smart choice, which is why Government recently launched the CleanBC Better Homes Energy Savings Program in partnership with the federal government and BC Hydro. This program offers enhanced supports to people to make fuel-switching and energy-saving upgrades more affordable – including heat pumps – for low- and middle- income households.

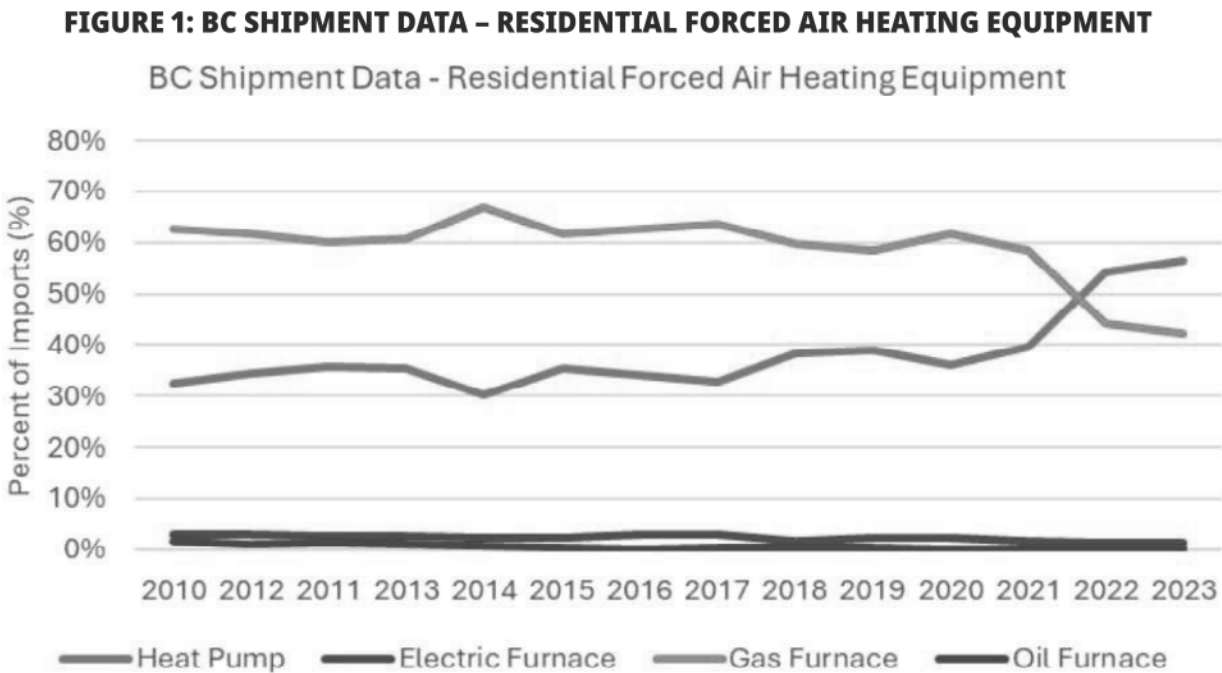
With increased rebate amounts of up to \$24,000, income-qualified households may be eligible to receive a free heat pump, making a real difference in these families’ lives and helping to alleviate energy poverty. Significant improvements over past rebate programs include a more streamlined online application process, households no longer having to pay upfront, and consolidated federal and provincial rebates. Now, households only pay the remaining cost after all rebates, whether provincial or federal, are deducted right off the contractor’s invoice.

Government will continue to explore and find ways to make federal, provincial, municipal, and utility efficiency programs more coordinated, integrated, and accessible for British Columbians – while also creating good, well-paying jobs for workers as we build a clean economy. Other provinces, for example, have dedicated organizations responsible for coordinating energy efficiency programming.

HIGHEST EFFICIENCY EQUIPMENT STANDARDS

British Columbians continue to make the shift to heat pumps in record numbers. In 2022, the number of households in BC with heat pumps had increased by approximately 80% since 2017, from an estimated 142,000 to 254,000. And in 2022 and 2023, for the first time ever, BC heating equipment distributors imported more residential heat pumps than natural gas furnaces.

Because energy efficiency is one of the best ways to reduce costs and emissions in homes, Government regularly updates equipment standards to ensure household appliances sold to British Columbians meet industry-leading efficiency levels. This helps ensure energy savings and avoid costly replacements of appliances within just a few years time.



Source: Graph created based on industry-provided data

Government recently completed engagements on proposed Highest Efficiency Equipment Standards for space and water heating, which would require all new space and water heating equipment sold and installed in BC starting in 2030 to be at least 100% efficient – meaning an electric heat pump, gas heat pump, or dual-fuel system (where an electric heat pump is paired with a conventional natural gas furnace, for example). Households that currently use gas- and oil-fired heating equipment would be able to continue to use and repair them until their end-of-life, when they can be replaced with a 100% efficient (or better) system. The proposed standard would not cover fireplaces, stoves and other cooking equipment.

ENERGY EFFICIENT HOMES AND BUILDINGS

BC first introduced energy efficiency as a BC Building Code objective in 2008. Ever since, designers and builders have had the option to use either “prescriptive” or “performance” approaches to comply with the code’s efficiency requirements.

For local governments, the BC Energy Step Code offers assurance that new homes and buildings are performing as billed and provides builders with flexibility on how they meet the energy efficiency requirements – by incorporating innovative solutions, new techniques, and leading-edge technologies. In May 2023, the BC Building Code began requiring most new

buildings to meet 20%-better energy efficiency. Local governments may still incentivize or require builders to achieve higher steps of the code.

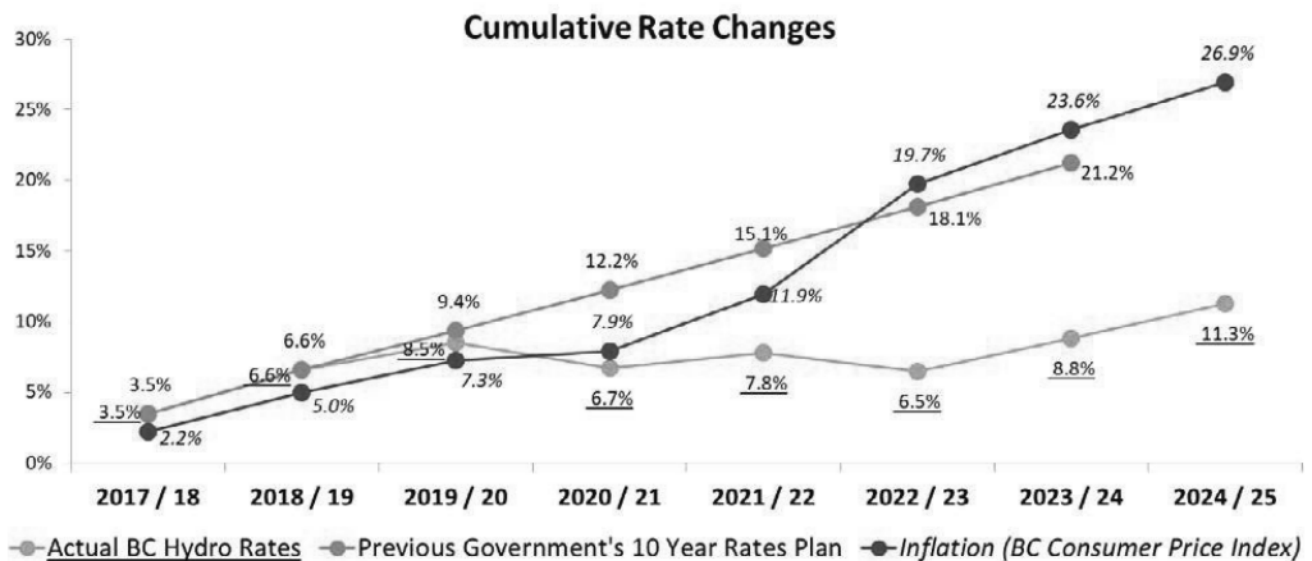
The Zero Carbon Step Code is a new tool to help BC meet its climate change objectives and reduce emissions from space and water heating. Local governments can choose which levels to apply to new homes and buildings (Part 3 and Part 9), and under what conditions or circumstances. The Code includes multiple compliance pathways, meaning that natural gas can still be used for cooking – such as cooktops, woodstoves and barbecues – even at the highest performance level. The Zero Carbon Step Code also does not apply to individual restaurants.



We're keeping rate increases well below the rate of inflation – almost 16% lower since 2017/18 – to help keep life affordable.

Keeping rates affordable for people and businesses

FIGURE 2: BC HYDRO RATES OVER TIME



Source: BC Hydro

With global inflation causing the cost of so many goods to rise, it's more important than ever to keep the cost of clean electricity as affordable as possible. Between 2000/01 and 2016/17, BC Hydro rates increased by a total of 80%, or 5% per year on average. Since then, Government passed new legislation to return oversight for setting electricity rates to the independent BC Utilities Commission (BCUC) and has kept rate changes below inflation for six consecutive years.

In addition to keeping rates low, BC Hydro has also provided on-bill credits for families and businesses that are struggling with the cost of living. Under the BC Electricity Affordability Credit included in Budget 2024, average residential customers will see savings of \$100 this year and commercial customers will save around \$400 to help with rising costs.

Keeping the cost of electricity as low as possible is not only important for making life more affordable for people and businesses but is also critical to maintaining BC's competitive advantage in attracting new investment from industries wanting to keep their power costs down. This helps to grow BC's clean economy

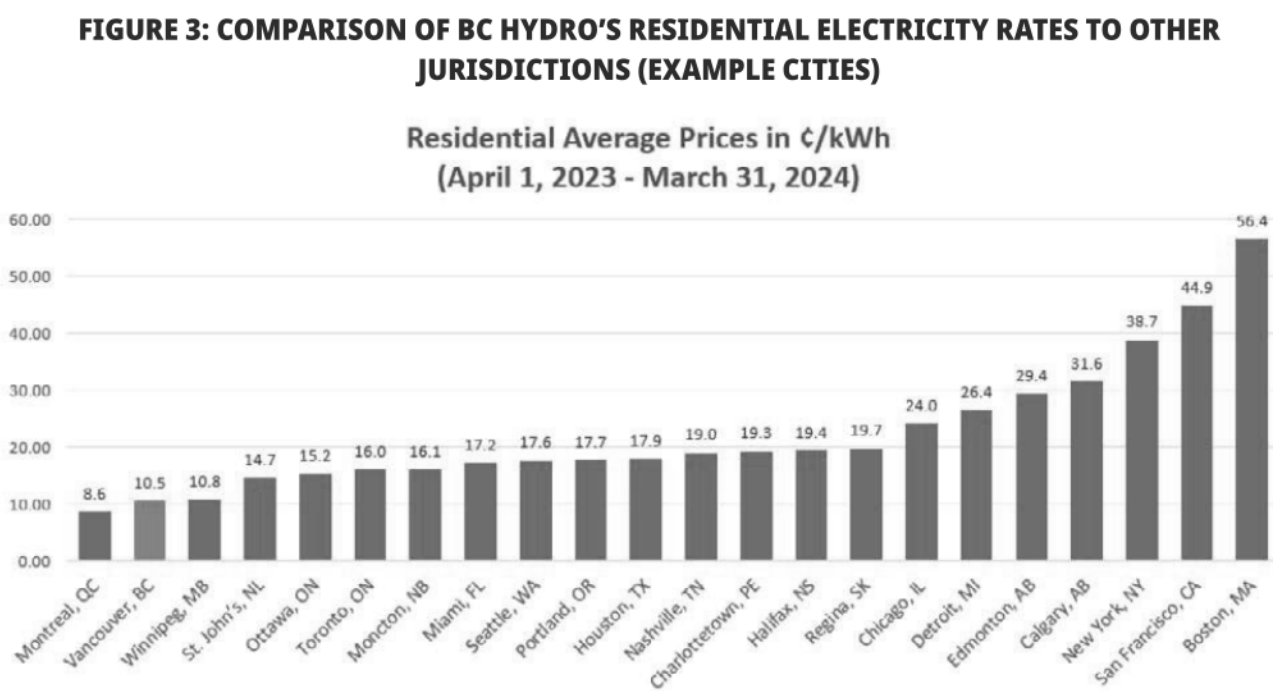
and create new, good jobs for workers. And when electricity costs less than fossil fuels, it supports existing industries in retrofitting their operations to make the switch to clean energy, reduce harmful pollution, and build healthier communities.

PRIORITIZING AFFORDABILITY IN THE LONG-TERM

Looking to the future, Government recently updated BC’s Energy Objectives under the *Clean Energy Act* to help ensure that people and businesses continue to have access to the affordable, clean electricity needed to power our growing economy.

The *Clean Energy Act* includes a list of BC’s energy objectives that the BCUC is required to consider in making its decisions on BC Hydro’s rate applications. In February 2024, Government added new objectives – including that BC Hydro rates do not exceed the cumulative rate of inflation and that rate changes are predictable and stable from year to year. This is the first time in the history of the Act that affordability and stability in rates are a clear goal in BCUC decision-making as BC increases power production and expands the electricity grid.

BC Hydro currently has the second-lowest residential electricity rates in North America, and the third lowest commercial and industrial rates.



Source: Electricity rates are based on average prices from surveys conducted by Hydro-Quebec for 21 North American utilities, published annually in the [Hydro-Quebec’s Comparison of electricity prices report](#).

MORE CHOICES, MORE SAVINGS

More and more, people are looking for choices in electricity price plans, so they can choose the plan that works best for their lifestyle and keeps their energy bills as low as possible. BC Hydro's new, voluntary Time-of-Day rate does just that – offering residential customers lower rates if they shift their electricity use to periods when demand for electricity is lower and there is more system capacity. Customers who voluntarily choose the Time-of-Day rate can save money by shifting their energy-intensive activities to off-peak hours – for example, by delaying when they set their laundry or dishwasher to run, or by plugging in an electric vehicle to charge overnight.

Voluntary rate options provide savings for customers, but they also benefit *everyone* because they reduce BC Hydro's overall costs of managing

peak energy demand during the day. And by avoiding unnecessary and costly infrastructure upgrades, this will also keep rates low for all BC Hydro customers.

Moving forward, BC Hydro intends to continue engaging with its customers to develop other voluntary rate options – such as an optional flat rate – so that people can choose how they pay for electricity to meet their needs while saving the most on their energy bills. By offering customers a single charge for electricity (in between the current Step 1 and Step 2 rates), this could also provide households with greater certainty on their energy bills as they decide to get off fossil fuels and use more clean electricity at home, such as by installing a heat pump or charging their electric vehicle.

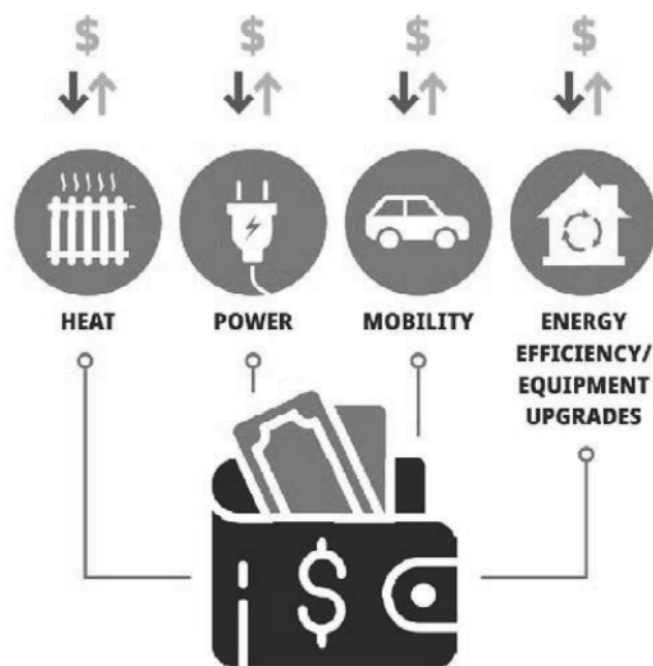




OUR ENERGY WALLET:
A HOLISTIC WAY OF VIEWING HOW WE USE AND PAY FOR ALL THE ENERGY SERVICES WE NEED

BC has a diversity of clean energy resources that power different parts of our society and economy. This diversity is one of BC's strengths, and it's an important factor for planning our province-wide energy system. Similarly, on an individual or household level, we use a number of different energy sources to power different things in our homes and lives – from cars to home heating to kitchen appliances.

The concept of an “energy wallet” shifts our focus from the individual energy bills we pay on a daily or monthly basis (like gasoline, natural gas, and electricity) and looks instead at our energy use as a bundle of services used over time – considering not just current energy costs to operate the devices and appliances we rely on but also how these costs may change over time, as well as the cost to buy, maintain and replace them.



For example, an electric vehicle may cost more up front than one fueled with gasoline, but it is less costly to maintain and operate over the long term. Similarly it can be difficult for families to afford the upfront cost of switching to more energy efficient heating for their home, like a heat pump, even though they would save more than it costs over the long term. That's why Government is working to help British Columbians with the higher upfront costs that often come with switching to cleaner or more efficient energy options.

Increasing and diversifying our production of clean electricity

With 98% of BC's electricity already coming from clean or renewable sources, our efforts are focused on increasing and diversifying the production of clean electricity, unlike many other jurisdictions that are still reliant on coal and natural gas for power production. As a start, the Site C dam is scheduled to be fully in service in 2025, adding approximately 8% more supply to BC's electricity grid (or 5,100 GWh per year).

For two decades, BC's electricity demand was relatively stable, but BC Hydro is now forecasting demand will increase by 15% or more by 2030. This is due to population growth and housing construction, increased industrial development across sectors and more homes and businesses switching from fossil fuels to clean electricity, among other factors.

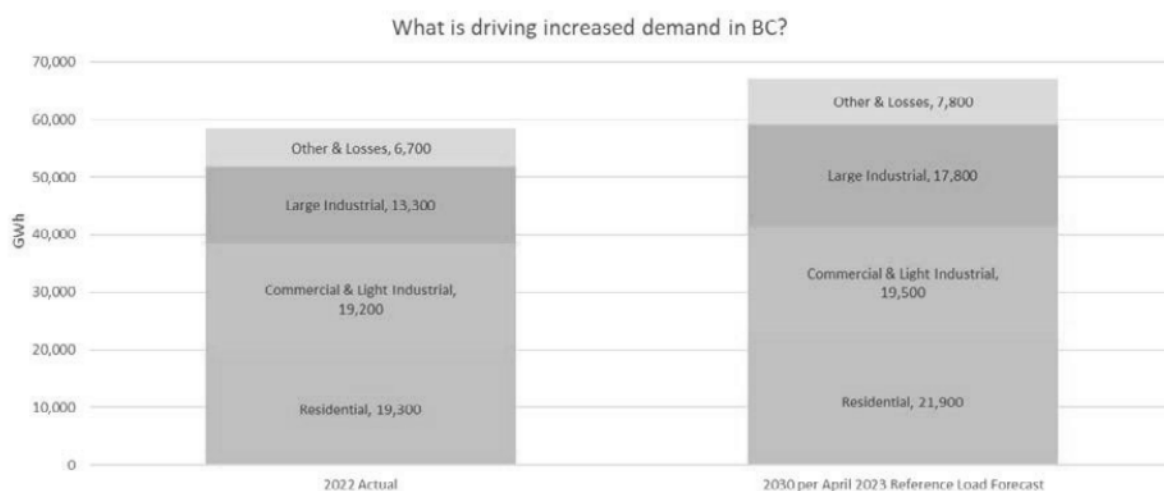
That's why in April 2024, BC Hydro issued its first competitive call for power in over 15 years to acquire approximately 3,000 GWh per year of electricity, adding about 5% more supply to BC's grid by 2028. That's enough clean electricity

to power 270,000 homes or approximately one million electric vehicles per year.

BC is well positioned to add intermittent renewable sources of energy, such as wind and solar, to the electricity grid because of the way hydro-electric dams act as batteries within our integrated, flexible electricity system. Reservoirs store water and allow BC Hydro to ramp electricity production up or down almost instantly, providing a firm, reliable backup when the sun isn't shining or the wind isn't blowing. Because the cost of wind and solar, and the time needed to construct new facilities, has dropped significantly in recent years, renewable energy sources are even more attractive for investment and electricity production.

Diversifying BC's energy production also makes our electricity system more resilient in the long term to a changing climate and more extreme weather events, like the current drought impacting water levels in BC Hydro's reservoirs.

FIGURE 4: BC HYDRO DEMAND PROJECTIONS TO 2030 AFTER DEMAND-SIDE MANAGEMENT



Note: Estimated demand for electric vehicles in 2030 is 1,300 GWh, or only 2% of total energy demand, which is included in the residential and commercial forecast.

Source: BC Hydro



BC Hydro expects demand for electricity will increase by 15% or more by 2030.

BC Hydro's Plan to Meet Future Demand

BC Hydro's updated Integrated Resource Plan (IRP) outlines how BC Hydro will meet the electricity needs of its customers over the next 20 years and reflects BC's legislated greenhouse gas reduction targets and electrification. It's a flexible plan that allows BC Hydro to monitor changing conditions and adjust its planning to meet the future needs of customers.

In addition to Site C coming online and BC Hydro's first competitive call for power in 15 years, the IRP includes a range of actions to meet future demand, including:

- Ramping up demand-side management (including energy efficiency) activities and investments to conserve energy and limit peak demand to achieve greater customer energy savings;
- Offering optional rates, like the new voluntary Time-of-Day rate, to achieve system capacity savings, including for home charging of electric vehicles;
- Renewing electricity purchase agreements with existing clean or renewable independent power producers on a cost-effective basis;

- Advancing upgrades to transmission infrastructure to achieve additional capacity; and,
- Advancing the integration of utility-scale batteries (energy-storage systems).

The BCUC approved BC Hydro's IRP in March 2024, following a multi-year regulatory proceeding that included participation from 36 stakeholder intervenors and BC Hydro answering approximately 5,000 questions. This is the first time since 2006 that the BCUC has had the opportunity to provide valuable oversight and approval of BC Hydro's IRP. The BCUC's oversight of long-term energy planning was restored in 2019 through legislative amendments to the *Utilities Commission Act*.

In the current context of increasing change, the BCUC accepted BC Hydro's proposal to develop more frequent and targeted updates to its IRP – to ensure it is making adjustments based on shifts in BC's economy and energy system – with its next IRP to be filed in Fall 2025.



PLANNING FOR AN INCREASINGLY ELECTRIFIED FUTURE

The latest research from public and private organizations suggests that BC's electricity use will likely double from current levels in order to keep up with population and economic growth, transition from fossil fuels, and achieve net zero emissions by 2050. The Canadian Climate Institute, for example, estimates that BC will need to add 1.3-2.6 times more generation and 1.8-2.9 times more capacity by 2050. With this level of use, electricity would become BC's largest source of energy (at 17%, electricity is currently the third largest source, after refined petroleum products and natural gas).

While 2050 is more than two decades away, BC must and is beginning to plan today for a future where electricity use doubles by 2050

and overtakes fossil fuels as the largest energy source in the province. That's why this year's call for power is just the beginning. BC Hydro will proceed with issuing regular calls for power every two years so that we are continuously increasing and diversifying BC's electricity production as the economy grows and the transition to clean energy keeps accelerating. The exact volume (energy and/or capacity) of future calls and timing of acquisitions will continue to be determined through BC Hydro's long-term resource-planning process, under the oversight of the BCUC.

Committing to regular calls for power sends a strong and necessary signal to the renewable power sector to invest and advance utility-scale clean electricity projects in BC. It also provides certainty to industries of all types that BC will have the power needed for major projects, such as new critical minerals mines and hydrogen production

facilities. And by aiming to expand production continuously in line with future demand, we can also keep costs down for current BC Hydro customers.

DISTRIBUTED SELF GENERATION AND STORAGE

The energy system of the future will also be increasingly decentralized and distributed. In addition to large generation and transmission infrastructure across the province, this means more opportunities for participation by communities in small-scale energy production and storage to meet local needs. That's why BC Hydro is launching an enhanced Self-Generation Program (also called "net metering").

For the first time, customers can receive rebates to install solar panels and generate their own clean electricity, reducing the amount of electricity

that BC Hydro needs to supply. Customers can export back to the grid and receive bill credits for any excess electricity they self-generate. Rebates will be available for battery storage systems that will enable the use of solar energy as a flexible resource to address local capacity constraints, which can avoid most costly system upgrades.

BC Hydro will also be proposing changes to the BCUC to increase the size of self-generation projects able to participate in the program, enable community net metering so that multiple customers can contribute to – and benefit from – the same generation project, and ensure the amount customers are paid for excess electricity reflects its value to the system.

Maximizing our production of clean fuels

Not all energy needs can be met through electricity and utility-scale batteries. Liquid and gas fuels will remain essential for the foreseeable future, especially in areas like long-haul transportation, certain industrial processes, and in remote communities not connected to the electricity grid. BC's gas system will also continue to play an important role for many years to come in order to maintain system resiliency, meet peak energy demand, and provide home heating in colder climates. And when it comes to transportation fuel, we are still largely dependent on imports from other jurisdictions, with the exception of Burnaby's Parkland Refinery and Prince George's Tidewater Renewable facility, both of which are leaders in producing renewable and low-carbon fuels.

BC is a North American leader with a robust set of policies to encourage the production and use of clean fuels, including the Low Carbon Fuel Standard and Greenhouse Gas Reduction

Regulation. Producing more clean fuels like hydrogen, renewable natural gas, and biofuels right here in BC helps us replace fossil fuels with clean energy and make BC more energy independent. These policies also help drive new investment and create good jobs for people. This will be government's priority moving forward, with BC's new Clean Energy & Major Projects Office (CEMPO) helping to fast-track investment in clean energy and create good, sustainable jobs in the transition to a clean economy. First announced in March 2023 and now fully operational, CEMPO is already providing dedicated, cross-government support to advancing major energy projects with a focus on clean fuels.

Maintaining BC's existing gas infrastructure is necessary to ensure BC can deliver clean fuels as production ramps up in the years ahead, in addition to supporting the resiliency of BC's energy system.

HYDROGEN

As the first Canadian province to design and implement a hydrogen strategy, BC is committed to growing its hydrogen economy. We are well positioned to do so, with our abundant natural resources, renewable electrical grid, and long history of innovation in hydrogen and fuel cell technology. For decades we have been creating the environment and making the investments necessary to attract researchers, entrepreneurs, innovative companies, and investors to BC's hydrogen ecosystem.

Since the release of the Hydrogen strategy Government has been taking action to advance the production, distribution, and use of low carbon hydrogen by working with partners to create regional hydrogen hubs where production and demand are co-located to lower costs and maximize benefits for local economies.

More than 50% of Canada's hydrogen and fuel-cell companies are in BC, and the province accounts for about 60% of research investment in hydrogen and fuel-cell technology.

The province also offers significant opportunities to produce low-carbon hydrogen for local use and export, thanks to our low-cost, clean, and renewable power, vast natural gas reserves, and carbon sequestration potential.

BC is working to create conditions to support a growing hydrogen sector, from supportive provincial policies, significant government investments toward innovation, proximity and strong trading relationships with key export markets and a stable investment climate.

The \$900 million H2 Gateway project is aimed at reducing emissions in the transportation sector. HTEC plans to build and operate an interprovincial network of as many as 20 hydrogen refuelling stations (with 18 in BC) to support the deployment of heavy-duty fuel cell trucks and advance greener transportation solutions. The refuelling stations will be supported by three new electrolyzers in Burnaby, Nanaimo and Prince George, and a new facility that liquefies 15 tonnes per day of byproduct hydrogen in North Vancouver. The H2 Gateway projects are estimated to create more than 280 full-time jobs to build, operate and support the hydrogen infrastructure. H2 Gateway will also support the development of regional hydrogen hubs across the province where production and use are co-located to lower costs and maximize benefits for local economies.

RENEWABLE NATURAL GAS

Renewable natural gas is methane that comes from biological sources, which could include landfills, sewage and food, agricultural or forestry waste. Natural gas and renewable natural gas are practically chemically identical; they can be mixed, processed, stored, transported and used the same way. Renewable and low carbon gases will enable households and businesses to lower emissions while ensuring the province's energy system is reliable, especially for peak demands brought on by cold weather.

FortisBC is working to ramp up production of Renewable Natural Gas (RNG), with 8 suppliers online from BC as of May 2024.

The Capital Regional District will contract Waga Energy, through its subsidiary Hartland Renewable Resource Group, to design, build and operate a new district facility that will upgrade the biogas generated at Hartland Landfill to Renewable Natural Gas (RNG). The renewable natural gas that will be produced at Hartland Landfill is a carbon-neutral energy made from capturing and upgrading the biogas released from decomposing organic waste in the landfill. This project is expected to reduce the region's greenhouse gas emissions by approximately 450,000 tonnes over the next 25 years. FortisBC will purchase the renewable natural gas to be blended into the region's existing natural gas infrastructure to help decarbonize our natural gas supply.



BIOFUELS

The CleanBC Roadmap to 2030 includes a target for BC to produce 1.3 billion litres of renewable fuel by 2030. The shift is supported by BC's Low Carbon Fuel Standard (LCFS), which requires fuel suppliers to make their products progressively less carbon intensive. First implemented in 2010, the LCFS is among BC's most successful and cost-effective emission reduction policies – between 2010 and 2022, it avoided 18.8 million tonnes of emissions. It is also attracting investment to BC and creating new, good jobs for people in the clean economy. Agreements are now in place under the Low Carbon Fuel Standard for 42 projects that represent investments expected to exceed \$2.25 billion. And we are on track to produce about 840 million litres per year already by 2026. To ensure we build on this progress and remain a leader in renewable fuel production, BC is increasing its target to 1.5 billion litres produced per year by 2030.

PARTNERSHIP WITH LHEIDLI T'ENNEH FIRST NATION TO EXPAND DOMESTIC BIOFUEL PRODUCTION

Supported through the Low Carbon Fuel Standard Initiative Agreement, Arbios Biotech Canada Limited is working with the Lheidli T'enneh First Nation to construct and operate a biomass-to-liquids facility in Prince George. The facility will convert 25,000 dry tons of residue wood biomass to 50,000 barrels of sustainable bio-oil per year. When in full capacity the facility is expected to employ approximately 50 people, with skills ranging from engineers to process operators to management.





BC is also setting the pace to develop sustainable aviation fuel and reduce emissions from air travel. In January 2024, the LCFS was expanded to include jet fuel and its alternatives. The new regulations now set low-carbon and renewable fuel content requirements for jet fuel in BC and require a 10% reduction in the carbon intensity of jet fuel by 2030. Canadian production capacity for sustainable aviation fuel is projected to grow significantly to be nearly 900 million litres per year in 2027, rising to nearly 2 billion litres per year by 2030.

PARTNERSHIP WITH VANCOUVER INTERNATIONAL AIRPORT TO ACCELERATE SUSTAINABLE AVIATION FUEL SOLUTIONS

Vancouver International Airport (YVR) is Canada's second-largest international airport, having welcomed nearly 25 million passengers in 2023. It is also one of the Province's biggest employers and economic drivers of growth and revenue. Through a signed memorandum of understanding (MOU) in March 2024, YVR and the Province will collaborate with Indigenous partners, communities and aviation and aerospace stakeholders over three years to accelerate sustainable aviation to fight pollution and reduce emissions. The MOU will also increase clean-tech investments to promote made-in-BC technology and good jobs.

To kick off this new partnership with YVR, the Province is investing in three key projects that will support the broader aviation industry. One of these projects is a \$250,000 investment from the Province for a sustainable aviation fuel opportunities study to accelerate the development of new technologies and opportunities in this sector. The MOU will also help enhance access to reliable, sustainable air services – a vital element for Indigenous and rural communities as it ensures access to critical health and emergency services, supports job creation, creates business and tourism opportunities, and maintains connections to other parts of the province.

Building out BC’s electricity grid and connecting customers faster

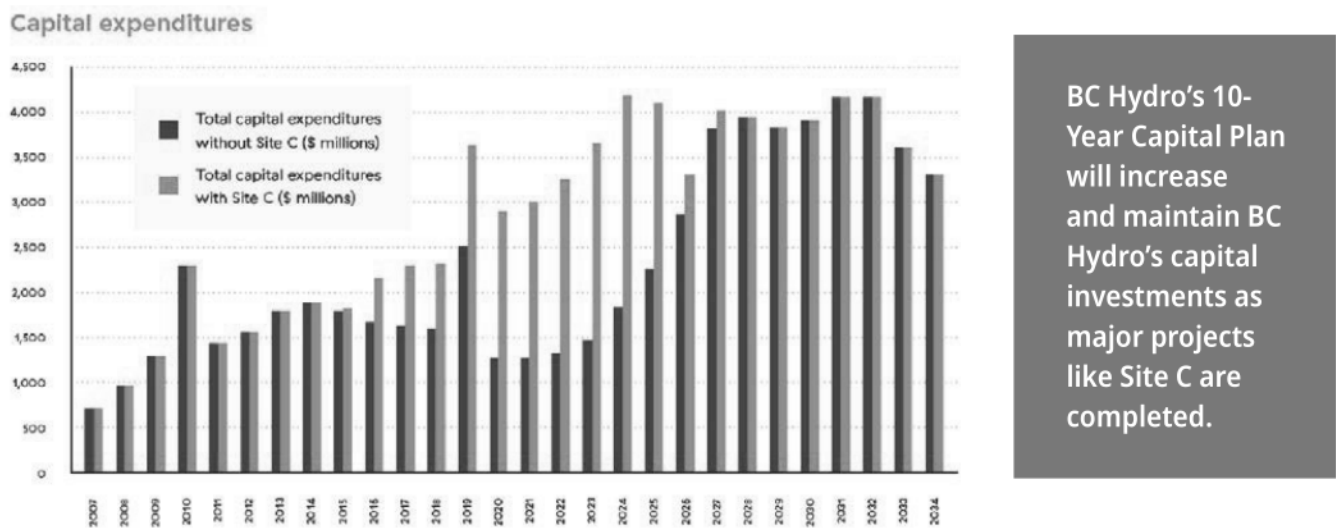
Not only will BC need to produce more electricity in the years to come, we must also strengthen the transmission and distribution system to safely and reliably deliver that energy to the homes, businesses and industries that need it.

In January 2024, BC Hydro announced its plans for an unprecedented level of construction over the next decade, building out our electricity grid to power a growing clean economy and communities, and create new jobs. BC Hydro’s updated 10-Year Capital Plan (2024/25 to 2033/34) includes almost \$36 billion in community and regional infrastructure investments across the province, an increase of 50% over its previous capital plan.

This includes:

- **\$21 billion** to ensure existing assets can handle the expansion and continue to serve future generations. This includes replacing aging power poles and lines, upgrading transformers and substations, as well as making critical investments to ensure the safety of dams and reservoirs.
- Almost **\$10 billion** for new electrification and emissions reduction efforts, including reducing the use of diesel generators in remote communities, major transmission infrastructure like the North Coast Transmission Line, and investment in seven new substations. These investments support increasing electrification of homes, businesses, transportation, and industries.
- More than **\$5 billion** to support new customer connections, particularly in high growth communities across the Lower Mainland and Vancouver Island. This includes over 50 new distribution feeders in the next five years that can supply about 200,000 new homes.

FIGURE 5: BC HYDRO NET CAPITAL EXPENDITURES



Source: [Power Pathway: Building B.C.’s energy future](#)

STREAMLINING CUSTOMER CONNECTIONS

Every year, BC Hydro completes approximately 35,000 customer upgrades and new connections on its distribution system. In the past four years, customer connection requests have increased by 36% and are expected to continue to increase. Following on the recommendations of the BC Hydro Task Force, BC Hydro is taking actions to streamline and accelerate distribution customer connections, with a focus on speeding up the completion of new housing development in growing communities.

Last updated in 2008, BC Hydro's Distribution Extension Policy sets out how costs are allocated between new and existing customers for connections to the BC Hydro grid. In recent years, municipalities, home builders and other stakeholders have been advocating for changes to improve cost equity and predictability under the policy, especially where a new or upgraded connection requires system upgrades that currently must be completely borne upfront by the initial customer that makes the request.

BC Hydro is moving forward with a BCUC application to update its Distribution Extension Policy to eliminate system improvement costs for all new customers (except in extraordinary circumstances) and to increase BC Hydro's maximum contribution to offsetting extension costs. These updates will provide greater cost certainty for customers and help to support investments in affordable housing (including larger multi-unit developments) and in electrification by homes and businesses.

MAKING EV CHARGING MORE ACCESSIBLE

Making the switch to an electric vehicle means less pollution, cleaner and healthy communities, and savings on fuel costs. British Columbians want to have confidence that they will be able to charge up easily when travelling across the province. That's why government is working with BC Hydro, FortisBC, municipalities, and other partners to expand BC's public charging infrastructure.

BC already has one of the largest growing EV public charging infrastructure networks in Canada. As of April 2024, there were more than 5,000 public charging stations in BC, an increase from approximately 1,500 stations in 2018. And we are on track to complete BC's Electric Highway in Summer 2024, achieving coverage along all highways and major roads.

The CleanBC Roadmap to 2030 included an overall target of BC having 10,000 public charging stations by 2030. With EV sales increasing faster than anyone could have predicted when the *Zero Emission Vehicles Act* was passed in 2019 and already representing almost one out of every four light-duty cars sold in the province, government is currently revising BC's 2030 target for public charging stations. And, to ensure that every community in BC has access to a fast-charging station, Budget 2024 included an additional \$30 million to add more than 500 public fast-chargers, with priority being placed on applications for locations highly accessible to the public, including community and recreation centres, libraries, highway rest stops and park-and-ride stations.



Expanding opportunities for Indigenous Peoples

First Nations have long been leaders in the clean energy sector, developing projects that further their energy independence, create new economic opportunities, and/or power their communities with clean energy. Consistent with the Province's commitments to reconciliation, advancing meaningful partnerships with First Nations is critical to achieving the goals of *Powering our Future* – partnerships that enable Indigenous-led clean energy projects as well as benefit from other clean energy projects being developed in their territories.

That's why BC Hydro engaged extensively with First Nations on the design of its recent call for power, including close collaboration with the First Nations Energy and Mining Council. And similar to recent calls for clean power by other jurisdictions – including Alberta and Saskatchewan – projects must have a minimum percentage of equity ownership held by First Nations. To enable this participation, the Canada Infrastructure Bank will make loans available as an option for First Nations

to help finance as much as 90% of their equity position in a project that is awarded an electricity purchase agreement under the call for power. Looking to the future, government will engage with First Nations on their experiences with BC Hydro's first call for power to identify lessons learned and explore options to further support Indigenous participation in future calls for power.

Government is exploring options to advance co-ownership opportunities with First Nations in new, major transmission lines crossing their territories, beginning with the North Coast Transmission Line. In Ontario, for example, Hydro One offers First Nations a 50% equity stake in all new, future transmission line projects above a certain size. Co-ownership opportunities not only ensure First Nations can participate in and benefit from new infrastructure being built on their territories, but also can help to streamline consultation and permitting processes to accelerate the construction of significant electrification projects.

SUPPORTING SMALLER COMMUNITY-SCALE PROJECTS

While BC Hydro's 2024 call for power is targeted to larger, utility-scale projects (40 MW – 200 MW) to capture economies of scale, there are still many grid-connected First Nations across the province interested in building smaller, community-scale projects. That's why Government recently provided a \$140 million endowment to the British Columbia Indigenous Clean Energy Initiative (BCICEI), a clean-energy funding partnership between the Province of British Columbia, the Government of Canada and the New Relationship Trust. BCICEI is currently engaging with First Nations on the design of a new funding stream to support smaller, Indigenous-led clean energy projects to help offset their higher costs relative to larger, utility-scale projects. Interest from the endowment (approximately \$6.5 million per year) is being used to support BCICEI's existing funding streams to advance projects to the construction stage.

SUPPORTING REMOTE COMMUNITIES TO GET OFF DIESEL

British Columbia has approximately 40 remote communities that are not connected to the electricity grid, most of which are First Nations communities. Many of these remote communities

are served by BC Hydro, while some own and operate their own diesel generators. Each year, these remote communities consume around 19 million litres of diesel, one of the most expensive and polluting fuels available. An initiative of CleanBC, the Community Energy Diesel Reduction Program (CEDR) aims to reduce diesel use in remote communities by 80% by 2030, helping to reduce pollution, support energy independence, and build healthier, more resilient communities.

A recent example of the move away from diesel dependence is the Ulkatcho First Nation's new solar energy project. The \$30-million project – which is receiving \$16 million in provincial and federal funding – is expected to produce enough electricity to power about 350 of the area's 5,000 homes, according to BC Hydro. This project is set to reduce the need for diesel generation in this remote community by about 64% – equal to a reduction of 1.1 million litres of diesel per year – and will be the largest off-grid solar project in Canada. Located in Anahim Lake in Central BC, the Ulkatcho First Nation's power is currently 100% diesel generated. BC Hydro will buy the solar energy through a Community Electricity Purchase Agreement and integrate the energy into its microgrid through a line interconnection and battery energy storage system to then serve the community.



INDIGENOUS CLEAN ENERGY OPPORTUNITIES (ICEO) INITIATIVE

Launched in 2021, the Indigenous Clean Energy Opportunities (ICEO) Initiative is a collaboration between the First Nations Leadership Council, the First Nations Energy and Mining Council (FNEMC), and the Ministry of Energy, Mines and Low Carbon Innovation. Through the ICEO process, FNEMC and the Ministry seek to engage First Nations rights holders and organizations in a collaborative dialogue to position First Nations to fully participate in current and future opportunities in British Columbia's clean energy sector and align the Province's strategic clean

energy policy and legislation with the United Nations Declaration on the Rights of Indigenous Peoples.

A key topic of focus for the 2024/2025 ICEO workplan is to identify what obstacles are being faced by First Nations interested in entering or enhancing their participation in BC's clean energy sector, and what new supports and programs could address these capacity gaps, including consideration of a new Indigenous-led, province-wide organization.

Planning for a resilient future

Part of what makes BC's energy system resilient is the diversity of its energy sources. For example, a record-breaking cold snap in January 2024 drove BC's hourly peak demand to new highs. BC Hydro was able not only to meet that peak demand at home in BC, but also to export much-needed power to our neighbours in Alberta. Natural gas was also critical in meeting peak demand, delivering about twice as much energy for home heating as the electricity system during this time – highlighting the importance of BC's existing gas system.

INTEGRATED UTILITY PLANNING

Electricity and gas can be complementary energy sources, for example where the gas system's role in heating acts as a back-up for clean electricity, but currently their futures are planned independently through separate resource planning processes. Coordinated planning of electric power and gas systems is critical to optimize investments, reduce emissions, and keep energy affordable as BC's energy mix changes in the coming years and decades. As part of the work to develop *Powering Our*

Future, the Government, BC Hydro, FortisBC and Pacific Northern Gas (PNG) agreed on the need to advance joint planning in the future to help keep our energy system affordable, reliable and efficient in the transition to clean energy and a net zero economy.

Specifically, planning together will enable:

- More efficient use of energy resources, with electricity and gas each used where and when they make the most sense (for example, based on climate regions),
- Understanding how clean electricity and a decarbonized gas system can work together in the future, with a focus on meeting peak demand while cost-effectively reducing emissions, and
- Better coordination among our electric and gas utilities to limit unnecessary and costly infrastructure investments.

While fully integrated utility planning through the BCUC will take time to implement, government will continue to advance joint planning between the electric and gas utilities.

EXPLORING PATHWAYS TO NET ZERO EMISSIONS BY 2050

As a key next step in the energy transition, BC will undertake an independent net zero pathway assessment – a comprehensive study of all the credible pathways for achieving a net zero economy by 2050. Other jurisdictions, such as Ontario and Quebec, are increasingly turning to “pathway assessments” to develop a shared understanding of the different approaches available to achieve net zero emissions. This includes evaluating specific choices and trade-offs, identifying options, and bringing people together for an evidence-based discussion about the province’s energy future.

A key focus of BC’s net zero pathway assessment will be the impacts of electrification of home heating on electricity and natural gas planning and identifying the role of a decarbonized gas system – with increasing amounts of renewable natural gas and hydrogen – in BC’s future energy system. For example, in colder climates, dual fuel systems may make the most sense where low-carbon gases serve as back-up during colder temperatures where electric heat pumps are less efficient and the electricity system is unable to meet peak demand annually.

Creating jobs and supporting sustainable growth

Powering our future with clean energy is one of the job-creation opportunities for our generation. BC Hydro’s capital plan and its first call for power are estimated to lead to total public and private capital investments of approximately \$40 billion and create between 11,300 and 14,000 construction jobs annually.

	Type	Capital Investment	Job Estimates (Construction)
BC Hydro 10 Year Capital Plan	Public	\$36 billion	10,500 to 12,500 jobs on average annually (over 10 years)
BC Hydro’s 2024 call for power (first in regular calls every two years)	Private	\$2.3 billion to \$3.6 billion*	800 to 1,500 jobs on average annually

*Does not include additional investment to connect new power projects to the grid.

The shift to clean energy will also create jobs in new emerging professions like heat pump installation, rooftop solar installation, efficiency retrofits, electric vehicle charging and maintenance. For example, by accelerating efficiency retrofits, the CleanBC Better Homes and Better Buildings program has created approximately 800 jobs per year.

To ensure people and employers are prepared for these and other opportunities, the Province is investing nearly half a billion dollars in the [StrongerBC Future Ready Action Plan](#), connecting people to the training they need for more than 250 in-demand careers in areas such as construction, technology, clean energy and housing. For BC employers, many of whom are facing a shortage of skilled workers, the plan means approximately 8,500 newly-trained people will be ready to fill positions in the next three years.

Training People for the Clean Energy Skills of the Future



ELECTRIC VEHICLE TECHNICIANS TRAINING

As zero-emission cars gain in popularity, there is a growing need for technicians and mechanics who can service these vehicles. The Province provided \$325,000 in funding to the British Columbia Institute of Technology to develop a first-of-its-kind training course for certified Red Seal automotive service technicians to upgrade their skills for zero-emission vehicles. The curriculum was designed in partnership with the City of Vancouver's green-fleet technicians and includes course modules for servicing battery electric, plug-in hybrid and fuel cell electric vehicles.



HEAT PUMP INSTALLATION

Continued growth in the popularity of heat pumps will require a significant expansion of qualified heat pumps installers in B.C. The Province has been working with the utilities and the heating, ventilation and air conditioning industry to develop best practices training for heat pumps. Our work also includes consideration of trades qualifications to ensure there are viable options for transitioning members of other trades like gas-fitters.



HYDROGEN

Innovation in the hydrogen sector is supported by cutting-edge research conducted at B.C.'s universities and technical institutes, which are also training the next generation of talent working in this field. Since 1994, the Institute of Integrated Energy Systems in the University of Victoria has been working on feasible pathways to sustainable energy systems by developing technology and training for the next generation of changemakers. The Institute formed Canada's first major university-industry research partnership focused on fuel cells and hydrogen systems and continues to be an active research centre in fuel cell modelling, hybrid power trains and hydrogen storage.

BC'S CLEAN & COMPETITIVE ADVANTAGE

Clean, affordable electricity helps to attract investments in new businesses like E-One Moli. In 2023, the company announced plans to build a \$1.05 billion lithium-ion battery manufacturing plant in Maple Ridge, in part based on the ability to power their operations with affordable clean electricity. The plant will be Western Canada's first high-performance lithium-ion battery plant and provide around 450 good jobs.

Businesses increasingly want to locate and invest in jurisdictions that can guarantee their energy needs are not contributing to climate change. That's why BC recently updated the energy objectives in the *Clean Energy Act*, amending the existing objective that 93% of the electricity generated in BC needs to come from clean or renewable electricity generation (which the Province has surpassed) to a target of 100% by 2030 for the integrated grid. While this will not affect remote communities or the use of gas-fired

electricity generation as emergency back-up, or the use of natural gas for other needs such as home heating, it will ensure that BC capitalizes on its clean advantage when competing with other jurisdictions for investment.

The clean electricity we use in BC also makes our products cleaner and more attractive to investors and customers. In the critical minerals sector, clean electricity enables BC to better contribute to the global transition to a low carbon economy and power BC mines, which are producing critical minerals used to produce electric vehicles, renewable energy systems and energy storage devices. Clean electricity provides a competitive advantage for our mines and supports growing this sector while making progress on reducing emissions. For example, mining one tonne of copper in BC produces over 20% less GHG emissions than one tonne mined in Chile, primarily due to our clean power supply.

ELECTRIFYING MINING TRUCKS AT COPPER MOUNTAIN

By working with industrial partners, the province is leading the way in the electrification of mining operations. One example of this partnership at work is the Province's \$10 million contribution toward the installation of an electric trolley system for mine-haul trucks at Copper Mountain Mining Corporation's copper, gold and silver mine near Princeton, BC. This funding, provided through the CleanBC Industry Fund, supported upgrades to seven of the company's trucks to be compatible with an overhead trolley system that replaces diesel used by the haul trucks to transport mine material to a surface processing facility with clean electricity, significantly reducing emissions.

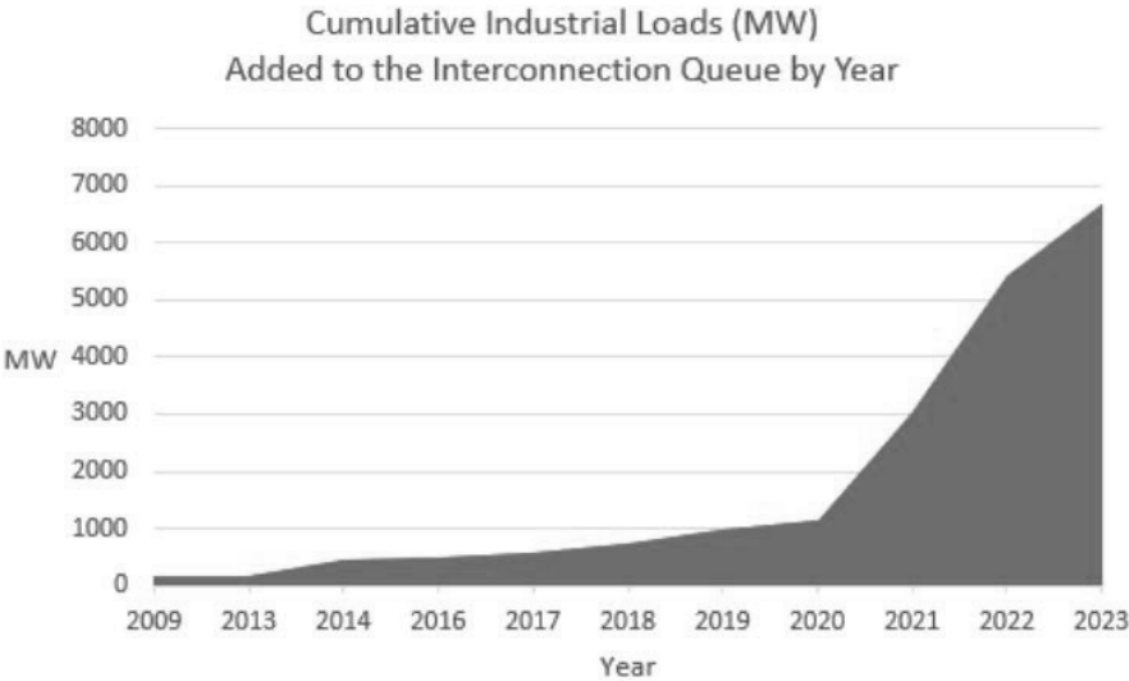
The Copper Mountain project is the first trolley assist to be installed in an open-pit mine in North America. Learnings from this project will help refine the technology to drive wider adoption of similar solutions across the industry.

ENABLING INDUSTRIAL DEVELOPMENT

Growing our industrial base is critical to our economic future, providing jobs and contributing to growth. BC is seeing unprecedented interest from new, major industrial customers developing new or expanded projects in BC and wanting to power their operations with clean electricity. There are currently approximately 7,000 Megawatts (MW) of proposed new industrial demand in BC Hydro’s interconnections queue. For comparison, the current BC Hydro system demand in 2024 is about 11,000 MW and the total capacity of Site C will be about 1,100 MW.

This unprecedented interest encompasses everything from traditional natural resource industries, such as mining and oil and gas, to newer industries like green hydrogen production and advanced manufacturing. While we know from past experience that not all projects that enter BC Hydro’s interconnections process end up proceeding, this is an enviable position for any province to be in and shows that BC is poised for clean industrial growth over the next decade.

FIGURE 6: CUMULATIVE VOLUME ADDED TO BC HYDRO’S INTERCONNECTION QUEUE BY YEAR



Source: BC Hydro

Proponents of projects that require extremely large amounts of power (e.g., above 150 MW) require certainty that the electricity will be there when they need it, while BC Hydro requires assurance that projects will proceed prior to constructing expensive new infrastructure. BC Hydro’s current tariff for connecting large industrial customers was developed almost three decades ago, receiving approval from the BCUC in 1991. New models are needed.



Government will develop and engage with industry on innovative approaches for connecting new, large industrial customers that provide greater certainty on timelines and other requirements, prioritize projects that create jobs and benefit British Columbians, and protect existing BC Hydro customers from rate increases. For example, this may include changes to pool customer contributions for new transmission lines across multiple customers and looking at project-specific calls for power for customers that require significant new generation capacity.

Driving innovation and clean energy technology

Energy systems are constantly changing in response to advances in technology – from LED light-bulbs to cold-climate heat pumps and electric vehicle batteries – that enable new clean energy solutions while lowering costs. *Powering Our Future* recognizes that BC must remain an innovation leader to achieve our energy goals. This means not only accelerating the integration of commercially proven technologies into the system, but also supporting the development of new technology that will change what is possible in the years to come.

The Innovative Clean Energy (ICE) Fund supports cutting-edge partnerships with universities, First Nations, municipalities, and clean tech companies across BC. Since its inception in 2008, it has committed over \$112 million in funding to help advance technologies that harness the potential of a range of clean energy options including solar, ocean tidal, geo-exchange, energy management, smart grid and waste-to-energy approaches. In May 2024 the fund launched a new targeted call for over \$12 million in new projects over the next three years, with a focus on clean energy optimization and management technologies.

FortisBC's Clean Growth Innovation Fund will help the utility invest in innovative, emissions-reducing projects in partnership with government and industry, with a focus on renewable natural gas, carbon and methane capture, energy efficiency, and fuel cell and remote power technologies.

BC Hydro recently announced Canada's first "vehicle-to-grid" pilot project for medium- and heavy-duty vehicles – allowing them to push energy from their batteries back into the grid. The bidirectional charging trial project for medium-sized vehicles such as buses, and heavy-duty vehicles like transport trucks, is the first of its kind in Canada. While this is an emerging technology, it could have the potential to displace diesel back-up generation in the future as a clean power source.

ACCELERATING UTILITY-SCALE BATTERIES

Utility-scale batteries are a relatively new technology within the traditional utility sector. The costs of battery storage technology have decreased in recent years and utility-scale batteries can open up new opportunities for managing the electricity grid by shifting output from renewables – such as solar panels – into periods when demand is higher and it is needed most.

As part of its Integrated Resource Plan, BC Hydro is accelerating its work to explore and advance integration of utility-scale batteries into the grid with the aim of achieving up to 600 MW of additional capacity by 2030.

B.C. CENTRE FOR INNOVATION AND CLEAN ENERGY

Founded in 2021 with an initial \$35 million provincial investment leveraging an additional \$70 million from federal and private sources, the B.C. Centre for Innovation and Clean Energy is an independent, not-for-profit corporation that helps fund the commercial development and scaling of made-in-BC clean energy solutions — from Canada to the world. The Centre brings together innovators, industry, governments and academics to accelerate clean energy innovation and catalyze new partnerships.

The Centre's focus areas for funding and project delivery currently include:

- Carbon management
- Production, use and distribution of low-carbon hydrogen
- Low carbon fuels including renewable natural gas, biofuels and synthetic fuels
- Battery technology, storage and energy management system



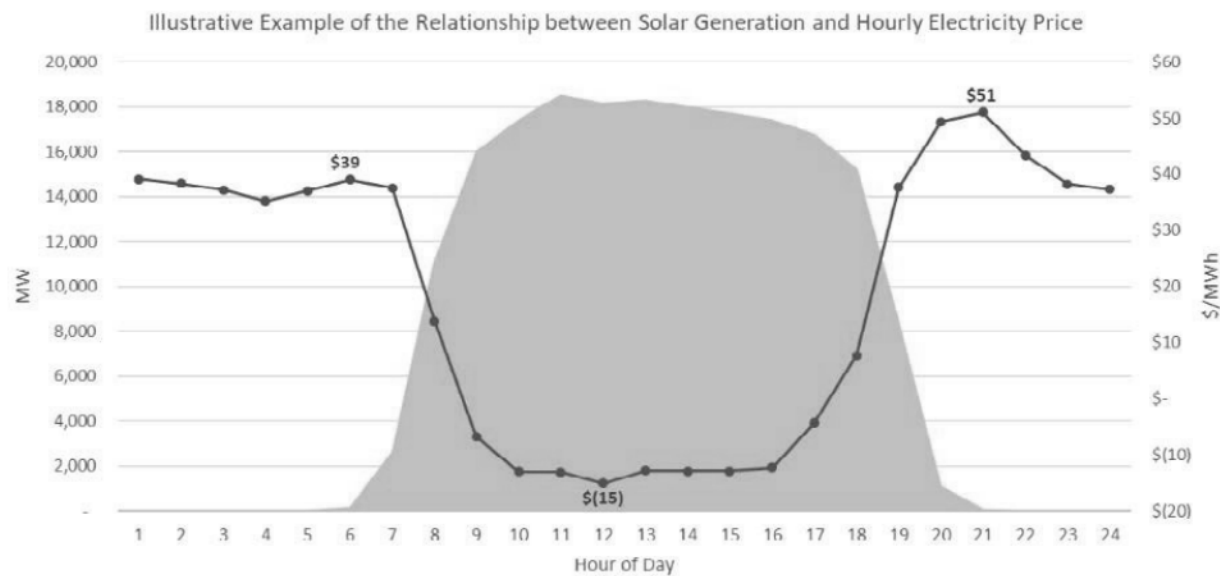
Trading with our neighbours to benefit BC

All utilities across jurisdictions, including in BC, are importing and/or exporting power every hour of the year. This is key to the reliable operation of the Western Interconnection – a network of transmission lines connecting BC with utilities in Alberta and 14 western U.S. states. BC Hydro's trading subsidiary Powerex, imports and exports power to help BC Hydro manage its system, keep rates low for British Columbians, and help reduce emissions in other jurisdictions still reliant on coal or natural gas for baseload electricity generation.

Importing can be a very cost-effective way to buy surplus electricity from another jurisdiction that would otherwise go to waste, such as wind and solar that cannot be stored. Imports of electricity also allow BC Hydro to conserve and store water in its reservoirs – which act like large batteries, reserving generation for periods when it is needed most in BC or has the highest value on the export market.

British Columbians have access to the cleanest electricity in western North America and BC is well-positioned to benefit from electricity trade as a result of our flexible system of hydro-electric storage reservoirs. Increasing amounts of renewable generation, such as solar and wind, are being added to the western grid as other jurisdictions get off of coal- and natural gas-fired electricity. When electricity generation is abundant, and prices tend to be lower, BC Hydro can decrease its generation and Powerex, a subsidiary of BC Hydro, can import electricity during these times. At other times prices might be higher such that BC Hydro can generate more than it needs domestically and Powerex can export the electricity to other jurisdictions. Powerex's import and export activity helps reduce emissions in the electricity sector, while also creating trade income that keeps BC Hydro's rates amongst the lowest in North America.

FIGURE 7: ILLUSTRATIVE EXAMPLE OF HOW MARKET PRICES CAN FLUCTUATE OVER THE DAY



Note: Information provided in the graph is for illustrative purposes only and may not represent current or future conditions; information from May 9, 2024.

Source: CAISO solar generation and SP-15 (Southern California) day-ahead hourly prices

Powerex's trading activities result in significant revenue that is passed onto BC Hydro to keep rates lower for its customers. In total, Powerex's trade income over the last five fiscal years was \$2.485 billion.

PLANNING FOR SELF-SUFFICIENCY

While BC Hydro plans for a balanced system, there is a great deal of weather variability that can affect both generation and demand, with some years being wetter or drier, some colder or warmer. Under the *Clean Energy Act*, BC Hydro is required to be self-sufficient based on average water years. This means that in some years BC will be in surplus (and a net exporter), while during others it will be in deficit (and a net importer), like during 2023 due to the current drought.

In fact, over the last 15 years, BC was a net importer in seven years and a net exporter in eight. And even with the historic drought that has significantly impacted our water reservoirs, BC was still a net exporter over the last five-year period.

In its next Integrated Resource Plan, BC Hydro will be reviewing the latest research on climate change scenarios and examining how they may impact reservoir levels in the decades to come – and if that means more generation capacity is needed. In addition, by bringing more renewables onto the grid like wind and solar, BC will diversify how it generates electricity and make us more resilient in face of more frequent and extreme droughts.

Importing Clean Power

Electricity imported into BC by Powerex is from two sources. First, from identifiable clean resources like hydro and other renewable facilities. Over the past five years, the majority of its imports were from dedicated clean sources of electricity like these.

Second, from the wholesale market, which is a mix of all resources on the grid in other jurisdictions. Market electricity in the west continues to trend away from fossil fuels toward cleaner forms of generation, as more wind and solar replace retiring coal and natural gas. In recent years, more renewables, like solar, have created periods of short-term over-supply in places like California where solar generation is highest during mid-day. This is the time of day when Powerex generally imports given that prices are lower.

The greenhouse gas intensity of the electricity used by BC customers on the integrated grid is determined by the Province's Climate Action Secretariat. The Electricity Emissions Intensity Factor, which incorporates data on Powerex's imports and exports was reported at 11.3 tonnes of CO₂ equivalent per GWh in 2023. For comparison purposes, the emissions rate from gas or coal generation is approximately 500 or 1,000 tonnes of CO₂ equivalent per GWh, respectively.

ADVOCATING FOR FAIR ACCESS TO ALBERTA'S MARKETS

Although 90% of Powerex's trading activity is with the Western US, it also trades with Alberta through the BC-Alberta intertie.

In March 2023, the Alberta Electric System Operator (AESO) chose to unilaterally reduce the import capacity of the Intertie. This restricts BC from selling clean electricity to Alberta customers despite the fact that BC provides non-discriminatory access along the intertie that allows Alberta to export gas-fired electricity through BC to the U.S.

Intertie access is intended to be reciprocal, and BC will continue to advocate for Alberta to lift these restrictions, like they did during the recent January cold snap and emergency grid alert in Alberta, enabling BC to provide nearly 300MW of clean electricity during Alberta's time of need. Although it may limit competition for natural gas-fired generators in Alberta, delaying full restoration of the Intertie undermines the value of having an interconnected grid and ultimately increases electricity rates for both British Columbians and Albertans.





Conclusion

British Columbia is well positioned to power our clean energy future, and to ensure everyone has the opportunity to benefit as we make the transition away from fossil fuels. Our legacy system of clean hydro-electricity provides the backbone for a broader clean energy system, with more renewables like wind and solar and more clean fuels like hydrogen, renewable natural gas, and biofuels.

We are building a future where no one is left behind, where innovation drives progress and keeps our economy competitive to improve our quality of life. Indigenous Peoples will have opportunities to advance self-determination

and be leaders in building the clean economy. And everyone in British Columbia will have the opportunity for a cleaner, more secure and better future.

To advance this strategy, we will engage with key stakeholders and Indigenous Peoples on implementation by identifying the priority objectives, actions and timelines that will ensure BC accelerates its production of affordable and reliable clean energy to support the Province's CleanBC, economic development and affordability goals.



StrongerBC

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Evolving Role of BCER

KEY FACTS:

- To ensure rapid permitting and robust regulation of renewable energy projects, such as wind, solar and high-voltage transmission lines, the Province will introduce legislation in spring 2025 to move these projects to the authority of the BC Energy Regulator (BCER).
- The proposed legislation is enabling and would allow for the Province to “turn on” BCER authorities over time. If the legislation passes, the primary focus of BCER authorities will be the nine wind power projects and one solar power project in BC Hydro’s 2024 Call for Power and the North Coast Transmission Line Project.
 - The ten energy projects in BC Hydro’s 2024 Call for Power will provide nearly 5,000 gigawatt hours per year of electricity, enough to power 500,000 new homes, boosting BC Hydro’s current supply by 8 per cent.
 - The North Coast Transmission Line Project includes a proposed twinning of a new 500 kilovolt transmission line that would run from Prince George to Terrace. The project also includes upgrades to the existing 500 kilovolt line from Prince George to Terrace and additional lines beyond Terrace. The North Coast Transmission Line is integral in ensuring northern industries and communities have access to clean power.
- To enable reliable, clean power delivery to British Columbians in the face of unprecedented trade threats, the Province is also proposing legislation to disapply the *Environmental Assessment Act* in relation to the nine wind energy projects and the North Coast Transmission Line. These projects are vital to growing our economy, supporting economic reconciliation, and providing benefits to all British Columbians.
- The Province is reviewing the permitting process to ensure that the oversight and development of renewable energy projects uphold provincial environmental standards, including using BCER’s technical regulations to ensure comprehensive project oversight in the absence of an environmental assessment.
- BCER is already preparing to take over responsibility for the regulation of these projects and will bring a flexible, robust and timely approach to this strategically important file.

ADDITIONAL INFORMATION:

- BCER has been managing oil and gas activities since 1998. BCER has demonstrated its ability to shift focus to other energy resources when it was made responsible for hydrogen, ammonia, methanol and expanded carbon dioxide underground storage in 2023.

- BCER has established a regulatory framework for hydrogen manufacturing that offers a simplified process for smaller facilities that have minimal potential impacts on public safety and the environment and a more stringent set of requirements for more complex projects. The approach enables the many innovative companies working within the hydrogen sector to continue to grow their business while ensuring an appropriate level of regulatory oversight.
- BCER has a team of over 300 professionals in seven offices located throughout B.C.
 - Subject experts include biologists, engineers, hydrologists, agrologists, compliance and enforcement officers, First Nation liaison officers, Heritage Conservation Officers and archaeologists.
 - BCER may hire additional staff and subject experts as needed.
- BCER is mandated to regulate in a manner that protects public safety and the environment, supports reconciliation with Indigenous peoples and the transition to low-carbon energy, conserves energy resources and fosters a sound economy and social well-being.

FINANCIAL SUMMARY:

- BCER is able to recover costs of permitting and oversight from industry. BCER integrated one-window permitting approach will save proponents time and money, which may offset any additional costs associated with BCER cost recovery fees and levies.
- For more information about BCER, please refer to the BCER estimates binder.

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Rachel Shaw, ERD	250 507-6047

Evolving Role of the BCUC

KEY FACTS:

- The British Columbia Utilities Commission (BCUC) is an independent regulatory agency that oversees B.C. energy utilities and other public utilities.
- The BCUC is undertaking several key actions to streamline its efficiency and enable greater consideration for the speed by which the energy landscape is evolving.
- Completed in 2023, the BCUC Regulatory Efficiency Initiative found several opportunities to enhance regulatory efficiency and participation by updating, consolidating, and developing new rules, policies, and guidelines that aim to reduce regulatory burden and shorten review timelines.
- As part of accepting BC Hydro's 2024 Integrated Resource plan, the panel recognized that BC Hydro's new "living" long-term resource planning cycle, with regular filings and targeted updates, requires the BCUC to initiate a process for revising their Reporting Guidelines to ensure they align with the evolving planning approach and remain responsive to a rapidly changing energy landscape.
- In fiscal 2023/24, the BCUC also reviewed the Thermal Energy System Guidelines and addressed the rise of non-traditional utilities, like submetering providers, in B.C.. As part of its evolving role in this sector, the BCUC launched proceedings to determine if these entities qualified as public utilities and set regulatory requirements if applicable.
- Through its direction to create Joint Scenarios and shift how BC's gas and electric systems interact, the BCUC became the first utility commission in North America to initiate a process toward Integrated Utility Planning.
- This aligns with Powering our Future: BC's Clean Energy Strategy, which highlights the BCUC's responsibility to support integrated utility planning, ensuring that utility resource planning and regulation work together to deliver cleaner, more cost-effective, and reliable services.
- In making determinations for long-term resource plans, expenditure schedules, certificates for public convenience and necessity, and energy supply contracts, the BCUC also considers the energy objectives specified by Government in the *Clean Energy Act* (CEA).
- In February 2024, the energy objectives in the CEA were updated to ensure that electricity supplied to the integrated grid was 100 percent clean or renewable and to ensure that BC Hydro's rates were affordable, predictable and consistent from year to year. Additionally, energy objectives related to keeping energy rates affordable and reducing greenhouse gas emissions were given relative priority over the others.

ADDITIONAL INFORMATION:

- The BCUC serves as an economic regulator, ensuring customers have access to safe, reliable energy services while allowing utilities to earn a fair rate of return. It reviews utilities' long-term resource plans to forecast energy demand, guide spending approvals, and infrastructure projects.
- The BCUC recovers its costs from regulated entities by fixing levies. Levies are based on the amount of energy a utility sold in the previous calendar year. (C) Recoveries in fiscal 2023/24 totalled \$21.9 million and expenditures were \$20.8 million, compared to recoveries of \$20.7 million and expenditures of \$20.7 million in 2022/23.
- In September 2023, Mark Jaccard was appointed chair and CEO of the BCUC. He previously held this role from 1992-97 and is a recognized energy economist with experience on BC's climate action policy and the Climate Solutions Council. On March 10, 2025, he was reappointed for another five years.
- In fiscal 2023/24, the BCUC reviewed BC Hydro's first call for power since 2008, part of a \$36 billion capital plan to upgrade infrastructure. The BCUC also completed Phase 1 of its Renewable Natural Gas procurement review and began Phase 2 to refine regulatory frameworks. The BCUC also initiated discussions on hydrogen energy services in response to BC's Hydrogen Strategy.
- (C) The BCUC conducts various proceedings, such as compliance filings from public utilities, to maintain regulatory oversight. In fiscal 2023/24, it addressed 344 complaints, with 98 percent of responses issued within five business days. BC Hydro received 167 complaints primarily concerning disconnection; FortisBC Energy Inc. received 80 complaints primarily concerning rate increases.
- (C) Under the *Fuel Price Transparency Act*, the BCUC monitors fuel price competitiveness, collecting data on sales margins, volumes, and transport costs from over 200 fuel stations. Advice/Recommendations; Cabinet Confidences; Government Financial Information
Advice/Recommendations; Cabinet Confidences; Government Financial Information
- In fiscal 2023/24, the BCUC was subject to three Orders in Council, five Ministerial Orders, and issued 39 letters covering a range of topics including annual contracting plans, annual reports, and a review of customer complaints.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Chris Gilmore, EURD	250-217-2163

Fuel Price Transparency Act

KEY FACTS:

- The Province brought the *Fuel Price Transparency Act* (FPTA) into force on March 9, 2020 to provide more transparency to consumers on how gasoline and diesel prices are set in British Columbia (B.C.), and to understand market competitiveness.
- The FPTA requires those who import, purchase, store and distribute gasoline and diesel products in the fuel wholesale market intended for sale at retail stations to report to the FPTA administrator - the BC Utilities Commission (BCUC).
- As an independent regulatory agency primarily governed by the *Utilities Commission Act* (UCA), the BCUC is authorized to recover costs from the entities it regulates under the UCA. However, the UCA does not allow the recovery of costs for the BCUC's role as Administrator of the FPTA. Since the FPTA does not provide for cost recovery from reporting entities, to carry out its legislated duties, the BCUC must recover its costs as Administrator from Government.
- In the five years since it was named as the Administrator of the FPTA, the BCUC has taken several steps to collect and publish information about gasoline and diesel fuel activities in B.C., to promote competitiveness, and increase public confidence in the competitiveness of the fuel market. This has included:
 - launching and maintaining the [GasPricesBC.ca](https://gaspricesbc.ca) website as an informative and public-facing website for engagement;
 - developing and implementing the FPTA Industry Portal for efficient and secure data collection from fuel market wholesalers and retailers; and
 - undertaking numerous data collection projects in response to public requests for information about fuel prices in select B.C. cities.

ADDITIONAL INFORMATION:

- B.C. does not regulate the retail price of gasoline or diesel. This means that prices can fluctuate as B.C. relies on market mechanisms to determine the price consumers pay for fuels.
- The carbon tax on gasoline is currently 17.61 cents per litre and was set to rise to 20.91 cents per litre on April 1, 2025. Ministry staff expect fuel prices to decline as a result from the removal of this tax over time.
- Several factors influence the price at the pump, including the cost of crude oil, wholesale fuel prices, transportation and refinery costs, taxes, storage fees, and profit

margins. Some of these elements fluctuate daily, which can make it hard for consumers to isolate the specific impact of changes to the carbon tax.

- In Spring 2019, fuel prices in B.C. rose by over \$0.40 per litre, costing consumers an additional \$62 million daily. The BCUC conducted an inquiry exploring factors influencing costs and found a 13.0 cents per litre unexplained price differential between B.C. and the Pacific Northwest, resulting in B.C. consumers paying almost \$500 million more annually.
- In the years following the FPTA's implementation (2019 - 2022), the unexplained retail price difference between B.C. and Western Canada dropped by 62 percent, from 9.2 cents per litre to 3.5 cents per litre. In Vancouver, the decrease was 84 percent. This decrease represents annual savings of approximately \$270 million.
- The BCUC plays a key role in responding to concerns raised by constituents, using information gathered in its role as Administrator. Government also continues to receive numerous information requests directly from the public and from MLAs concerned about gas prices across B.C. Ministry staff work with the BCUC to respond to these concerns using findings from the BCUC's Exploration Projects and Staff Reports under the FPTA.
- Advice/Recommendations; Cabinet Confidences
- Implementation of the FPTA is a completed mandate letter commitment to "ensure oil and gas companies are publicly accountable for unexplained markups and price increases."

FINANCIAL SUMMARY:

- FPTA administration has been funded through Contingencies (see Table 1 below).
- Advice/Recommendations; Cabinet Confidences; Government Financial Information
-

(C) Table 1: Funding History for FPTA Administration

	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Contingency Funding (\$M)	0.830	0.912	1.770	0.970	1.014	Advice/Reco mmendations;

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Chris Gilmore, EURD	250-217-7163

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Innovative Clean Energy Fund

KEY FACTS:

- 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 (B.C.)'s clean energy sector.
- Funds are collected and disbursed in accordance with Section 9.5 of the *Special Accounts Appropriation and Control Act*.
- Funding for the Special Account comes via a 0.4 percent levy applied to the final sale of specified energy products: natural gas; fuel oil; and, grid-delivered propane. The levy was forecast to generate approximately \$9 million in 2024/25.
- At the direction of Treasury Board, the Ministry of Energy and Climate Solutions submits an annual rolling three-year spending plan for the ICE Fund Special Account.
- Over the last 15 years, ICE Fund investments have leveraged projects worth \$633 million, creating or sustaining more than 1100 direct jobs.
- The ICE Fund publishes performance reports on the Ministry website. The most recent report (2017/18 to 2022/23) outlines the 67 different projects funded and \$62 million administered through the ICE Fund, contributing to a project value of over \$386 million.

ADDITIONAL INFORMATION:

Budget 2024 Summary

- In the Budget 2024 fiscal year, \$3 million in funding was provided to two Partnership Stream initiatives:
 - \$1 million to Miru Smart Windows to develop next-generation windows that electronically tint windows to let in more or less light. ICE funding helped unlock \$20 million USD in series A financing led by BDC.
 - \$2 million to establish a Battery Innovation Centre at the University of British Columbia's Okanagan campus. ICE funding unlocked \$2 million from industry and \$1 million from the federal government.
- Under the ICE Fund Project Stream, the 2024 Targeted Call for Clean Energy Innovation committed \$3.38 million in funding to four BC-based clean energy technology companies that are expected to make electrification more feasible and affordable. Information on successful projects will be publicly reported in the forthcoming 2025 ICE Fund Performance Report.

- The ICE Fund had \$5 million allocated for two CleanBC Go Electric programs which support low carbon transportation infrastructure and technology development in B.C..
 - (C) \$2 million for the Advanced Research Commercialization program was still pending transfer to the program administrator in March 2025.
 - (C) \$3 million for Hydrogen Fueling has not been expended due to procurement delays. These funds will be retained in the ICE Fund reserve for re-allocation as part of the ICE Fund spending plan Budget 2026 process.

□ **Budget 2025 Forecast**

- (C) Between \$5-9 million is allocated through the Project Stream for the second year of the Targeted Call for Clean Energy Innovation. This will provide funding to B.C.-based pre-commercial technology development projects which support electrification affordability or electric utility grid management.
- (C) \$4.8 million is allocated to the Partnerships Stream to co-fund projects with private, academic, and federal agencies. Partnership funding is provided through the ICE Fund's ongoing open call which provides the flexibility to leverage provincial funding with other sources for greater impact.

ICE Fund Success Stories

- In March 2023, the ICE Fund provided \$1 million to Miru Smart Technologies. Miru was able to leverage this funding to secure \$20 million USD in a series A funding round. ICE funding and the Series A funding allowed Miru to begin construction of a new manufacturing facility in downtown Vancouver to scale up their electrochromic window technology.
- From 2018 to 2020, the ICE Fund provided \$1.275 million to Ekona Power, a company creating innovative methane pyrolysis technology for on-site hydrogen production. In January 2024, Ekona announced its first industrial deployment in Grande Prairie, Alberta.
- In March 2019, the ICE Fund provided \$150,000 to Svante, a company specializing in carbon capture technology. In 2022, Svante raised \$318 million in their Series E funding and are using this funding to construct a \$165 million manufacturing plant near Vancouver.

FINANCIAL SUMMARY:

- Budget 2024: Funds have been managed and expended in accordance with the ICE Fund spending approved by Treasury Board in Budget 2024.

- (C) Budget 2025: The proposed 2025/26 to 2027/28 spending plan has expenditures totaling \$28.811 million.
 - (C) Levy revenues are forecast to be \$8.000 million per year over the spending plan period which is a decrease of \$1.000 million per year due to a drop from historically high natural gas utility revenues.
 - (C) The expenditure types and amounts are consistent with the detailed Treasury Board submission provided in Budget 2024.

(C) Budget 2025 ICE Fund Spending Plan (proposed)				
(\$ millions)	2024/25 Re-stated	2025/26	2026/27	2027/28
Special Account Opening Balance (A)	10.508	8.377	5.472	4.737
CleanBC Go Electric - Hydrogen Fuelling	(3.000)			
CleanBC Go Electric – Advanced Research and Commercialization	(2.000)			
Partnership Projects	(3.000)	(4.835)	(4.302)	(4.302)
Projects (<i>Clean Energy Innovation Call</i>)	(3.335)	(5.000)	(4.000)	(4.000)
Special Account Administration	(0.433)	(0.433)	(0.433)	(0.433)
ICE Fund Projects Top-Up		(0.537)		
Funds Returned to Special Account	0.637			
Hydrogen Strategy		(0.100)		
Total Expenditures (B)	(11.131)	(10.905)	(8.735)	(8.735)
Annual Special Account Revenue (C)	9.000	8.000	8.000	8.000
Special Account Balance (After) (A - B + C)	8.377	5.472	4.737	4.002

ATTACHMENTS:

- Attachment 1: ICE Fund Projects

ADM(s) Responsible	Contact number
Chris Gilmore, EURD	250-217-7163

Attachment 1: ICE Fund Projects

Fiscal Year	Company Name	Project Description	ICE Fund Contribution	Other Government Contribution	Project Cost
2023/24	Miru Smart Technologies	Construction of a demonstration manufacturing facility to scale up electrochromic window tinting technology	\$1.000M		\$29.293M
2023/24	Simon Fraser University	Construction of an on-campus hydrogen hub which supports clean hydrogen equipment technology testing.	\$1.000M	\$9.462M	\$22.019M
2023/24	PH7 Technologies	Development of a low-energy, closed-loop process to extract platinum-group metals.	\$0.850M		\$16.927M
2024/25	University of British Columbia Okanagan Campus	Construction of a Battery Innovation Centre including solid-state battery technology development.	\$2.000M	\$1.000M	\$8.080M
2024/25	Progressive Planet (C)	Pilot plant to develop a lower energy and carbon supplementary cementitious material out of recycled glass.	\$1.140M	\$4.636M	\$13.063M

Last updated: 20 Mar 2025

Successful recipients from the first year of the Targeted Call					
2024/25	EVectriX EV Solutions (C)	Development of a smart electric load management system.	\$0.600M	\$0.100M	\$0.850M
2024/25	FUTURi Power Inc. (C)	Development of an energy processor for net zero housing.	\$1.200M	\$0.200M	\$2.400M
2024/25	SISA Energy Ltd. (C)	Pilot of an electrification planning platform across BCIT campuses.	\$0.600M		\$0.934M
2024/25	Green Matters Technologies Inc. (C)	Deployment of a highly energy heating and cooling system which captures waste heat in a first-of-kind installation at the Burnaby Winter Club.	\$0.735M		\$1.193M

LNG Bunkering (Tilbury)

KEY FACTS:

- In operation since 1971, FortisBC Energy Inc (FEI)'s liquified natural gas (LNG) facility on Tilbury Island (Tilbury) in Delta is located near the FEI transmission pipeline system just a few kilometres from Vancouver.
- Starting in 2018, FEI began exploring several phased projects to expand Tilbury for LNG storage, marine refueling, and export under various stages of development. These include:
 - **Phase 1A:** The first phase of the "Tilbury expansion project". A peaking facility for when additional gas is needed during cold snaps. This is a regulated utility asset and is a completed project.
 - **Phase 1B:** Incremental LNG production capacity with onshore piping to connect to an LNG storage tank for marine refueling. Advice/Recommendations; Cabinet Confidences
 - **Phase 2:** Consists of both a regulated asset (a new storage tank to replace the 1971 Base Plant) and unregulated assets which are joint ventures outside of the public utility (a marine jetty, and increased LNG production capacity and liquefaction infrastructure for marine refueling and export)
- FEI has applied to the British Columbia Utilities Commission (BCUC) for a Certificate of Public Convenience and Necessity for approval of its new storage tank as part of Phase 2. This proceeding is ongoing.
- The Tilbury marine jetty, a collaboration of Fortis Inc, FEI, Seaspan and Musqueam Indian Band, will be used for the express purpose of export and marine bunkering. It received its Environmental Assessment Certificate on March 27, 2024.
- The use of LNG as a marine fuel to power and decarbonize domestic and international shipping is expanding, and BC is well positioned to benefit from this opportunity.
- Using LNG instead of bunker fuel will significantly improve air quality in the Lower Mainland, Fraser River basin and in coastal communities, providing significant environmental and health benefits for all British Columbians.

ADDITIONAL INFORMATION:

- In 2012, under the *Utilities Commission Act*, Cabinet issued Direction 5 to the BCUC which allows FEI to recover up to \$400 million from its ratepayers to expand its existing LNG liquefaction and storage facilities as part of Phase 1B of its Tilbury facility.

- Advice/Recommendations: Cabinet Confidences
- Cabinet enabled FEI to use ratepayer funds under the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR) to promote LNG for the marine sector, with up to \$120 million in incentives to kick-start the bunkering market and related infrastructure.
 - Musqueam Indian Band, Tsawwassen First Nation and Snuneymuxw First Nation are collaborating with FEI to share in the benefits of this opportunity.
 - FEI and the Port of Vancouver have been actively working to make the Port an LNG fueling hub on the west coast of North America. In November 2024, Seaspan received the first-to-be-issued LNG bunkering accreditation from the Port authority. This means it is now authorized to conduct ship-to-ship LNG bunkering at the Port of Vancouver.
- The provision of LNG for marine bunkering would also support a broad range of new economic activities such as new emission reduction technologies and development of new and alternative fuels, potentially creating new business and job opportunities in all sectors of the provincial economy.

FINANCIAL SUMMARY:

- There are no fiscal impacts to government.

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Chris Gilmore, EURD	250-217-7163

Natural Gas Utility Rates

KEY FACTS:

FortisBC Energy Inc.

- On January 1, 2025, FortisBC Energy Inc.'s (FEI) gas bills increased 17.5 percent. This marks the first increase since 2022, as overall gas bills fell in 2023 by 7 percent and were maintained in 2024 for most customers.
- The bill increase is driven by a variety of factors, namely: a 7.75 percent increase to the delivery charge, the increased cost to deliver a 2 percent blend of renewable natural gas to all customers, and an increase to the rate rider to support the FortisBC Clean Growth Innovation Fund (\$0.40 per customer per month). The changes to customer bills were approved by the British Columbia Utilities Commission (BCUC) at the end of 2024.

(C) Pacific Northern Gas

- All customer classes across Pacific Northern Gas (PNG) territory are expected to experience a significant rate increase starting May 1, 2025:
 - Rates for customers in PNG's western network along the Summit Lake to Prince Rupert corridor (PNG-West) are expected increase 28 percent in 2025, 28 percent in 2026, and 5 percent in 2027.
 - Rates for customers in Fort St. John and Dawson Creek (PNG-Northeast) will increase 9 percent per year; and,
 - Rates for customers in Tumbler Ridge (PNG-Northeast) will increase less than 1 percent per year.
- PNG-West's rate increase is driven by multiple factors:
 - Business Information
 -
 -
 -
- PNG-West industrial customers, especially in the forestry sector, are facing significant challenges from the United States tariffs, and increasing softwood lumber duties.
- Premier Eby announced on March 14, 2025, that the consumer Carbon Tax will be eliminated in line with Prime Minister Carney's commitment of the same. As legislation is being developed, the first step will be to halt the scheduled increase to the Carbon Tax from \$80 per tonne to \$95 per tonne which was supposed to take effect on April 1, 2025.

- Natural gas customers are expected to see a reduction in their utility bill of between 9 and 24 percent when the Carbon Tax is removed in its entirety. The overall bill impact will vary depending on individual consumption.

Affordability

- The Ministry of Social Development and Poverty Reduction may provide a crisis supplement to family units that are eligible for income assistance, disability assistance, or hardship assistance to avoid disconnection from an essential utility used for cooking or heating.

ADDITIONAL INFORMATION:

- Public utilities must apply to the BCUC to set their rates. The utility must file a Revenue Requirements Application (RRA) with the BCUC, which outlines the total costs the utility needs to carry out its business and recover from ratepayers.
- The BCUC sets rates by reviewing a utility's RRA, and a utility's rate design application. The BCUC makes objective and evidence-based decisions. They facilitate fair, transparent, and inclusive processes, and value input from all British Columbian ratepayers.
- FEI is the largest natural gas utility in B.C. delivering natural gas and propane to over 1 million customers in 135 communities across B.C., and 58 First Nations communities.
- FEI is currently undertaking a variety of necessary investments in maintenance and upgrades including Gibsons Capacity Upgrade, Coastal Transmission System Transmission Integrity Management Capabilities, Okanagan Capacity Upgrade Mitigation project, and the Pattullo Gas Line Replacement projects. Other projects, like the Tilbury LNG Storage Expansion project, are currently before the BCUC for approval and decisions are expected later in 2025.
- PNG is the province's second largest natural gas utility; however, it only delivers about 4.4 percent of the natural gas consumed in B.C.
- PNG owns and operates two natural gas networks in northern B.C., which serve a combined 42,000 customers:
 - PNG's western network (PNG-West) consists of transmission and distribution pipelines between Summit Lake (north of Prince George) to Kitimat and Prince Rupert. PNG-West serves 20,800 customers with an additional 130 propane customers in the Village of Granisle, B.C.
 - PNG's northeast network (PNG-NE) consists of distribution pipelines and a gas processing plant to serve approximately 21,600 customers in Fort St. John, Dawson Creek, and Tumbler Ridge.

Components of a Customer's Bill

Basic Charge	A standard fee charged to all customers to stay connected to the gas system, whether gas is being used or not. This fee pays a portion of the cost of the facilities required to deliver gas to its customers.
Delivery Charges	Delivery charge is based on consumption and is the cost of delivering gas through the gas system to the customer's home or business. The Delivery Charge is reviewed by the BCUC annually.
Storage and Transportation	Storage and transportation is what the gas utility pays to other companies to store and transport gas through their pipelines and infrastructure. The cost is passed to the customer without markup and is reviewed by the BCUC annually.
Cost of Gas	The market price of natural gas itself. Utilities review the cost of natural gas every three months with the BCUC. The utility buys gas on behalf of customers and passes the cost on without mark up.
Carbon Tax	Provincial tax that applies to the purchase of all fossil fuels within the Province of B.C. The tax is collected by the utility and remitted directly to the Ministry of Finance. Announced on March 14, 2025, the consumer Carbon Tax will be eliminated and legislation is under development to no longer proceed with the scheduled increase on April 1, 2025.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
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MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

SECTION G: CLIMATE ACTION/ ENERGY DECARBONIZATION

Section G contents:

- CleanBC Budget
- CleanBC Roadmap 2030 Implementation
- Clean Buildings Policy and Programs
- Clean Transportation Policy and Programs
- CleanBC Go Electric Advanced Research and Commercialization Program Issue
- CleanBC Program for Industry
- CleanBC and Affordability
- Climate Infrastructure/CleanBC Communities Fund
- Greenhouse Gas Reduction Targets
- Climate Preparedness and Adaptation Strategy
- Climate Solutions Council
- Low Carbon Fuel Standard
- Demand Side Management
- Remote Community Energy Strategy
- Natural Gas Decarbonization
- Carbon Capture and Storage
- Clean/Low Carbon Competitiveness
- Position on Nuclear Energy

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CleanBC Budget

KEY FACTS:

- *Budget 2024* included \$400 million in operating funding for CleanBC initiatives over the fiscal plan (2024/25-2026/27). Funding for 2025/26 -26/27 is largely frozen, subject to program review by FIN. The one exception is \$100 million over the next two years committed to in Budget 2025 for additional rebate programming for electric heat pumps for low- and moderate-income households. This was a condition of the Agreement-in-Principle with the Green Party.
- *Budget 2025* includes several investments in transit totalling \$15.9 billion. This includes \$9 billion in SkyTrain expansion projects (Surrey-Langley and Broadway Subway projects) and \$84 million to construct a new HandyDART Centre for BC Transit to facilitate growth of Victoria's bus system and support a low-carbon fleet of vehicles that will enhance services. These investments aim to ensure safe, reliable and equitable transportation networks that encourage mode shift to transit and active transportation.
- Additional investments in *Budget 2025* related to CleanBC include \$117 million to upgrade Kootenay Lake ferry service, including electric-ready ferry vessel and terminal upgrades and extending the deadline for qualifying expenditures for the clean buildings tax credit. This refundable tax credit incentivizes energy efficiency upgrades for existing buildings that go above minimum requirements.

ADDITIONAL INFORMATION:

- The Ministry of Energy and Climate Solutions has been overseeing the CleanBC funding envelope during 2024/25 and will continue to do so for the next two years. This includes program monitoring, evaluation, and reporting accountabilities through a deputy minister's committee supported by ADM and ED committees to support CleanBC funding allocation decisions.
- (C) The 2024 CCAR presents financial information on climate investments including actuals for 2023/24 and forecast for 2024/25. In 2023/24, Government spent an estimated \$2.2 billion on climate-related initiatives. In this year, operating investments were higher than in 2024/25 due to upfront funding that the Province provided to accelerate action under key programs.
- Operating expenses are forecast to decrease by approximately \$400M, while capital expenses are forecast to increase by approximately \$800M for transit-related projects. Although the 2024 CCAR is being released post Budget 2025, 2024/25 expenses remain a forecast until spending details are confirmed in *2024/25 Public Accounts*, which will be released in the summer of 2025.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADMs Responsible	Contact number
Adria Fradley, CAS	250 893-4329
Nat Gosman, EDD	778 698-7282

CleanBC Roadmap to 2030 Implementation

KEY FACTS:

- The CleanBC Roadmap to 2030 (Roadmap) was released in October 2021, building on the original CleanBC plan of 2018. Responsibilities for implementing Roadmap commitments are in several ministries including ESC, ENV, MOTT, CITZ, AF, FOR and others.
- The 2024 Climate Change Accountability Report (2024 CCAR) will be tabled during the spring legislative session as required by the *Climate Change Accountability Act*. The report will include emissions estimates and projections, actions and expenditures to reduce emissions and manage climate risks, and advice to the Minister from the Climate Solutions Council (CSC).
- (C) The 2024 CCAR reports that between 2007 and 2022, B.C.'s net GHG emissions declined by 2.2% while real gross domestic product (GDP) grew by 41% (compared to the national average of 27%). The net GHG intensity of the economy (emissions per unit of GDP) fell by 30.5% during that same period. Population grew by 25% from 2007 to 2022 (compared to the national population growth of 18%) while net GHG emissions per person declined by 21.6% – from 15.3 to 12.0 tonnes of CO₂e per capita.
- (C) The 2024 CCAR will show that the Province is not on track to meet its legislated 2030 targets with the latest modeled scenarios to 2030 projecting a significant gap.
- Roadmap measures are leading to market transformation and low-carbon growth as demonstrated by the following metrics with the latest available data:
 - Passenger electric vehicle sales share was 22.65%, among the highest in Canada
 - Over 6,000 public electric vehicle charging stations (including over 1,500 fast chargers) installed across B.C.
 - Approximately 13% of households use heat pumps in B.C.
 - Oil and gas sector methane emissions are on track to exceed the 2025 target of 45% below 2014 levels, and
 - Every dollar invested through the CleanBC Industry Fund has generated two dollars in private investment, creating jobs and stimulating growth across B.C.
- As part of the 2025 *Cooperation and Responsible Government Accord* (CARGA) with the Green Party (BCGP) the Province has committed to initiate and complete a review of CleanBC in 2025.

ADDITIONAL INFORMATION:

- Key Strategies in the 2025/26 Ministry Service Plan list several Roadmap commitments including:
 - Increase affordability and accessibility of clean transportation options through public awareness, skills training, research and commercialization, home and

workplace charging, public charging and hydrogen fuelling infrastructure and fleets

- Install 10,000 public zero-emission vehicle chargers by 2030
- Ensure costs for energy remain low for people through supports for home energy retrofits, including heat pumps
- Continue to reduce the carbon intensity of transportation fuels through the Low Carbon Fuel Standard, while supporting B.C.-based biofuel producers
- Continue the development and implementation of the Remote Community Energy Strategy
- Continue to implement policies and initiatives to advance energy efficiency and conservation in the built environment, including equipment standards and the Home Energy Planner tool
- Work with the federal government to cap emissions from the oil and gas sector
- Establish policies that will reduce methane emissions from the oil and gas sector by 75% by 2030 (as compared to 2014 levels) and achieve near elimination of industrial methane by 2035
- Develop policy and measures to require new large industrial facilities to have credible plans to be net-zero GHG emissions
- Continue collaboration with proponents and First Nations to further development of new projects under the Forest Carbon Offset Protocol and finalize the Carbon Capture and Sequestration Protocol
- Work with the Climate Solutions Council (CSC) to obtain strategic advice on climate action and clean economic growth, establishing a new net-zero GHG emissions target for 2050

FINANCIAL SUMMARY:

- (C) The 2024 CCAR presents financial information on climate investments including actuals for 2023/24 and forecast for 2024/25. Operating expenses are forecast to decrease by approximately \$400M due to upfront funding that the Province provided in 2023/24 to accelerate action under key programs. Capital expenses are forecast to increase by approximately \$800M for transit-related projects.
- Government Financial Information

ATTACHMENTS:

- Attachment 1 – CleanBC: Roadmap to 2030 (71 pages)

ADM(s) Responsible	Contact number
Adria Fradley, CAS	250-893-4329



cleanBC
our nature. our power. **our future.**

Roadmap to 2030



LAND ACKNOWLEDGEMENT

We acknowledge with respect and gratitude that this report was produced on the territory of the Ləkʷəŋən peoples, and recognize the Songhees and Esquimalt (Xwsepsum), and W̱SÁNEĆ Nations whose deep connections with this land continue to this day.

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A MESSAGE FROM PREMIER JOHN HORGAN

Here in British Columbia, people share a deep connection to the clean water, abundant forests and rich farmland around us. Our province's landscape is a source of beauty, food and economic opportunities. It is a source of great pride for all of us. There is simply nothing more important than protecting this natural inheritance for future generations.

Today, the things we cherish the most in B.C. are at risk like never before.

While we are living through a time of uncertainty and overlapping crises, the greatest challenge we face now and into the future is climate change. The threat is no longer decades or even years away. The impacts are all around us – from devastating wildfires and intense heat waves to droughts and dying crops.

Three years ago, our government introduced CleanBC – North America's most progressive climate action plan. In that time, we have regulated carbon emissions from the biggest polluters, legislated strong climate targets, and made it easier for people and businesses to switch from fossil fuels to clean energy solutions.

The scale of the climate emergency we are living through demands that we act with even greater urgency.

We have accomplished a lot together, but there is so much more we need to do. As British Columbians, we know we can't afford to delay action. That's why we're taking the next big step on our continent-leading plan and introducing new measures so that we can meet our Paris emissions reduction targets for 2030 and reach net zero by 2050.

The CleanBC Roadmap builds on the progress we've made. It will help power more businesses and communities with clean, renewable hydro power. Working with large industry partners, it will ensure sector-specific plans to reduce their climate pollution. Most importantly, it will encourage innovation of clean alternatives, which will become more affordable to British Columbians.

In developing this Roadmap, we listened to input from people across British Columbia – including consultation with Indigenous leaders and expert advice from the Climate Solutions Council. As the plan is rolled out, we will seize the opportunity to build stronger partnerships with Indigenous peoples by ensuring they share in decision making and the prosperity created in the low carbon economy.

Tackling climate change is not only our greatest challenge. It's also an opportunity to build a stronger, more resilient B.C.

The world has changed since we first launched CleanBC. But our province is uniquely well-positioned to thrive in the emerging clean economy. We have abundant clean energy and renewable resources. We are strategically located as a gateway to the Asia-Pacific region and a major port to the rest of North America.

By far our biggest asset is our people. If the recent forest fires and the pandemic have taught us anything, it's that we're best when we work together. It is that same sense of common purpose that we must bring to the fight against climate change. No one person, or government, can turn things around on their own. It will take all of us doing our part to seize the opportunity in overcoming this historic challenge.

That's what this plan is all about. Working together to chart a path to a cleaner, brighter future with good jobs and opportunities – for everyone.

Honourable John Horgan
Premier of British Columbia



A MESSAGE FROM MINISTER GEORGE HEYMAN

When we launched CleanBC in 2018 we were very clear that our modelling left us with an emissions gap. We needed to intensify our focus across all sectors to hit our emissions reduction goal by 2030. We have since introduced legislatively enforced accountability measures that support the findings of recent landmark reports from the Intergovernmental Panel on Climate Change and others. In short, everyone needs to do more to address climate change.

CleanBC set out a series of actions to begin a 30-year journey to build opportunity, keep communities strong and sustain human and ecological health. In many respects it set a standard for others to reference given its comprehensive approach. The Roadmap to 2030 takes its lead from CleanBC and takes us even further. In fact, it takes us to 100 percent of the achievement of our 2030 emissions reduction target and sets the course to fulfill our net-zero commitment by 2050.

The Roadmap is a clear articulation of where we need to expand and accelerate our action to reduce greenhouse gas emissions. It takes note of where things are showing signs of early success and where renewed approaches are necessary. It creates the opportunity for new partnerships like bringing together B.C.'s burgeoning clean tech sector with traditional industries to position B.C. products and services for new and evolving markets. Increasingly global investors are recognizing climate-centred technologies as critical in how we transition to living better on the planet. British Columbia is ideally positioned to take advantage of these new opportunities and the Roadmap supports that case.

A number of the actions will show rapid results as we commit to meeting or exceeding the federal benchmark on carbon pricing, enact requirements for all new buildings to be zero carbon by 2030 and eliminate emissions from all new cars by 2035. As these new technologies come on stream we will increase clean energy and fuel efficiency to support the transition.

Like all maps, the purpose of the Roadmap is to set the direction and offer choices to guide our efforts as we continue to track progress. It will allow us to anticipate challenges and potential changes in course. It expands on the principles of fairness and equity so that costs and benefits are evenly distributed as we introduce new measures.

The plan laid out in the pages that follow is admittedly technical. The tables, charts and analysis tell a story to help decision-makers across all sectors reach our goals. They are tools to help construct that better future we all want for our children and their children. In developing this plan we have not lost sight for one moment that ultimately the Roadmap is about people. It is about our connection to place, a place that we are seeing with new eyes through the lens of reconciliation and renewed relationships with Indigenous peoples. Our success will ultimately be determined by the way our natural environment responds to our choices in this journey. I am confident that with the Roadmap focusing our efforts we will arrive at our destination and more importantly we will all arrive together.

George Heyman

Minister of Environment and Climate Change Strategy



EXECUTIVE SUMMARY

The need to take urgent action together to reduce the impacts of climate change and build a strong clean economy for everyone has never been clearer than it has this past year. Two international reports outlined the challenge ahead and called for faster action. The landmark study from the International Panel on Climate Change¹ provided the latest scientific consensus on climate change and was characterized as a ‘code red for humanity’ by leading scientific and climate experts.

In British Columbia, we saw the impacts first-hand with an unprecedented heat wave, severe droughts and dangerous wildfires this past summer. These events were a poignant example of how serious the climate crisis is and why we need to act now.

Challenges and opportunities

This spring, the International Energy Agency also released a detailed report² outlining the challenges and opportunities of meeting net-zero emissions globally by 2050. The report acknowledged that countries around the world

are struggling to meet the moment with policies and plans to reduce emissions and create a vibrant, resilient low carbon future.

The last year saw growing recognition in the financial and business community that business-as-usual is no longer an option. Global investors like the Glasgow Financial Alliance for Net Zero – representing over \$80 trillion (USD) in investment capital – have called for an accelerated transition to net-zero emissions by 2050 at the latest. Increasingly, investors are asking for detailed plans outlining how companies can prosper in a carbon-constrained world as a prerequisite for investment.

1 International Energy Agency. (May 2021). Net Zero by 2050. Available online: www.iea.org/reports/net-zero-by-2050

2 Intergovernmental Panel on Climate Change. (2021). Sixth Assessment Report. Available online: www.ipcc.ch/assessment-report/ar6

These significant developments in the global economy represent major opportunities for British Columbia. Our province's CleanBC plan includes a wide range of actions to reduce emissions, build a cleaner economy and prepare for the impacts of climate change. Launched in late-2018, CleanBC is helping improve how we get around, heat our homes and power our industry – setting us on the path to a cleaner, stronger future. It includes groundbreaking policies that are leading the way forward on climate change. For example, we were the first in the world to make it law that all new car and truck sales would be zero-emission vehicles by 2040. Since that time, we've seen the highest uptake in electric vehicle purchases on the continent, thanks in part to CleanBC incentives and investments that make 'going electric' more affordable and convenient.

Across B.C., we have seen industries and businesses respond both to CleanBC actions and to the new global economic environment. At least half of all emissions from large operators in B.C. are now covered by a corporate commitment to reach net zero by 2050. We've worked with industry to accelerate this transition by investing in new technologies that reduce emissions and support good jobs for people. And we are accelerating industrial decarbonization by utilizing one of B.C.'s strongest assets in the fight against climate change – our supply of clean, abundant, and affordable hydro-electricity.

While we have made enormous progress in a few short years, we know there is much more to do. B.C. has not been immune to the challenges faced by other jurisdictions trying to reach their targets.

As required by our climate accountability legislation, government presents the latest information every year on progress to our emissions targets. New emissions projections show the road ahead is significantly more

challenging than when CleanBC was originally launched in 2018.

While there are several reasons for this shift – including revised emissions methodology from the federal government – it's clear that substantial new and sustained action is required to meet our commitments.



The CleanBC Roadmap to 2030 is our plan to achieve 100% of our emissions target while building a cleaner economy that benefits everyone. It includes a range of accelerated and expanded actions across eight pathways.

- Low Carbon Energy
- Transportation
- Buildings
- Communities
- Industry, including Oil and Gas
- Forest Bioeconomy
- Agriculture, Aquaculture and Fisheries
- Negative Emissions Technologies

The Roadmap will strengthen action in areas already showing positive results, as well as those at the earlier stages of transition. Each action is based on how affordable and available clean solutions are in each market – known as 'market readiness'. If low-carbon technologies are already available and affordable, for example, the

Roadmap will help increase their adoption on a wider scale through targeted supports, regulations and other policies. If technologies are limited in their availability and expensive, actions instead focus on supporting research, development, and commercialization to create affordable, clean options. This approach will help minimize costs and maximize benefits in the long run.

Foundational Roadmap actions include:

- A stronger price on carbon pollution, aligned with or exceeding federal requirements, with built in supports for people and businesses
- Increased clean fuel requirements and doubling the target for renewable fuels produced in B.C. to 1.3 billion litres by 2030
- An accelerated zero-emission vehicle (ZEV) law (26% of new light-duty vehicles by 2026, 90% by 2030, 100% by 2035)
- New ZEV targets for medium- and heavy-duty vehicles aligned with California
- Complete B.C.'s Electric Highway by 2024 and a target of the province having 10,000 public EV charging stations by 2030
- Actions to support mode-shift towards active transportation and public transit
- Stronger methane policies that will reduce methane emissions from the oil and gas sector by 75% by 2030 and nearly eliminate all industrial methane emissions by 2035
- Requirements for new large industrial facilities to work with government to demonstrate how they align with B.C.'s legislated targets and submit plans to achieve net-zero emissions by 2050
- Enhancing the CleanBC Program for Industry to reduce emissions while supporting a strong economy
- Implement programs and policies so that oil and gas emissions are reduced in line with sectoral targets
- A cap on emissions for natural gas utilities with a variety of pathways to achieve it
- New requirements for all new buildings to be zero carbon and new space and water heating equipment to be highest efficiency by 2030
- Implement a 100% Clean Electricity Delivery Standard for the BC Hydro grid
- A new program to support local government climate and resiliency goals with predictable funding
- Support for innovation in areas like low carbon hydrogen, the forest-based bioeconomy and negative emissions technologies
- Household affordability will continue to be a key focus, especially for those who need it most.



British Columbia's plan will be aligned with actions being taken at the federal, municipal and Crown corporation levels. When emissions reductions from these actions are considered, we expect B.C. to further surpass our 2030 emissions target.

These actions and others included in the Roadmap will help drive deeper emissions reductions at a faster pace and support clean economic opportunities.

In less than a decade, people across our province will live, work and play in a cleaner and more prosperous B.C. Almost all new vehicles sold in the province will be zero emissions. We'll see more people walking, biking and taking transit.



Our communities will be more comfortable with less pollution. New homes and buildings will no longer emit carbon pollution and will use energy much more efficiently, saving people money on their energy bills. They will be built using materials that are less carbon intensive. People will have more affordable options to retrofit their homes. The system that delivers natural gas to heat homes and businesses today will transition to also deliver cleaner fuels like renewable natural gas and hydrogen. And more of us will find jobs in the clean economy working to reduce pollution with innovative advanced technologies that are exported beyond our borders.

A central pillar of the Roadmap focuses on our abundant supply of clean and affordable hydroelectric power as an alternative to fossil fuels. B.C. is one of the few jurisdictions in the world with an electricity grid that can deliver close to 100% zero-emissions electricity to power our homes, businesses and vehicles. Further, by pairing this resource with our commitment to innovation and partnership between B.C.'s clean tech sector and traditional industries, we're

ensuring B.C. is ideally positioned for a world that is increasingly focused on near-term emissions reductions and reaching net-zero emissions by mid-century.

The Roadmap recognizes that we are at a defining moment of change and need to make sure we're ready for a global economy that is rapidly moving towards a future defined by net-zero emissions. It also builds on other efforts across government including the upcoming Climate Preparedness and Adaptation Strategy and economic plan, as well as work to modernize the forest sector and implement the recommendations of the Old Growth Strategic Review.

Nature often offers the best solutions to strengthening our response to climate change. In British Columbia, we are blessed to have a natural environment that sustains our health, strengthens our communities and builds hope for the future. The Roadmap demonstrates that at the core of our approach to climate change is a foundational commitment to protecting and preserving our environment now and for future generations.



CHAPTER 1: CLEANBC AND THE ROAD TO 2030

1.1 Accelerating Climate Impacts, Accelerating Climate Action

Climate change is often called the defining issue of our time. It demands simultaneous action on two fronts: reducing greenhouse gas emissions and making sure our homes, communities, businesses and infrastructure can withstand the impacts of a changing climate in the years to come.

It's hard work, but British Columbians are rising to the challenge – changing our behavior (what we buy, how we get around, how we heat and cool our homes), our economy (what we produce and how we produce it), and our energy system (how much and what kinds of energy we use, as well as how often we use them). More and more people are choosing electric vehicles, installing heat pumps in their homes and buildings, and investing in low carbon technologies and approaches.

These trends are encouraging. At the same time, we know we need to do much more. The pace and scale of climate change are accelerating, threatening so much of what we hold dear.

B.C.'S NET-ZERO COMMITMENT

Like our current emission reduction targets, B.C.'s commitment to a net-zero future will be backed by legislation. We'll engage with Indigenous communities, local governments, business, industry and others in 2022 to ensure the legislation is consistent with the targets, and the paths to reach them.

Net zero means that any greenhouse gas (GHG) emissions from our economy are balanced by equivalent amounts of GHG removals from the atmosphere. Working to achieve this balance will advance our economy, create good jobs and help to keep us competitive.

Net zero and the new global economic context

On top of these changes, international markets are shifting and demand is growing quickly for new climate-friendly technologies and services, renewable energy and low carbon products. Dozens of countries, accounting for roughly 70% of global GDP, have now adopted net-zero-by-2050 targets. Our neighbours and partners in the Pacific Coast Collaborative – Washington, Oregon and California – are significantly ramping up their own climate actions. And almost 20% of the world's biggest companies – representing annual sales of nearly \$14 trillion – now have plans to achieve net-zero emissions by 2050.³

During 2020, even with the global downturn created by COVID-19, investment in clean energy and climate solutions grew significantly. Companies and governments around the world put half a trillion dollars into renewable energy, electrified transport, electrified heat, energy storage, hydrogen production, and carbon capture and storage.⁴ And B.C. clean tech companies are at the forefront of this transition – with four on the 2021 Global Cleantech 100 list.

GLASGOW ALLIANCE

Over 250 firms with more than \$88 trillion in assets have joined forces to steer the global economy towards net-zero emissions. The Glasgow Financial Alliance for Net Zero, chaired by Mark Carney, UN Special Envoy on Climate Action and Finance and former Bank of Canada governor, brings together leading net-zero initiatives from across the financial system to accelerate the transition to net-zero emissions by 2050 at the latest.

Members include major asset owners and managers as well as banks with the power to mobilize trillions of dollars behind the transition to net zero.

Closer to home, the B.C. based Catalyst Business Alliance – a network of companies focused on clean growth – believes that climate change is the greatest risk to jobs and the economy. It champions strong climate and energy policy, and the creation of a resilient economy that benefits customers, employees, communities and the environment.

There's also a growing global movement to ensure that solutions are responsibly sourced and conform to high environmental, social and governance (ESG) standards. Investors with more than \$120 trillion worth of assets under management have signed on to the United Nations Principles for Responsible Investment, which advocates a greater focus on ESG investing.

These developments support the business case for increasing our climate ambition. B.C. is well positioned to meet the interests of ESG investors with abundant clean energy, a vibrant clean tech sector, clean industries and a rich, diverse and growing bioeconomy.

3 Taking stock: A global assessment of net zero targets. (23 March 2021). Available online: www.eciu.net/analysis/reports/2021/taking-stock-assessment-net-zero-targets

4 BloombergNEF 2021 Executive Factbook. (March 2 2021). Available online: www.about.bnef.com/blog/bloombergnef-2021-executive-factbook

We're also making progress in partnership with Indigenous peoples, as part of our commitment to implement the Declaration on the Rights of Indigenous Peoples Act. The Province and Indigenous peoples are working together to develop a province-wide, whole-of-government action plan, setting out a path towards reconciliation. The plan will describe the long-term actions needed to meet the objectives of the UN Declaration, along with specific actions the Province will take in the next five years.

We've shown that working together with Indigenous peoples creates more opportunities for everyone. As the plan is implemented, we will have renewed opportunities to build stronger partnerships and better incorporate Indigenous rights, perspectives and interests into provincial climate plans and policies. We have heard clearly from Indigenous peoples about the importance of early and meaningful engagement, and that more can be done to increase capacity to ensure Indigenous peoples can participate most effectively. There is also enormous opportunity that comes with mobilizing Indigenous resources to build new economic opportunities while protecting the environment. We will further strengthen our consultation and engagement work on climate action, including with First Nations Economic Development Officers (EDOs) or similar leadership groups from Nations that don't have EDOs.



Ongoing engagement with Indigenous peoples has informed and shaped this Roadmap, the Climate Preparedness and Adaptation Strategy and our continued partnership on shared climate objectives. This includes work with the First Nations Leadership Council, which is developing a B.C. First Nations Climate Strategy and Action Plan.

These actions are consistent with our commitment to address our greatest challenges in ways that benefit people, communities and the environment, along with the economy. This Roadmap provides another set of opportunities to make our society more inclusive and sustainable – by putting people first and ensuring we consider and mitigate impacts to B.C.'s diverse populations.

*"I would say with a pretty high degree of confidence that
in the next three years a net-zero commitment and a plan to achieve
it will be the norm for public companies"*

– Mark Carney, UN Special Envoy on Climate Action and Finance and former
Bank of Canada governor⁵

⁵ Financial Post. (September 21, 2021). Mark Carney says net-zero plan to be 'norm' for public firms in coming years. Available online: <https://financialpost.com/news/economy/mark-carney-says-net-zero-plan-to-be-norm-for-public-firms-in-coming-years>



1.2 How Does the Roadmap Work?

As we continue to implement the long-term actions in CleanBC, the Roadmap builds on our progress to date with an expanded and accelerated approach to meeting our targets and transforming markets for clean solutions. The Roadmap:

- Examines the eight key areas of our economy that generate emissions or can create solutions
- Assesses our progress in developing and deploying low- and zero-carbon products, approaches and technologies
- Sets out a series of pathways to support innovation in sectors where low carbon solutions are emerging, and drive deployment in sectors where they're already mature – helping to deliver more clean solutions, faster.

Some of the pathways are specific to economic sectors. Others cut across sectors to advance key objectives, such as developing our bioeconomy and exploring the potential of negative emissions technologies. Each pathway describes where we need to be by 2030 and maps out the most promising routes to get there – recognizing that some of these routes break new ground and will only reveal their strengths and weaknesses with time.

Foundational pathway actions to achieve our targets and advance market readiness for decarbonization include:

- Beginning in 2023, B.C.'s carbon tax will meet or exceed federal carbon price requirements, while considering impacts to household affordability. We'll also improve our industry programs to help meet our climate targets by supporting the adoption of new technologies while keeping our businesses competitive.
- New regulations will enhance the Low Carbon Fuel Standard, one of our most successful climate action measures. It requires fuel suppliers to make continuous reductions in their products' carbon intensity. We will double the target for renewable fuels produced in B.C. to 1.3 billion litres by 2030.
- We're accelerating our targets for zero-emission vehicles and we will set new standards for medium- and heavy-duty vehicles aligned with leading jurisdictions. By 2030, ZEVs will account for 90% of all new light-duty vehicle sales in the province (and targets of 26% by 2026 and 100% by 2035).

- We'll complete B.C.'s Electric Highway by 2024 and target having 10,000 public EV charging stations by 2030.
- A comprehensive Clean Transportation Action Plan in 2023 will support emission reductions by focusing on efficiency-first transportation options.
- A reduction of methane emissions from the oil and gas sector will lower emissions by 75% below 2014 levels by 2030, equivalent with the federal commitment. We'll also aim to eliminate methane emissions from oil and gas, mining, forestry and industrial wood waste by 2035.
- New large industrial facilities will be required to work with government to demonstrate how they align with government's 2030 and 2040 targets and submit plans to achieve net-zero emissions by 2050.
- The CleanBC Program for Industry will be enhanced to reduce emissions while supporting a strong economy.
- We'll implement programs and policies so that oil and gas emissions are reduced in line with sectoral targets.
- A greenhouse gas (GHG) cap for natural gas utilities – limiting emissions from the gas used to heat our homes and buildings and power some of our industries – will encourage new investment in low-carbon technologies and fuels (including renewable natural gas and hydrogen) and energy efficiency.
- By 2030, all new buildings will be zero carbon, and all new space and water heating equipment will meet the highest standards for efficiency.
- We'll implement a 100% Clean Electricity Delivery Standard for the BC Hydro grid.
- A new program will support local governments to continue taking climate action.
- We'll support innovation in areas like low-carbon hydrogen, the forest-based bioeconomy and negative emissions technologies.
- Household affordability will continue to be a key focus, especially for those who need it most.

Together, these measures will deliver significant reductions in GHG emissions. But the actions in this Roadmap are not just about climate change. Transforming our economy provides an opportunity to implement solutions that will also build on our broader social, environmental and fiscal priorities. These include:

- Advancing reconciliation with Indigenous peoples
- Improving people's health and well-being
- Spurring innovation in clean technologies that we can use and export to build a stronger economy and drive clean job creation
- Reducing inequalities so everyone has the opportunity to participate in, and benefit from, our growing clean economy
- Attracting investment based on sound ESG credentials.

This Roadmap will serve as an evolving plan to get us to our targets. Climate policy doesn't work if you set it and forget it, so the Roadmap will be updated as we move forward, learn from our experience and craft new solutions to meet our goals.

In the months and years ahead, we will continue to work with Indigenous peoples, recognizing their essential role as climate action partners. Many of the solutions we're developing and pursuing together will affect their territories, creating new opportunities for joint decision-making to advance self-government, self-determination and sustainable economic development in support of the Province's commitment to the *Declaration on the Rights of Indigenous Peoples Act*.

We will also continue working closely with local governments, industry, civil society partners and the independent [Climate Solutions Council](#) to further shape our pathways and hone our approaches to meet our targets for 2030 and beyond.

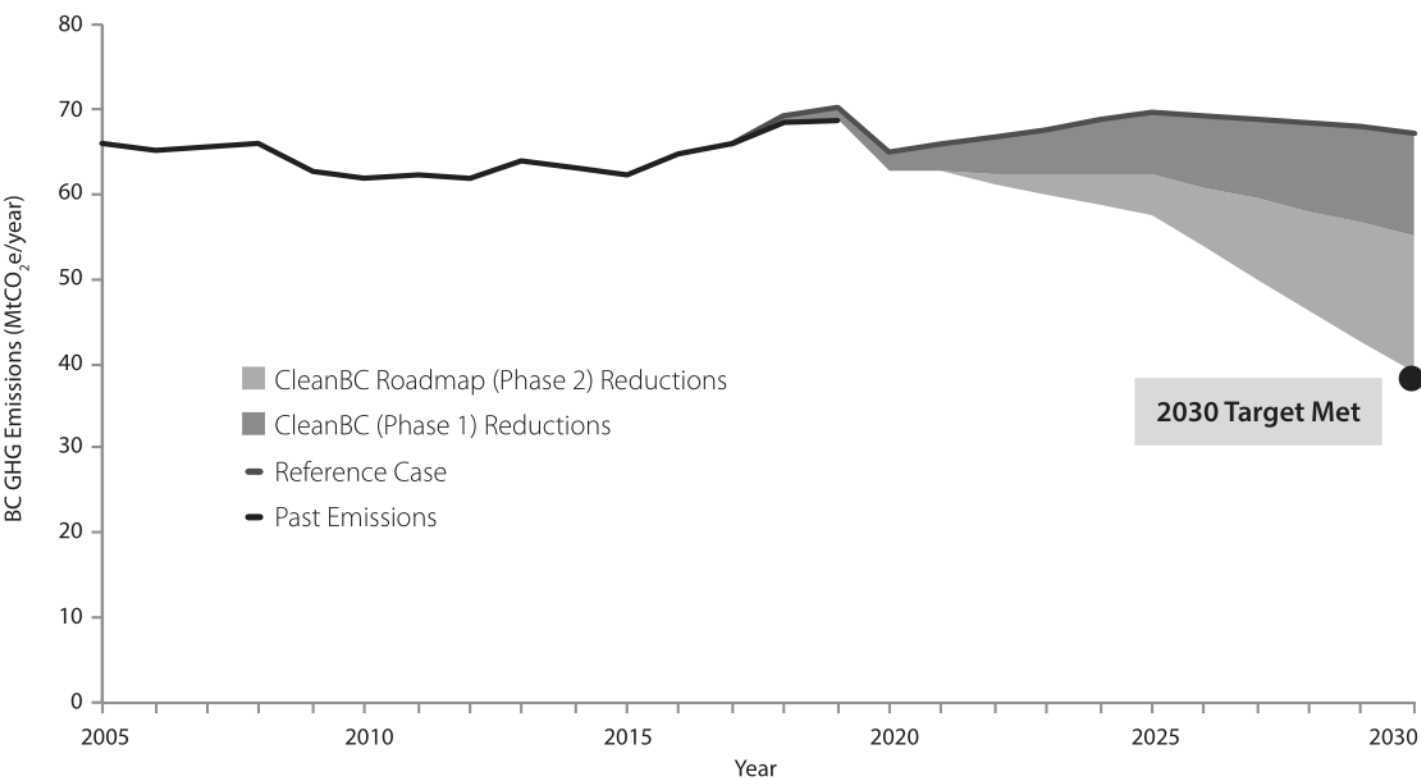
ENGAGEMENT WITH INDIGENOUS PEOPLES

Indigenous peoples across British Columbia were invited to contribute their knowledge and experience during engagements in 2021. The interests, opportunities, ideas and perspectives shared by Indigenous leaders and community members have helped shape the Roadmap to 2030. For example, through these conversations Indigenous peoples:

- Expressed interest in low carbon economic opportunities in their communities
- Affirmed the need for greater affordability and accessibility of CleanBC programs, leading to the commitment to a single-window access for all CleanBC incentives and programs and a renewed focus on affordability in program design
- Emphasized public climate education as key to support community decision making, understanding priorities and the importance of climate action, which influenced the Roadmap commitment to implement public awareness and education campaigns with a dedicated youth strategy
- Highlighted the importance of expanding clean transportation beyond ZEVs to ensure safe and reliable public transportation, which the Clean Transportation Action Plan's "efficiency first" approach will work to address
- Shared the need for cleaner transportation options suited to rural and remote living, contributing to the expansion of the Low Carbon Fuel Standard
- Expressed a desire for skills training to ensure participation in clean growth opportunities, as will be the focus in the upcoming workforce readiness framework
- Noted the high cost of transporting recycling and waste, leading to the commitment to a circular economy strategy.

In each pathway you'll find 'What we heard' boxes that provide examples of the perspectives of Indigenous peoples we worked with in the development of this Roadmap.

CleanBC Emissions Reductions



CLIMATE SOLUTIONS COUNCIL

B.C.'s Climate Solutions Council provides strategic advice on climate action and clean economic growth. It includes members representing Indigenous peoples, environmental organizations, industry, academia, youth, labour and local government. This Roadmap responds to many of the Council's recommendations, including:

- Increasing carbon tax in line with the federal benchmark while providing additional supports for emissions-intensive, trade-exposed industry
- Increasing the zero-emission vehicle standard for light-duty vehicles to between 80 and 100% by 2030
- Implementing medium- and heavy-duty, zero-emission vehicle regulations
- Supporting local governments
- Strengthening the Low Carbon Fuel Standard and implementing a new emissions cap for natural gas utilities.

By increasing the pace and scale of these and other CleanBC initiatives, the council says, "B.C. can both create more stable employment opportunities and achieve additional emission reductions that assist in getting the province on track for our 2030 climate change targets."



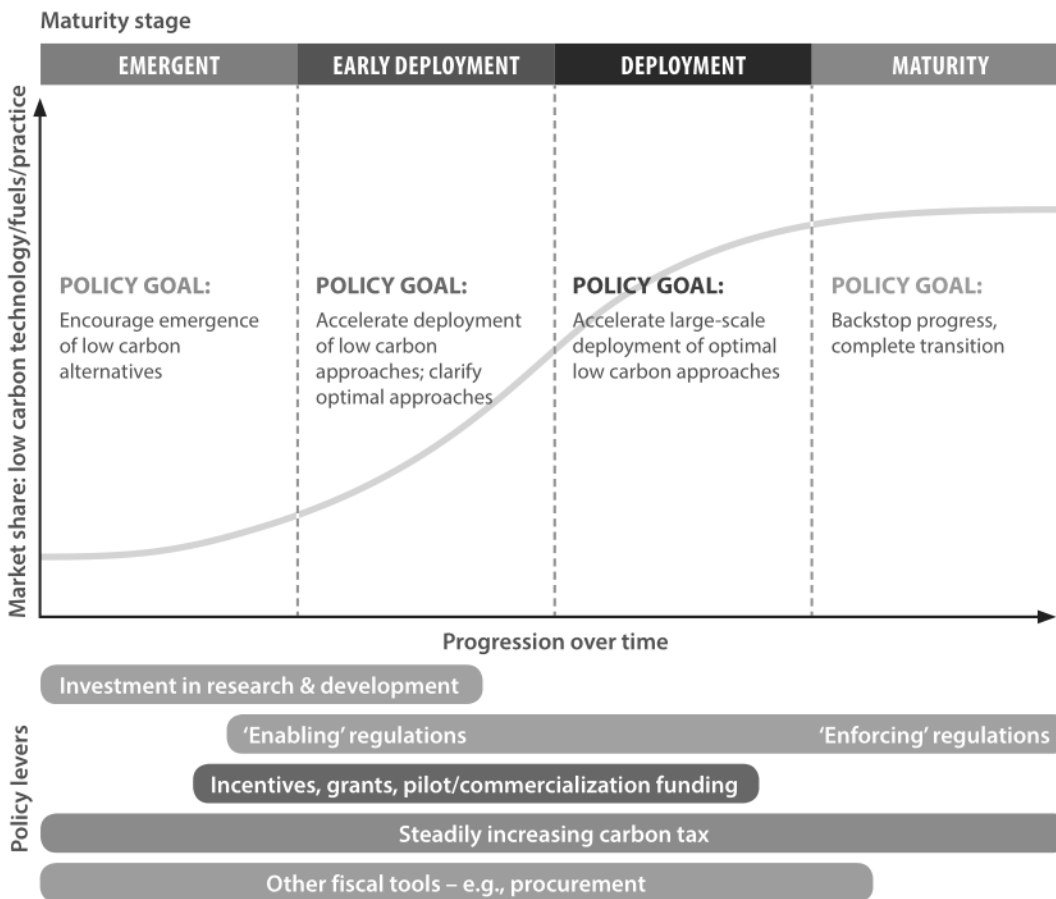
1.3 Climate Solutions – from Innovation to Wide-Scale Implementation

With CleanBC, our province began a set of bold, ambitious actions to transform our economy by shifting away from fossil fuels and towards clean, renewable energy and innovative technology. This Roadmap builds on our work to date and sets the stage for a broader, deeper transformation of large-scale societal systems – from how we produce and use energy to how we build low carbon, climate-resilient communities that keep us safe as the climate changes.

To reach this goal, we're focusing on tailoring approaches for each sector – recognizing that we need different tools for different market stages. Our actions will focus on growing markets for, and speeding up the adoption of, technologies we know are ready for deployment, such as zero-emission vehicles and heat pumps, while supporting research and development in areas where alternative solutions are still emerging.

In all cases, we will prioritize actions that solve unique problems or unlock co-benefits, such as improving people's health or achieving equity outcomes.

Stages of Market Readiness



Adapted from: Victor, D.G. et al. 2019. *Accelerating the Low Carbon Transition: The case for stronger, more targeted, and coordinated international action*. The Brookings Institution; and Meadowcroft, J. et al. 2021. *Pathways to Net Zero: A decision support tool*. Transition Accelerator Reports

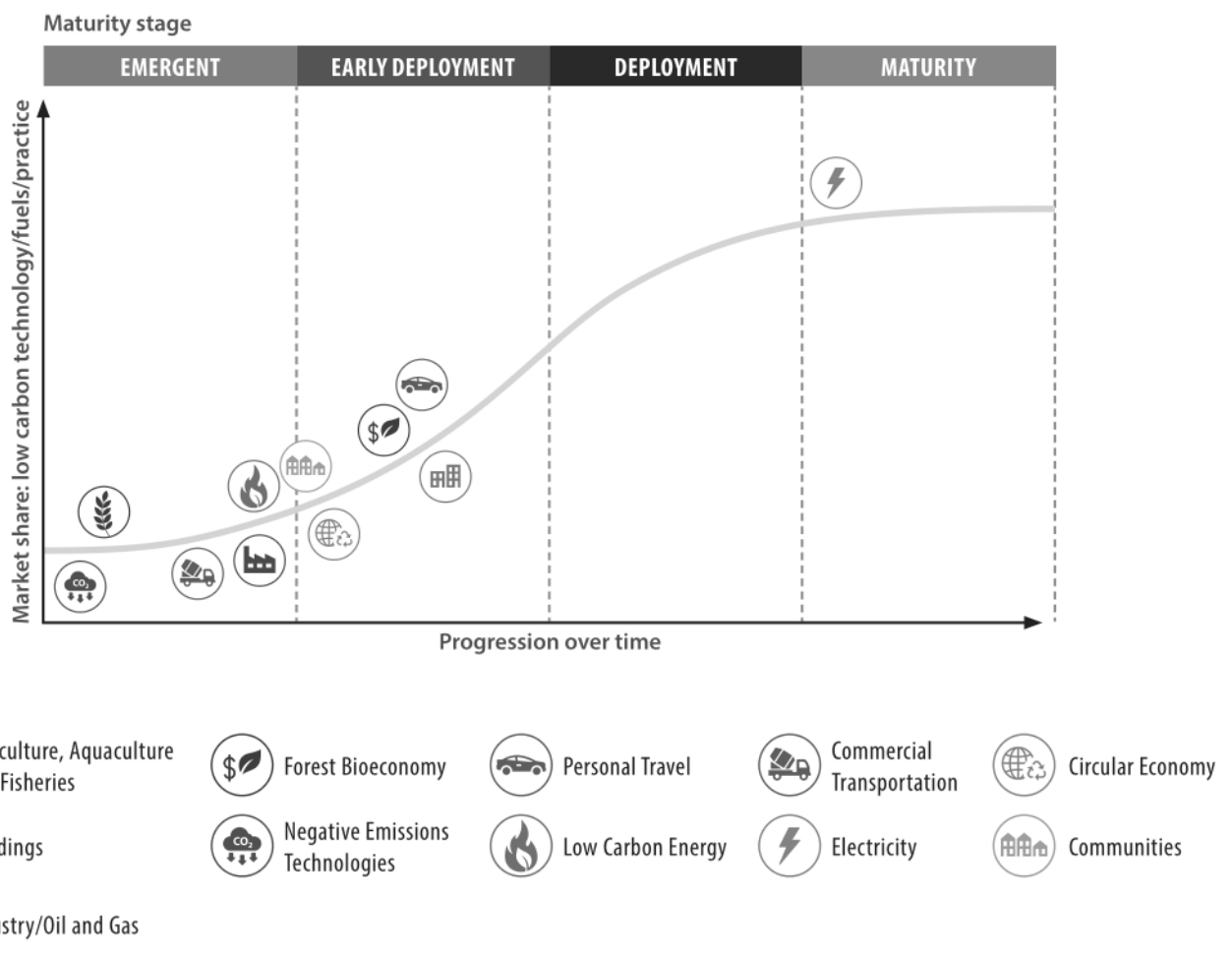
Market readiness indicators

To inform the types of actions needed to drive decarbonization, and to help us track our progress, we're developing a series of readiness indicators, which will be applied across the pathways. The indicators address key issues including:

- Market share of technologies, reflecting the extent to which low-emission solutions are being adopted
- Cost of transitioning to low-emission solutions
- Workforce and skills readiness, reflecting our capacity to adopt new approaches
- Economic and social opportunities, pointing to important co-benefits in areas such as reducing inequality and advancing reconciliation with Indigenous peoples.

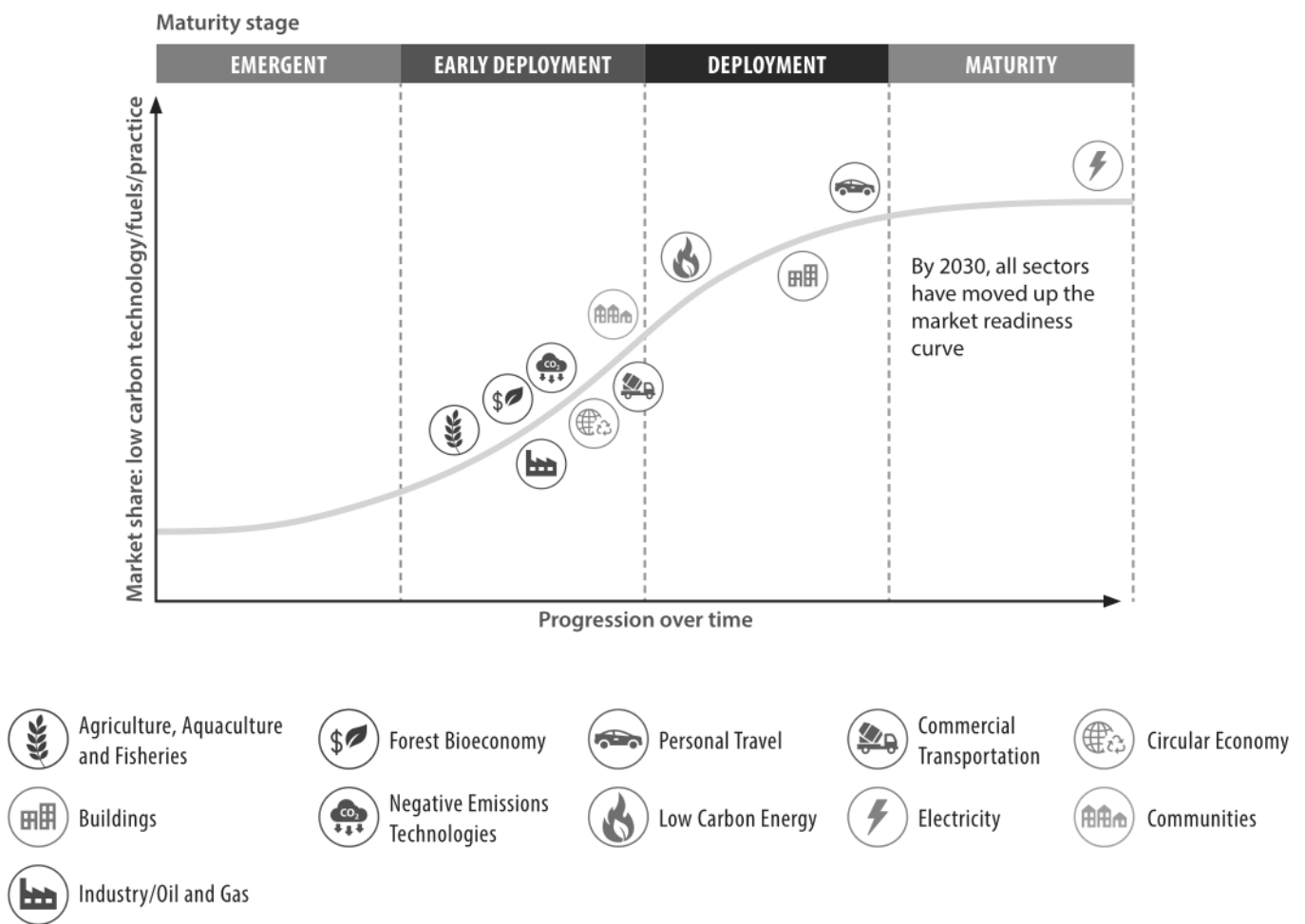
Based on these indicators, we've developed a baseline (below) showing where each of the pathways or Roadmap elements is starting from.

Current State of Market Readiness



By 2030, we will achieve the following advances in market readiness:

State of Market Readiness by 2030 with Roadmap



1.4 Modelling and Economic Analysis

To forecast the impacts of our climate actions, B.C. follows well-established best practices, using the best available data and sophisticated computer modeling. However, projections change over time as new information becomes available and methodologies are updated and it can be challenging predicting specific outcomes a decade or more away. As noted earlier, we now expect the measures in CleanBC (not including Roadmap actions) to achieve 32 to 48% of our 2030 targets – compared to the original estimate of 75%. The increased gap is due to several factors, including:

- Updated modelling: for example, new data on natural gas and electricity have lowered projected GHG reductions from industrial electrification
- Higher than expected emissions in sectors such as transportation and pulp and paper
- Changes in the federal approach to measuring emissions from sectors such as waste.

Detailed information on model updates and estimates are available as part of the 2021 [Climate Change Accountability Report](#).

Through the measures in this Roadmap we expect to reach 100% of the 2030 emissions target.

Impacts on jobs and GDP

In today's economy, citizens and the global financial community are insisting that governments and companies have credible, long-term plans to reduce climate pollution – making this Roadmap an economic necessity.

Based on provincial data, we expect investment in Roadmap initiatives to generate approximately 18,000 direct and spinoff jobs with:

- GDP increases of 19% by 2030 and 89% by 2050 from 2020 levels
- Job growth of 7% and 37% by 2030 and 2050 respectively from 2020 levels.

These are conservative estimates; the economic benefits could be even greater if, for example, new clean technologies turn out to cost less than we expect. The Roadmap, like any credible climate plan, will increase the cost of fossil fuels. Government will minimize the impacts by continuing the Climate Action Tax Credit and providing increased support to help people and businesses reduce emissions and costs.



CHAPTER 2: PATHWAYS

The pathways presented here are not unlike a road network, intersecting in various places and offering multiple routes to reach our destination. They're also affected by a number of broader, overarching initiatives that provide a foundation for ongoing climate action in British Columbia.

Carbon pricing

A price on carbon pollution is one of the most effective and economically efficient ways to reduce GHG emissions. Consistent with the recommendations of the Climate Solutions Council, B.C.'s carbon tax will continue to meet or exceed any federal carbon price requirements for 2023 and beyond.

What we heard

In the consultations that informed this Roadmap, we heard from many local governments, the Climate Solutions Council, and others that the carbon tax needs to be raised and in line with the federal benchmark. From industry, we heard there is overall support for carbon pricing, along with concerns about competitiveness and carbon leakage.

Between now and 2030, we'll analyze the price and program options that best support meeting our climate targets while protecting affordability and competitiveness for people and businesses. We are working to develop mechanisms to support long-term funding for climate action in B.C., including preparing for the impacts of climate change.

The federal government has announced a carbon price of \$170 per tonne in 2030, with annual \$15 increases beginning in 2023. B.C.'s current price is \$45 per tonne – already the strongest, most comprehensive carbon-pricing policy in Canada. Increasing the tax will support greater emissions reductions while encouraging sustainable growth and investment in new low carbon innovations.



At the same time, a higher carbon price can create challenges. For example, it can impact people who still depend on fossil fuels to get to work and heat their homes. It can also affect industries that sell their products in global markets, competing with producers who don't pay a carbon tax, or don't pay as much. Where carbon tax represents a significant operating cost that can't be addressed through investments in cleaner technologies, this can lead to carbon leakage – the movement of business, industry and jobs to places with lower carbon prices.

We'll explore other approaches to help make low-carbon options more affordable for low- and middle-income people in British Columbia. To promote greater fairness, we'll work with the federal government to explore ideas such as carbon border adjustments – ensuring that goods from places without strong climate policies face similar costs to those produced domestically. Through the CleanBC Program for Industry, B.C. uses carbon tax revenue to support emission performance improvements and competitiveness.

Government leadership

Every year since 2010, B.C. has achieved net-zero (carbon neutral) operations across the public sector, including health authorities, school districts, universities, and Crown corporations. As part of this Roadmap, we're building on our progress with the following new measures:

- Factoring climate considerations into government decision making, ensuring a focus on climate-resilient, zero- or low carbon projects. This priority will be delivered through capital projects as they include an assessment of these factors in their planning and approval processes
- Making zero-emission vehicles the default option for B.C. public sector fleets, with ZEVs accounting for 100% of light-duty vehicle acquisitions by 2027
- Requiring all new public sector buildings to align with our climate goals beginning with performance standards (2023) and moving to zero-carbon new buildings (2027)
- Developing and implementing a comprehensive strategy (2024) to transform our existing buildings portfolio to a low carbon and resiliency standard
- Implementing a public awareness and education campaign; this will include a dedicated strategy for connecting with youth and involving them in climate action
- Providing single-window access to all CleanBC incentives and programs.

Climate preparedness and adaptation

B.C.'s Climate Preparedness and Adaptation Strategy will be released in 2022, strengthening our capacity to anticipate and respond to the impacts of climate change in every part of B.C. These include sudden events like wildfires, floods and heat waves, as well as changes that happen more slowly like habitat loss, sea level rise and changes in growing seasons.

The strategy builds on the substantial work already underway in B.C. to adapt to climate change, lower long-term costs of impacts and help keep our communities safe, ensuring government programs and policies continue to achieve their goals as the climate changes. The strategy draws on a [2019 assessment](#) of the greatest climate risks to B.C. and outlines actions to prepare for them in ways that respect and respond to the diverse needs of people and communities across B.C.

Circular economy

A circular economy refers to a system where, by design, there is no waste – in contrast to the traditional Western model, which can be described as take-make-waste: we take raw materials, make them into products, use them and throw them away. The circular approach emphasizes sharing, reusing, repairing and recycling – eliminating waste and reducing GHG emissions while making better use of our resources.

What we heard

In the consultations that informed this Roadmap, people from Indigenous and remote communities said they face significant challenges and expenses to transport recycling and waste, especially when they have to use barges, forest service roads, or planes. There is support for developing a circular economy, including expanding B.C.'s continent-leading extended producer responsibility recycling system.



Circular economy in action: B.C. is keeping plastics in use and out of the environment

Learn more at: CleanBC.gov.bc.ca

With this Roadmap, we're taking more steps to advance the circular economy, especially in sectors such as agriculture and forestry. They generate byproducts that can be used to create low carbon building materials, renewable energy and other clean products – generating value and new opportunities while shrinking our carbon footprint.

We will develop a Circular Economy Strategy in 2022, supporting both our climate goals and our economy. Key components will include advancing the [Plastics Action Plan](#) and requiring more manufacturers to take responsibility for their products' eventual recycling, reuse or safe disposal.

The strategy will build on recent actions we've taken to expand our continent-leading recycling system, which will include electric vehicle batteries and chargers, mattresses, and electronic products such as solar panels, lithium-ion batteries and e-cigarettes.

A Workforce Readiness Framework: Preparing for a cleaner economy

The global transition to a low-carbon future will create new jobs in a range of sectors, and we want to make sure those jobs benefit people across B.C. A workforce readiness framework is being developed to ensure people are positioned for good jobs in a future, cleaner economy and that B.C. has the workers needed for sustainable economic growth and innovation.

Some jobs will be new. In other cases, existing jobs will evolve to incorporate new technologies, approaches and innovations. Some areas will see immediate changes while others will experience smaller shifts over time as we build a future workforce that is more inclusive, resilient and adaptable – in partnership with Indigenous peoples, industry, post-secondary institutions and others.

The framework will include measures to ensure B.C. has the number and diversity of workers to meet employers' needs; ensure there are opportunities for workers to upgrade their skills to adapt to changing jobs; and new training programs, standards and credentials that workers and employers are increasingly looking for as we transition to a low carbon economy.

The framework will guide work with industry, stakeholders, and Indigenous peoples to understand developing job growth opportunities and the skills needed for the current and future clean economy, and to identify barriers to train, attract and retain workers to support the just transition to a low-carbon economy.

EXTENDED PRODUCER RESPONSIBILITY (EPR) AND THE CLEANBC PLASTICS ACTION PLAN

B.C. has one of the strongest, most comprehensive recycling systems in North America known as Extended Producer Responsibility (EPR). EPR requires producers to take responsibility for the lifecycle of their products, including collection and recycling. B.C.'s EPR strategy recovers \$46 million worth of materials annually and reduces greenhouse gas emissions by more than 200,000 tonnes of carbon dioxide equivalent. It generates an estimated \$500 million annually through recycling programs, and collects approximately 315,000 tonnes of plastic from bottles, packaging and electronics. We're expanding this system to include electric vehicle batteries and chargers, solar panels, more types of lithium-ion batteries, mattresses and e-cigarettes.

B.C. is building on this leadership in EPR and developing the circular economy on plastics supported by the CleanBC Plastics Action Plan, which identifies actions to ban single-use items and reclaim more materials. These aims are bolstered by the CleanBC Plastics Action Fund that encourages innovation to turn used plastics into new products, as well as the Clean Coast Clean Waters initiative that supported the largest shoreline clean-up in the province's history. This initiative partnered with Indigenous and coastal communities, as well as local tourism operators and environmental groups. More than 550 tonnes of marine debris has been removed to date, with the majority of the material being reused and recycled.



2.1 Low Carbon Energy

Whether it's for producing food, lighting and heating our homes, moving people and goods or supporting industrial growth – energy underpins almost every aspect of our lives and economy in British Columbia.

To decarbonize our economy and accelerate the shift to clean technologies in the buildings, transportation and industrial sectors, we need to use energy more efficiently and replace fossil fuels with clean energy, including more clean electricity, renewable natural gas, low carbon hydrogen and liquid biofuels.

What we heard

In the consultations that informed this Roadmap, industrial operators said low carbon fuels can provide short-term flexibility as a substitute for natural gas but to ramp up production we need to address barriers, such as:

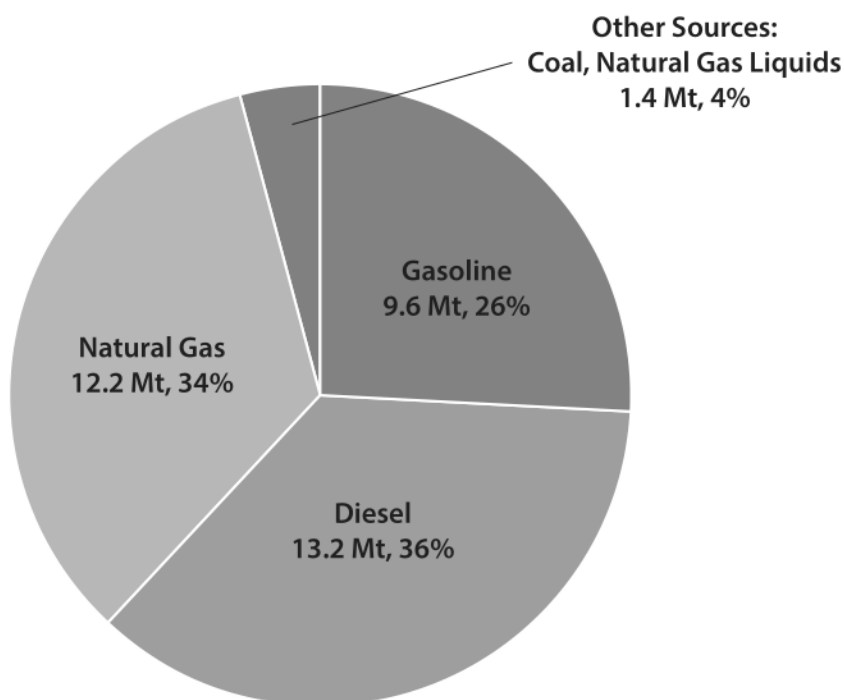
- *Biomass supply and uncertainties related to technology/capital purchases*
- *The impact of increasing transportation fuel costs on final production for certain industries*
- *The need for partnerships to implement the B.C. Hydrogen Strategy*

Indigenous peoples pointed to potential job creation opportunities through wood waste transfer facilities to create biofuel, as well as a waste collection program to support biofuel creation. There was also interest in more solar and wind power including cost sharing agreements.

Where we're starting from

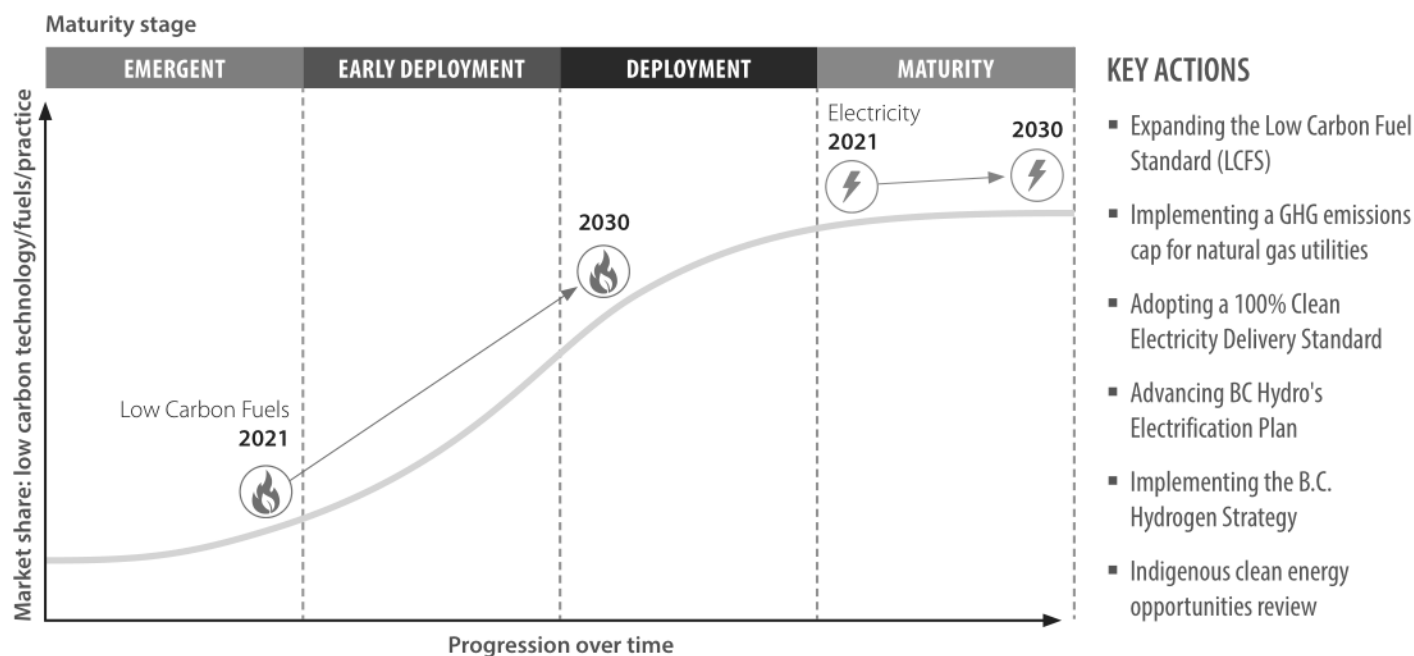
B.C. uses a diverse mix of energy types to meet demands from our transportation, industry and building sectors. Clean electricity currently accounts for only 19% of the total. Low carbon biomass and biofuels meet an additional 11%, and that proportion will rise in the future. However, most of our energy needs – the remaining 69% – are still met by fossil fuels, mainly in the form of refined petroleum products and natural gas. Fossil fuel production and consumption accounts for approximately 80% of B.C. emissions, underlining the need to move to cleaner fuels, faster. The pie chart below shows a breakdown of emissions by energy source.

2020 Emissions by Energy Source for Transportation, Buildings and Industry (Excluding Oil and Gas Sector)



Most of our electricity is clean and renewable, putting its market readiness stage at early maturity. Liquid biofuels are available but emergent, limited by a number of factors including the availability of feedstock, such as vegetable oils and tallow for products like renewable diesel. Low carbon gaseous fuels such as biomethane and hydrogen are also emergent, limited by factors such as capital investment, feedstocks and access to commercial-ready technologies.

Low Carbon Energy



THE PATH TO TRANSFORMATION – 2030 AND BEYOND

To maximize production of low carbon energy, we need a suite of regulatory and program initiatives that build on approaches we know work well and create incentives for new innovation.

Expanding the Low Carbon Fuel Standard (LCFS)

B.C.'s Low Carbon Fuel Standard is one of our most successful approaches to reducing GHGs from transportation. It requires fuel suppliers to progressively decrease the average carbon intensity of the fuels they supply to users in B.C.

With CleanBC, we increased its stringency by doubling the carbon-intensity reduction for gasoline and diesel from 10% to 20% by 2030. As part of this Roadmap, we intend to modernize the legislation governing the Low Carbon Fuel Standard, including to expand it to cover marine and aviation fuels beginning in 2023. We'll also consider new compliance options such as negative emissions technologies, while increasing the financial implications of failing to comply.

After careful assessment of impacts, we will raise our target beyond the current 20%, consistent with advice from the Climate Solutions Council, using 30% by 2030 as a starting point for further analysis and consultations. We will also double our commitment to develop production capacity for made-in-B.C. renewable fuels to 1.3 billion litres per year by 2030, creating new jobs and economic opportunities across the province.

Implementing a GHG emissions cap for natural gas utilities

B.C.'s existing pipeline infrastructure can play an important role in reducing greenhouse gases by transitioning away from delivering fossil natural gas to delivering renewable gas. B.C.'s gas utilities have been leaders in enabling this transition.

To help drive this transition, we will introduce a GHG emissions cap that will require gas utilities to undertake activities and invest in technologies to further lower GHG emissions from the fossil natural gas used to heat homes and buildings and power some of our industries.

Following further modelling and analysis, the cap will be set at approximately 6 Mt of CO₂e per year for 2030, which is approximately 47% lower than 2007 levels. Since emissions from gas consumption are linked to industry (excluding oil and gas) and the built environment, the cap is consistent with emissions targets for those sectors.

**From waste to clean energy:
B.C. companies are making the fuels
of the future**

Learn more at: CleanBC.gov.bc.ca



Utilities will determine how best to meet the target, which could include acquiring more renewable gases as well as supporting greater energy efficiency. Measures in CleanBC allow gas utilities to use renewables such as synthetic gas, biomethane, green and waste hydrogen and lignin to achieve this.

The B.C. Utilities Commission will have a mandate to review gas utilities' plans, investments and expenditures to ensure they're aligned with the GHG emissions cap and cost effective, helping to keep rates affordable for people and businesses.

Adopting a 100% Clean Electricity Delivery Standard

B.C.'s abundant supply of clean electricity is one of our greatest allies in the fight against climate change. Currently, an average of 98% is from renewable sources, mostly hydro power.

As part of this Roadmap, we are committing to increase this to 100% – making our power even cleaner; creating new opportunities in areas such as the bioeconomy; and helping to attract new businesses by supporting their sustainability strategies. BC Hydro will meet the new standard by ensuring it has produced or acquired sufficient clean electricity to meet the needs of its domestic customers and phasing out remaining gas-fired facilities on its integrated grid by 2030.

**Micro-hydropower provides clean energy
and jobs for Kitasoo Xai'xais Nation**

Learn more at: CleanBC.gov.bc.ca



Advancing BC Hydro's Electrification Plan

BC Hydro will advance its Electrification Plan by offering customers incentives, tools and business-to-business support to help them run their homes and businesses with clean electricity – and to reduce the time it takes to connect to the grid.

Subject to the approval of the BC Utilities Commission, over the next five years, the Crown corporation plans to invest over \$260 million to advance electrification, including more than \$190 million to promote fuel switching in buildings, transportation and industry and more than \$50 million to attract new customers – such as data centres and hydrogen producers – who can locate anywhere but see the advantages of B.C.'s clean, reliable, affordable hydroelectric power.

To help support and drive BC Hydro's focus on GHG reductions, we will add electrification and fuel-switching to its mandate, introduce an internal carbon price to evaluate electrification initiatives in regulatory applications, and enable investments in green hydrogen production and commercial vehicle incentives and infrastructure.

BC HYDRO'S INTEGRATED RESOURCE PLAN

BC Hydro is preparing an Integrated Resource Plan (IRP), which outlines how BC Hydro plans to provide reliable, affordable and clean electricity to meet customer demand now and into the future. It considers BC Hydro's 20-year projections of electricity demand in B.C. The IRP includes high and low load ranges and scenarios to account for a range of potential impacts, including support of CleanBC as policies and regulations are implemented and electrification ramps up to help achieve 2030 emissions reduction targets.

Implementing the B.C. Hydrogen Strategy

When burned or used in a fuel cell, hydrogen produces no carbon emissions. Hydrogen is one of the only solutions for decarbonizing sectors of the economy where direct electrification is not practical, such as heavy-duty transportation or industrial heating. When injected into the natural-gas grid, renewable hydrogen can displace fossil fuels for heating homes and businesses. Hydrogen can also be used for producing low carbon, synthetic fuels to reduce emissions in transportation and industry.

B.C.'s hydrogen sector is fueling green jobs

Learn more at: CleanBC.gov.bc.ca



B.C. is the first province in Canada to release a comprehensive hydrogen strategy. The [B.C. Hydrogen Strategy](#) outlines how the Province will support the development of production, use and export of renewable and low carbon hydrogen for the next 10 years and beyond. It complements the [federal hydrogen strategy](#), serving as a blueprint for regional development with 63 actions for the short term (2020-2025), medium term (2025-2030) and long term (2030-beyond).

Implementing the B.C. Hydrogen Strategy and developing our hydrogen economy will generate more clean economic opportunities, help reduce emissions and contribute to meeting our climate targets. The strategy's immediate priorities include scaling up production of renewable hydrogen, establishing regional hydrogen hubs and deploying medium- and heavy-duty fuel-cell vehicles.

OPENING THE B.C. CENTRE FOR INNOVATION AND CLEAN ENERGY (CICE)

With an initial \$35 million provincial investment leveraging an additional \$70 million from federal and private sources, the Centre for Innovation and Clean Energy will be a member-based, non-profit corporation, independent from government and private entities. The Centre will bring together innovators, industry, governments and academics to accelerate the commercialization and scale-up of B.C. based clean energy technologies. It will also be a catalyst for new partnerships and world-leading innovation to deliver near- and longer-term carbon emission reductions.

The Centre's initial focus areas for funding and project delivery will include:

- Carbon capture, utilization and storage
- Production, use and distribution of low-carbon hydrogen
- Biofuels and synthetic fuels (including marine and aviation fuels)
- Renewable natural gas
- Battery technology, storage and energy management systems.

The Centre will also initiate new technology pathways to accelerate larger reductions on the path to net-zero emissions by 2050.

Indigenous clean energy opportunities review

The actions in the Roadmap will open up a wide range of economic opportunities in B.C.'s low carbon energy sector. The Province is committed to working with First Nations to maximize the benefits for Indigenous communities. As a key step, the Ministry of Energy, Mines and Low Carbon Innovation and the First Nations Leadership Council, through their designate, the BC First Nations Energy and Mining Council, are launching a co-designed and co-led Indigenous Clean Energy Opportunities engagement process. Through the process, the Ministry and the Council will jointly engage First Nations to identify and support clean energy opportunities. They will also seek to collaborate with First Nations rights holders on the development of strategic clean energy policy and legislation, and meaningfully explore and develop policy, regulatory and program support to enable Indigenous participation within the growing and diverse clean energy sector.



2.2 Transportation

Transportation plays a major role in all our lives, connecting us to each other and the world. It's also our largest single source of GHG emissions, accounting for approximately 40% of our annual total in British Columbia. Actions that reduce these emissions have a wide range of benefits, from cleaner air and less congestion to better health, more clean jobs and economic development – benefits we'll see more of as we implement this Roadmap.

What we heard

In the consultations that informed this Roadmap, many groups supported accelerating and expanding zero-emission vehicle targets and enhancing funding and supports for active transportation. People in commercial transportation supported measures to predictably reduce emissions from medium- and heavy-duty fleets. In engagements with Indigenous peoples, we heard suggestions to expand clean transportation supports such as charging infrastructure, electric buses and public transportation, especially in the North.

Where we're starting from

The B.C. market for decarbonizing personal travel is at the early deployment stage. People can choose from more than 50 models of light-duty, zero-emission vehicles (ZEVs). However, these still cost about 20-40% more than equivalent non-ZEVs (before considering government rebates and lower maintenance and fuel costs). And more work is needed to build out the infrastructure for ZEV charging and hydrogen fueling. For active transportation, many communities still have significant gaps to fill to complete their networks for people of all ages and abilities.

The market for commercial travel is in the emergent stage, with ZEV solutions for medium- and heavy-duty vehicles starting to be deployed. Costs remain high and the commercial market is behind the personal market.

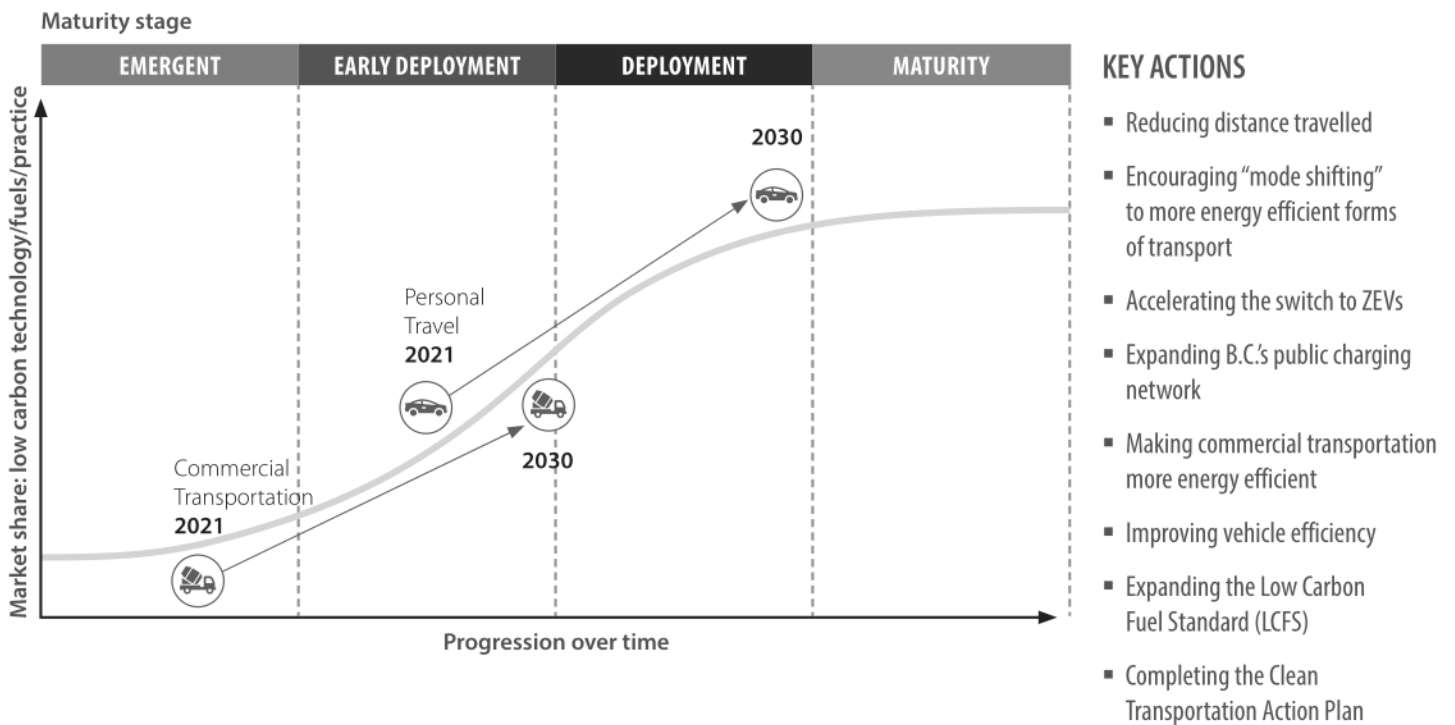
CLEANBC GO ELECTRIC COMMERCIAL VEHICLE PILOTS

The CleanBC Go Electric Commercial Vehicle Pilots program, launched in 2021, supports the switch to zero-emission commercial vehicles of all types, including trains, ships, trucks, construction and agricultural equipment, along with the necessary charging and fueling infrastructure.

The companion CleanBC Go Electric Specialty Use Vehicle Incentive program is supporting the transition for specialty vehicles, such as delivery trucks, passenger shuttles and a variety of other vehicles. Purolator is among the companies using the program to advance cleaner choices, running battery-electric trucks from its facility in Richmond.

More work is also needed to explore opportunities to move more goods by rail and shipping. This includes short sea shipping – using barges and waterways to get goods from ports to regional facilities. Ultimately, we expect there will be no single solution but a range of cleaner options for commercial transportation, reflecting the diversity of needs and opportunities.

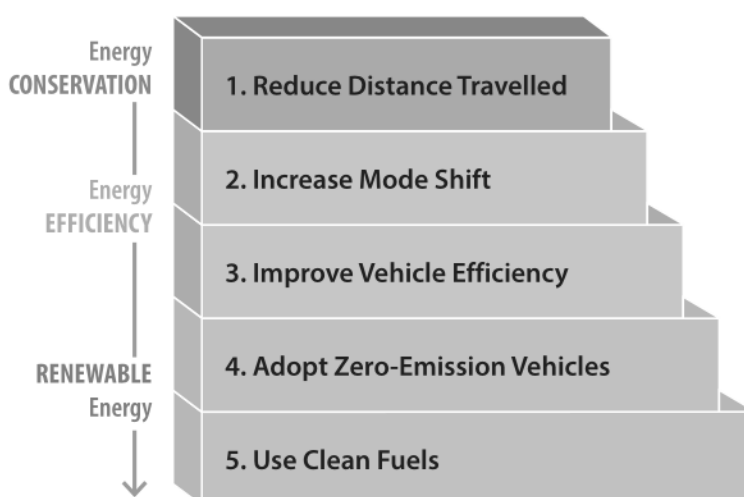
Transportation



THE ROAD TO TRANSFORMATION - 2030 AND BEYOND

Meeting our targets in the transportation sector demands aggressive action in addition to our world-leading ZEV and fuel standards. With this Roadmap, we're working across five areas, from encouraging more walking and cycling to reducing the carbon intensity of fuels. This approach, illustrated below, is based on an efficiency-first model, consistent with energy conservation principles.

In 2023, the actions in this Roadmap will be complemented by a new Clean Transportation Action Plan, setting out our next set of actions to reduce transportation emissions by 27-32% (from 2007) by 2030. Specific actions will be consistent with advice from the Climate Solutions Council.



Reducing distance travelled

As part of this Roadmap, we will work to reduce the distances travelled in light-duty vehicles by 25% by 2030, compared to 2020. This can be achieved in part by supporting more compact urban planning in partnership with municipalities to increase active transportation and public transit. We will also provide continued support for digital access and remote work where feasible, building on the lessons learned during the COVID-19 pandemic. In addition, we will work with ICBC to monitor vehicle kilometres travelled and develop additional ways to bring them down, helping to reduce emissions, transportation costs, collision risk, and wear and tear on our roads.

To help inform future decisions, we'll continue to collect and share transportation data, supporting both provincial goals and planning and analysis by partners, such as local governments and Indigenous communities.



Encouraging “mode shifting” to more energy efficient forms of transport

One of the surest ways to reduce our GHG emissions from transport is to choose the least energy-intensive and polluting ways to get around. For personal travel that generally means walking, cycling or taking transit. For commercial travel, it means moving more goods by rail, water or cargo bike where possible instead of using heavy-duty, on-road vehicles.

To encourage these shifts, we will establish energy intensity targets for personal and commercial transportation and work with key partners to:

- Increase the 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. In a 2019 survey, 24% of people in B.C. said they primarily used sustainable transportation (walking, cycling or public transit) to get to work.
- 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.

Accelerating the switch to ZEVs

B.C.'s Zero-Emission Vehicles Act, passed in 2019, has already helped to transform the marketplace. Thanks in part to government rebates, we're close to achieving our 2025 target, with ZEVs accounting for 9.4% of all new light-duty vehicle sales in 2020. To build on that momentum, we're accelerating our targets in alignment with automakers' published deployment plans. Our new light-duty ZEV sales targets are 26% by 2026, 90% by 2030 and 100% by 2035.

To support these targets, we will bring in "right-to-charge" legislation, allowing more people to install EV charging infrastructure in strata and apartment buildings. We will also introduce new ZEV targets for medium- and heavy-duty vehicles, in consultation with automakers, businesses and industry in alignment with the state of California.

Heavy-duty vehicles account for a large part of transportation emissions and modelling suggests the new targets will have a significant impact. Given the time required for research and engagement, we expect these targets will be in place by 2023.

Making cleaner models more affordable will help get more of them on our roads. And rising demand for cleaner vehicles will act as a further incentive for automakers, driving further improvements in efficiency and generating high-value jobs in ZEV research and development. We will explore other fiscal measures to broaden consumer access to ZEVs, accelerate market transformation and create a more sustainable fiscal framework for the ZEV transition.



Expanding B.C.'s public charging network

We will also ensure it's easy to charge your ZEV, wherever you are in the province. We will work with the private sector, utilities, Indigenous communities, the federal and local governments and others to achieve an overall target of B.C. having 10,000 public EV charging stations by 2030. This will include completing B.C.'s Electric Highway by ensuring broad geographic coverage across the Province for fast-charger EV sites by Summer 2024. BC Transit, TransLink and BC Ferries are also moving increasingly to zero-emission vehicles.

Making commercial transportation more energy efficient



**Delivery trucks are getting cleaner –
and bikes are sharing the load**

Learn more at: CleanBC.gov.bc.ca

In partnership with industry and other key stakeholders, we will work to make our commercial transportation systems more competitive while accelerating innovation and driving the adoption of clean B.C. technologies to support and advance climate change goals. As noted above, we're committed to reducing the

energy intensity of goods movements by 10% in 2030, 30% by 2040 and 50% by 2050. We'll also use better data technology to make our transportation systems more efficient, intelligent and competitive.

Having one of the cleanest, greenest transportation networks in the world will add to our competitive advantages, supporting economic growth along with GHG reductions.



Improving vehicle efficiency

When you need to use a vehicle, it makes sense to choose the most efficient one. And this is another place where government can help move the market through regulations, standards and incentives.

To help drive improvements in vehicle efficiency, we'll work with business and industry to encourage faster fleet turnover for the oldest vehicles, work with the federal government to strengthen emissions standards, and develop new equipment regulations for air, rail, marine and off-road vehicles. We'll also identify how the CleanBC Heavy Duty Vehicle Efficiency Program can drive further improvements. For example, the Province could offer higher incentives for tires that reduce fuel consumption on specific types of commercial heavy-duty vehicles and encourage the use of speed-limiting technology and electronic tracking to improve safety while continuing to reduce GHG emissions.

Expanding the Low Carbon Fuel Standard (LCFS)

As noted in the Low Carbon Energy pathway, the Low Carbon Fuel Standard is one of our most successful approaches to reducing GHGs from transportation. It requires fuel suppliers to progressively decrease the average carbon intensity of the fuels they supply to users in B.C.

As part of this Roadmap, we will increase its stringency, consider expanding it to apply to marine and aviation fuels, and consider allowing new compliance options such as negative emissions technologies.

Completing the Clean Transportation Action Plan

In addition to the specific actions in this Roadmap, we will develop a comprehensive Clean Transportation Action Plan in 2023. The Plan will highlight additional steps government will take to reduce emissions in the transportation sector, including ports and airports, to meet our 2030 targets and align with the development of complete, compact, connected communities to reduce vehicle travel.

Electric ferries are the wave of the future

Learn more at: CleanBC.gov.bc.ca





2.3 Buildings

Buildings – the places where we live, work, learn and play, and a vital component of B.C.’s economy – account for about 10% of the province’s GHG emissions, mainly from the energy we use to heat them and provide hot water.

Our building sector has been getting steadily cleaner and greener in recent years, but current emissions reductions are not at the scale needed to meet our 2030 targets.

INVESTING IN AFFORDABLE HOUSING ACROSS B.C.

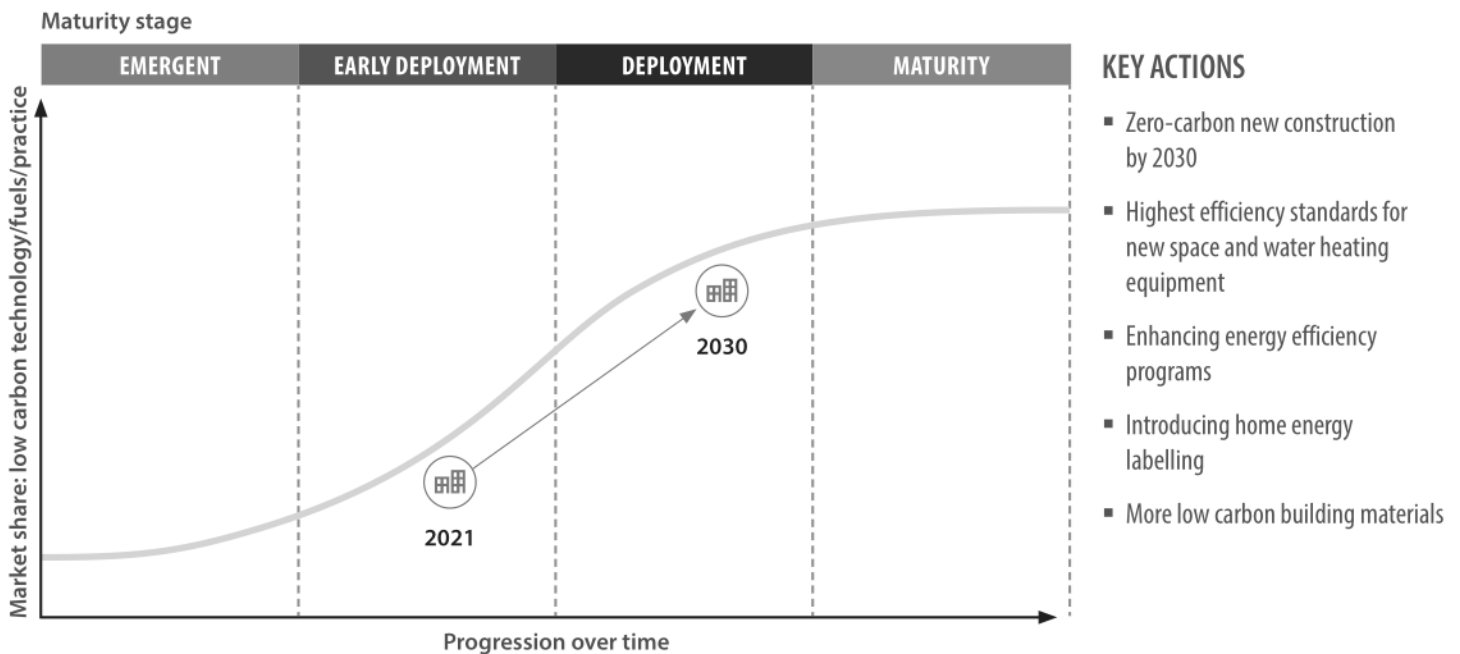
The Province is working to make housing more affordable for everyone in B.C. With \$7 billion dedicated over 10 years, we’re making the largest investment in housing in B.C.’s history. By working with partners, including local governments, we’re delivering 114,000 affordable homes over this time period. In just over three years, more than 30,000 new affordable homes are already complete or underway in more than 100 communities across the province. And we continue to make progress on our plan to retrofit 51,000 units of publicly owned social housing over ten years, making them more energy efficient, less polluting and safer, while significantly reducing heating costs for residents.

Where we're starting from

The decarbonization of buildings is at an early deployment phase. Households and businesses can choose from a range of low carbon solutions and B.C. is already a leader in this space. New construction is steadily moving towards the highest efficiency levels and builders are growing their capacity to make new buildings cleaner, supported by increasing adoption of the Energy Step Code, which sets higher energy-efficiency standards than the base BC Building Code. However, we still rely on fossil fuels to meet more than half our energy needs in buildings.

Low carbon electric technologies like baseboard heaters are commonplace, but not the most efficient options available. Heat pump technologies are more than twice as efficient and cost less to operate. Plus, they double as air conditioners in increasingly hotter summers and can include air filtration, protecting people from wildfire smoke, pollen and pollution. Heat pumps are gaining in market share, with options available for all major building types and climates. However, costs are still a barrier for many households and businesses.

Buildings



What we heard

In the consultations that informed this Roadmap, a wide range of groups including local governments, utilities, Indigenous peoples, professionals and organizations, shared their views on decarbonizing buildings, such as:

- *Regulating carbon as well as energy efficiency in the BC Building Code for new buildings*
 - *Accelerating highest efficiency heating equipment standards for existing buildings*
 - *Addressing affordability impacts especially for those who need it most*
 - *Integrating climate resilience, for example, to address heat waves and air quality issues*
 - *Considering unique Indigenous geographic and cultural needs*
 - *Ensuring program incentives support and align with future building codes and standards.*
-

THE PATH TO TRANSFORMATION – 2030 AND BEYOND

Zero-carbon new construction by 2030

Current requirements for new construction focus on energy efficiency without directly addressing the issue of GHG emissions. Since natural gas is still a dominant, low-cost energy source for buildings, efficiency requirements alone are not enough to meet our climate targets.

That's why we're adding a new carbon pollution standard to the BC Building Code, supporting a transition to zero-carbon new buildings by 2030. We're already working with local governments to develop voluntary carbon pollution standards. Those communities will serve as pilots for future province-wide requirements. The standard will be performance-based, allowing for a variety of options including electrification, low carbon fuels like renewable natural gas, and low carbon district energy.

In 2023, we'll review our progress and, based on what we've learned, we'll start phasing in provincial regulations over time (2024, 2027, 2030). We'll also incorporate energy-efficiency standards for existing buildings into the BC Building Code starting in 2024.

Highest efficiency standards for new space and water heating equipment

Space and water heating are the primary drivers of GHG emissions from buildings. To meet our targets, we need to ensure these functions are super-efficient, improve resilience and, wherever possible, run on clean electricity or other renewable fuels. To help accelerate this transition, we're committing to highest-efficiency standards for new space and water heating equipment by 2030, and earlier where feasible.

After 2030, all new space and water heating equipment sold and installed in B.C. will be at least 100% efficient, significantly reducing emissions compared to current combustion technology. Electric resistance technologies like baseboard and electric water heaters are 100% efficient: they convert all the energy they use into heat. But heat pump technologies exceed 100% efficiency by capturing and moving ambient heat, without having to produce it. The new requirements will encourage more people to install electric heat pumps while continuing to allow the use of electric resistance technologies. They will also allow hybrid electric heat pump gas systems and high-efficiency gas heat pumps.

As building owners, professionals, tradespeople and supply chains prepare for these significant shifts in how we build in B.C., the Province will continue to support market readiness and affordability through CleanBC Better Homes and Better Buildings rebates and financing, innovation funding, technical guidance and ongoing industry training.

CLEANBC BETTER HOMES INCOME QUALIFIED PROGRAM

CleanBC Better Homes is B.C.'s online hub for homeowners to access information, rebates and support to reduce energy use and greenhouse gas emissions in their homes.

The CleanBC Better Homes Income Qualified Program is a new, time limited, efficiency and electrification offer that provides high-value incentives to low- and moderate-income households. It complements existing residential energy efficiency programs to help make life more affordable while improving the quality, comfort and resiliency of homes, saving energy, and reducing GHG emissions.

Enhancing energy efficiency programs

Energy companies like BC Hydro and FortisBC have been working for years to encourage efficiency, offering information, tools and support and partnering with the Province to provide incentives and rebates. Utility-funded programs have been effective in reducing emissions, but like so many aspects of our climate-change response, they need to go further, building on initiatives in CleanBC to support the deep reductions needed to meet our long-term targets.

We'll achieve that, in part, with updated regulations 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. Instead of seeing incentives for conventional gas-fired heating equipment such as furnaces and boilers, consumers will see more support for building-envelope improvements such as insulation and better windows, and all kinds of high efficiency heat pumps – electric, gas and hybrid. We'll also look for ways to further coordinate and integrate energy efficiency programs to make them more effective and easier to access.

We will proceed with the next steps on a Property Assessed Clean Energy (PACE) program, which is a form of financing for energy retrofits designed to help building owners save on energy costs and reduce greenhouse gas emissions. PACE programs link an energy improvement loan to a specific property through a municipal tax lien. The annual payments for the improvements are tied to the property, not an individual, and paid through local government property taxes. This allows for longer terms, helping to reduce upfront loan repayment costs for building improvements. If the property changes hands to a new owner, the outstanding balance of the PACE loan is also transferred over to the new owner.

Introducing home energy labelling

We've done it for years with appliances and vehicles. Now we're putting tools in place to show people how energy efficient their next home could be. B.C. home sale listings will include an energy efficiency rating or label, letting buyers know what their energy costs and carbon footprint will be. Along with raising public awareness, home energy labelling can motivate owners to invest in retrofits that save energy and cut GHG emissions, knowing it will impact future salability.

As a first step, we will introduce a user-friendly, web-based, virtual home-energy rating tool to let people see how efficient their homes are. The tool will be linked to the Better Homes web hub, helping to make CleanBC and utility program offers more accessible. In-home EnerGuide assessments will continue to play a role where homeowners want a more in-depth evaluation, or where homes are too unique for virtual energy ratings to be accurate.

**Hartley Bay heats up (and cools down)
with energy saving heat pumps.**

Learn more at: CleanBC.gov.bc.ca



More low carbon building materials

Much of our work to date around cleaner buildings has focused on the amount and types of energy they use. The next bold step is to reduce embodied carbon, which refers to the total GHG emissions created through a building's lifecycle – from material extraction through manufacturing, transportation, construction, maintenance, and end-of-life disposal or reuse.

One approach is to use low carbon building materials, such as mass timber, wood-based insulation, carbon-absorbing concrete, and concrete made with lignin fibres from trees and other plants. Along with reducing embodied carbon, choosing cleaner materials can support a waste-free, circular economy while creating new opportunities in sectors such as forestry where the emphasis is shifting from high-volume to high-value products.

To help build the market for these cleaner materials, we will develop a Low Carbon Building Materials Strategy by 2023 that includes a holistic approach to decarbonizing buildings, initially emphasizing public sector buildings, supporting the development and implementation of embodied carbon targets for public sector buildings by 2030. We're also developing methods for quantifying and analyzing the total embodied carbon of our built environment and identifying pathways to reduce it.





2.4 Communities

B.C.'s local governments play a vital role in meeting provincial climate targets. Along with directly controlling emissions from their own facilities, operations and vehicle fleets, municipalities and regional districts have the capacity to influence about 50% of our GHG emissions through decisions on land use, transportation and infrastructure that affect where people live and work, how they get around, and how their communities grow and change with time.

This puts local governments on the front lines of climate action, where all these policies converge.

Local Government Relative Influence over GHG Emissions

High ← —————→ Low

Municipal infrastructure,
buildings and fleet

Transportation network
Land use patterns
Solid waste
Building efficiency
standards

Transportation mode
share
Residential and business
energy efficiency
Food security

Air travel
Industrial energy efficiency
Vehicle standards
Energy utilities

Adapted from: Options to Accelerate Climate Action. Available online: <https://kelownapublishing.escribemeetings.com/filestream.ashx?DocumentId=29429>

What we heard

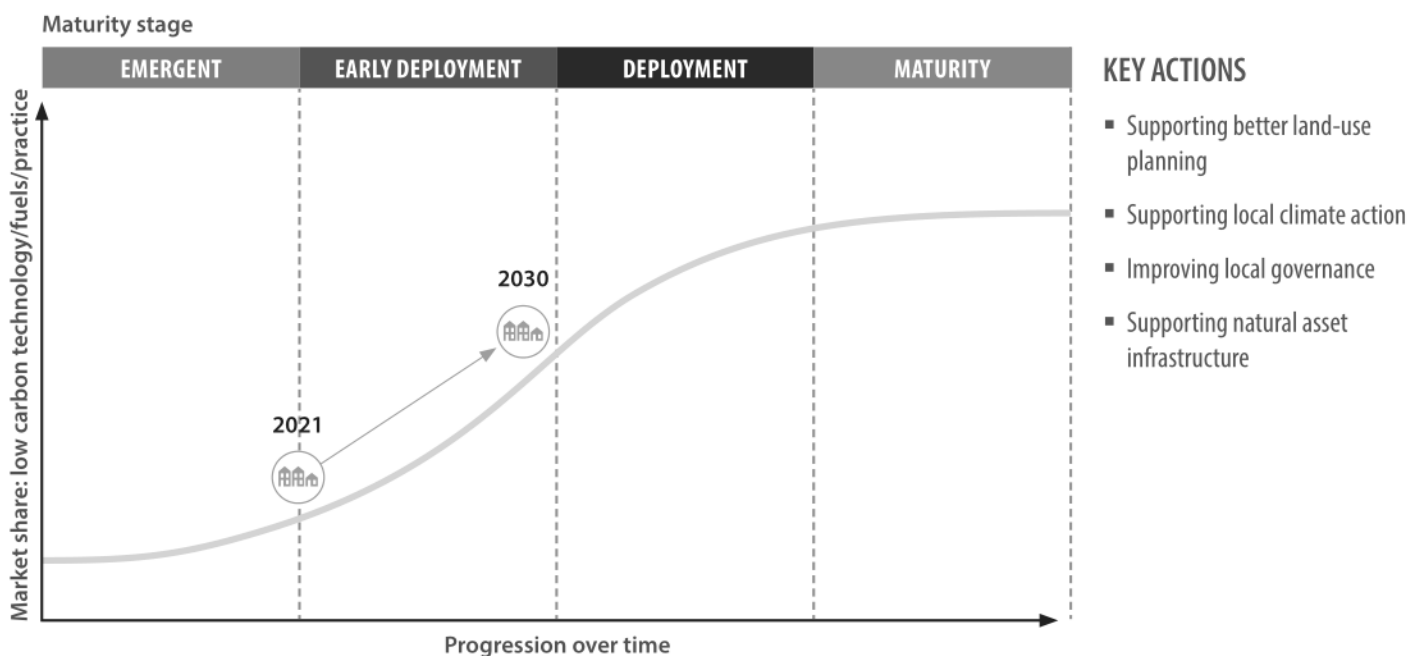
In the consultations that informed this Roadmap, many local governments shared their views regarding the need to:

- *Provide sufficient, flexible and guaranteed climate action funding*
 - *Enable local governments to regulate via opt-in legislation and expanded authority*
 - *Target capacity constraints through coordination, funding and tailored support*
 - *Consider legislative changes to better integrate climate action into Official Community Plans and take a more holistic approach to integrate climate resilience*
 - *Increase ZEV targets, carbon tax and the Low Carbon Fuel Standard.*
-

Where we're starting from

Since 2008, virtually all of B.C.'s local governments have signed the B.C. Climate Action Charter, a voluntary agreement to work toward corporate carbon neutrality, measure community-wide emissions and create complete, compact, more energy-efficient rural and urban communities. Many have ambitious targets and much has been achieved. However, within communities – especially in smaller and rural areas – capacity, environment, geography and size can add to the challenges of taking climate action.

Communities



THE PATH TO TRANSFORMATION – 2030 AND BEYOND

Transformation for this sector is closely tied to actions in the other Roadmap pathways, including transportation, buildings and low carbon energy, all of which have significant impacts on communities' GHG emissions and will require local government leadership to implement. In this pathway, our work addresses land-use planning, infrastructure and governance – key elements contributing to the larger climate action picture.

Supporting better land-use planning

Land-use planning links communities to the environment and the economy. It's multi-faceted, complex work that affects people's daily lives and plays a large role in shaping how communities will look, feel and function in the future. As part of this Roadmap, we'll work with municipalities and regional districts to enhance their work on land-use planning by:

- Providing better supports, tools and guidance
- Making data available to help inform decisions and assess progress
- Using a climate lens to review provisions in areas such as Regional Growth Strategies, Official Community Plans and zoning.

INTEGRATING TRANSPORTATION AND LAND-USE PLANNING

The Province is developing an integrated planning approach to better align transportation and land-use planning. The goal is to integrate future transportation investments with local and regional development plans, supporting the seamless movement of people and goods, enabling trade, preparing for future growth, and encouraging the development of diverse, affordable, resilient connected communities that provide the amenities, housing and quality of life people value.

As communities grow, we will support them to better align land-use and transportation planning to build connected, mixed-use communities where more people can live closer to jobs, services and transportation choices, helping to reduce commute times and greenhouse gas emissions. Climate sensitive land-use planning can also reduce emissions from deforestation by reducing urban sprawl.

Supporting local climate action

Local governments are climate action leaders and we want to make sure they maintain their momentum. The Province will partner with local governments to find new ways to support their work. This will include establishing a new program in 2022 to support local government climate actions through flexible, predictable funding. And we will continue to work with federal partners to enable local governments, Indigenous communities and stakeholders to apply a climate and resilience lens for all major infrastructure funding applications. This will help ensure that B.C.'s future infrastructure is clean, low carbon and able to withstand the impacts of a changing climate.



Improving local governance

B.C.'s *Community Charter*, the *Local Government Act* (LGA) and the *Vancouver Charter* define the core authorities of local governments and guide their decision making across a range of areas including land-use planning. Because better land use is essential to climate action, we will evaluate opportunities to strengthen the local government legislative framework – working with municipalities, regional districts, Indigenous communities and other key partners to identify where improvements may be needed.

We're also taking steps to re-invigorate and refresh the Province's partnership with local governments and the Union of BC Municipalities (UBCM) through the Green Communities Committee, established under the Climate Action Charter. Committee members support the development of strategies, actions, supports and incentives to advance climate action in all of our communities. They also work with local governments to build their capacity to plan and implement climate change initiatives.

Other actions in this pathway will include:

- Supporting access to GHG emissions data related to buildings, transportation and waste
- Enhancing the existing Community Energy Emissions Database for local governments and Indigenous communities
- Working to develop regionally specific adaptation and resilience strategies as part of B.C.'s Climate Preparedness and Adaptation Strategy; this includes supporting access to data needed for hazard and land-use risk reduction.

Supporting natural asset infrastructure

Natural assets such as aquifers, forests, streams, wetlands and foreshores provide important environmental services equivalent to those from many engineered assets. When we keep them healthy, they're also inherently resilient and adaptable to climate change. With effective monitoring, maintenance and rehabilitation, natural assets can provide services and add value for decades in ways that many engineered assets cannot match. Supporting natural assets can also reduce deforestation, leading to lower emissions.

As part of this Roadmap, we will support the development of natural asset infrastructure for local governments and Indigenous communities, aligned with local government climate initiatives.



2.5 Industry, Including Oil and Gas

B.C.'s industries are making great strides in low carbon innovation, delivering some of the cleanest industrial products of their kind in the world. Keeping them competitive is both an economic and environmental imperative. We produce resources the world needs, and we can make them with a smaller carbon footprint than most of our competitors, helping to address the impacts of climate change worldwide. If production moves to places with less environmentally friendly practices, the planet will be worse off and so will our economy.

To meet our climate targets, B.C. companies will need to continue investing in low carbon technologies and practices. In some cases, they will need support to further reduce emissions so they can stay competitive, attract new investment and showcase their successes to the world.

Where we're starting from

The market for fully decarbonizing large industry in B.C. is at the emergent stage, with a number of solutions and technologies being piloted or demonstrated. Because each industrial facility is different, there is no one-size-fits-all solution, and some operators are farther along the low carbon continuum.

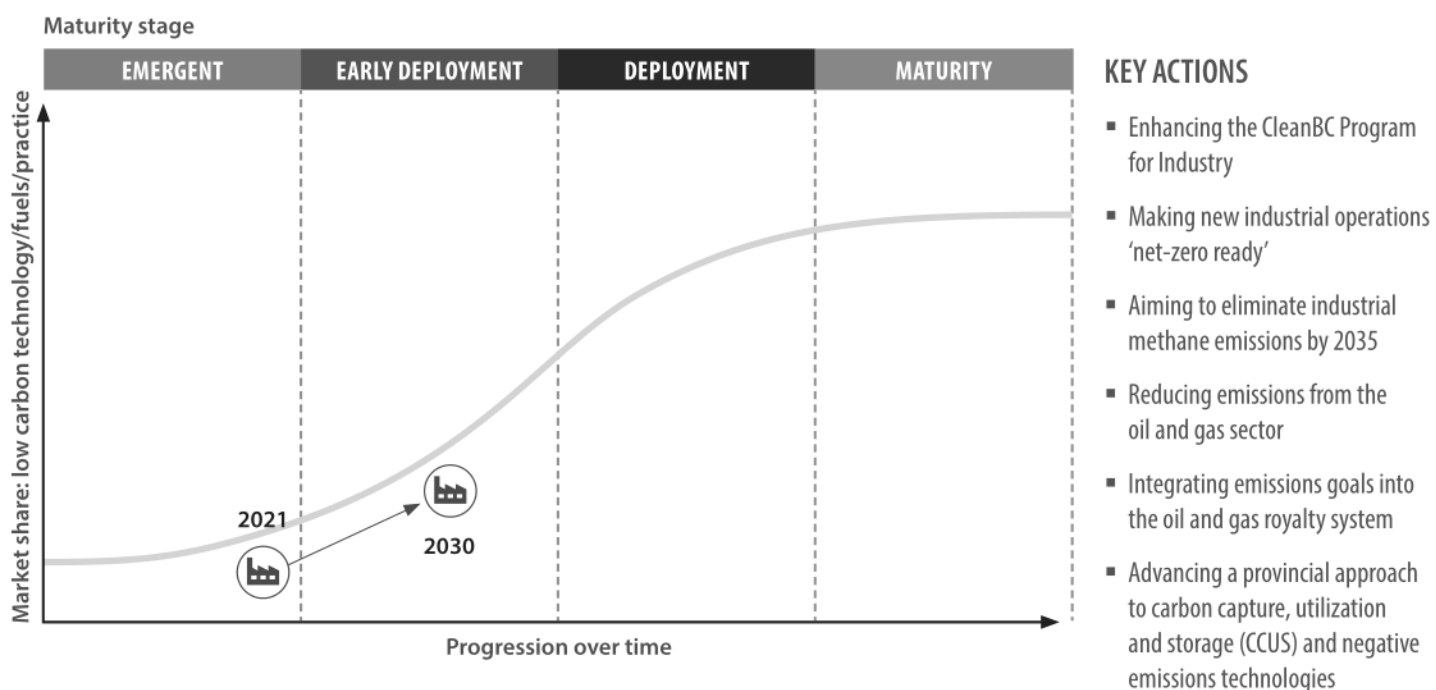
Commercial deployments are also at different stages, largely due to economic factors including cost, scale and regulatory considerations. Promising technologies such as carbon capture and storage are still in early development. And, while we're making progress towards reducing methane emissions in some sectors, we still have work to do on measuring and managing them in others.

What we heard

In the consultations that informed this Roadmap, industry leaders stressed the need to leverage their low carbon advantage while building on our natural resources to create opportunities for low carbon growth, including:

- Providing a predictable and forward-looking policy landscape that allows for long-term emissions reduction planning and investment
- Increasing protection for emissions-intensive trade-exposed industry and considering flexible options, such as offsets or credit generating systems, to help address competitiveness concerns
- Providing clarity on how to advance carbon capture, utilization and storage projects, including through regulatory certainty and fiscal measures
- Tackling major barriers to electrification such as high initial investment and operating costs and timing uncertainty
- Advancing low carbon fuel production and use to fill specific niches within industry.

Industry, Including Oil and Gas



THE PATH TO TRANSFORMATION – 2030 AND BEYOND

To help meet our climate targets and keep B.C. industry at the forefront of low carbon innovation and production, we need to work together to reduce industrial emissions as quickly as possible, including continuing to invest in low carbon technologies and practices and implementing more circular processes.

As part of this Roadmap, we'll encourage more facilities to connect to clean electricity, use more low carbon fuels such as hydrogen, explore how best to capture and safely store or use carbon, and reduce industrial methane emissions. We're also moving forward with a suite of new initiatives to help keep our industries competitive as we move to a net-zero future.

Enhancing the CleanBC Program for Industry

The CleanBC Program for Industry supports GHG reductions and competitiveness by investing carbon tax revenue in projects that reduce emissions and costs across B.C. In 2022, we will work with industry, the Government of Canada and Indigenous peoples to redesign the program to align with new federal carbon pricing rules while continuing to promote a competitive business environment and significant GHG reductions.

Our work will include determining how best to support common infrastructure needs through projects such as transmission grids and access to low carbon fuels. We will also explore ways of structuring projects to include and further benefit Indigenous communities.

Making new industrial operations 'net-zero ready'



Electric fleet reduces costs and improves productivity at this B.C. mine

Learn more at: CleanBC.gov.bc.ca

Some of B.C.'s largest industrial operators – accounting for almost 50% of industrial GHG emissions – have already committed to reaching net-zero emissions by 2050. Building on that progress, we're introducing a new requirement: all new large industrial facilities must have a plan to achieve net-zero emissions by 2050. New facilities will also have to show how they align with B.C.'s interim 2030 and 2040 targets.

This means facilities will have to be designed to minimize emissions as much as possible. Where emissions can't be reduced, companies will have to assess the use of new technologies such as carbon capture or consider the purchase of high-quality offsets from projects offering long-term carbon sequestration, such as through the use of negative emissions technologies. New net-zero plans will be required and assessed at different stages of development, subject to review, revision and enforcement over time. Government will work with facility proponents to align new policies and compliance mechanisms to support net-zero-emission plans.



This type of planning will future proof our newest industrial facilities, ensuring they can meet the needs of investors and purchasers adhering to a stringent definition of net zero. This approach will also help to drive investments in new, clean B.C. technologies while providing the certainty industry needs to thrive in a global net-zero economy. Government will work with stakeholders and First Nations as these requirements are further developed.

Aiming to eliminate industrial methane emissions by 2035

Methane is a powerful greenhouse gas, with more than 80 times the warming power of carbon dioxide during its first 20 years in the atmosphere. Clearly, we need to reduce its emissions – but measuring them and identifying where they’re from has long been a major challenge.

New solutions are becoming available and we’re learning more about them, thanks to the work we’ve been doing with research organizations, the oil and gas sector, the federal government and non-profits. Through the BC Methane Emissions Research Collaborative, we’ve demonstrated that methane emissions from oil and gas can be detected, attributed and quantified at specific sites, likely in a more cost-effective way than traditional methods.

With this Roadmap, we are committed to building on that research and applying it across the industrial sector to achieve our goal of zero emissions from methane – or as close to zero as possible – by 2035, and to reduce methane emissions in the oil and gas sector by 75% (compared to 2014) by 2030, consistent with the federal commitment. Methane from industrial wood waste landfills can be converted to less-harmful greenhouse gases through landfill management.

Reducing emissions from the oil and gas sector

Currently responsible for 20% of B.C.’s emissions and 50% of industrial emissions, the oil and gas sector will be required to make a meaningful contribution to BC’s climate targets. B.C. is the first jurisdiction in Canada to set a specific sectoral target for reducing emissions from the oil and gas industry.

The Province will work to implement policies and programs to reduce emissions in line with its sectoral target of a 33-38% reduction below 2007 levels. In addition to strengthening B.C.’s methane regulations and modernizing B.C.’s royalty system, our new industrial climate program, to be released in 2023, will be designed to ensure the oil and gas sectoral target is met.

We will also commit to cleaning up 100% of current orphan wells in B.C. before 2030 through the industry-funded Orphan Site Reclamation Fund.

Integrating emissions goals into the oil and gas royalty system

B.C.'s royalty system was set up nearly 30 years ago in the 1992 Petroleum and Natural Gas Royalty and Freehold Production Tax Regulation. The way natural gas is produced has changed significantly since then, as have market conditions, drilling technology and costs, and global concerns on the need to address climate change.

As part of this Roadmap, the Province will review the rules for oil and gas royalties to ensure they support our goals for economic development, environmental protection and a fair return on the resource for the people of B.C. It's part of our commitment to reduce emissions from oil and gas by 33-38% by 2030, compared to 2007 levels.

The review will examine ways to adjust the royalty system to help meet provincial emission reduction targets and will consider recommendations from the independent panel currently reviewing B.C.'s royalty system. Policy tools will be considered to encourage further emissions reductions from the sector, and to support the other pathways in this Roadmap.

Advancing a provincial approach to carbon capture, utilization and storage and negative emissions technologies

The full decarbonization of B.C. industry will require widespread electrification; the use of low carbon fuels like lignin, renewable gas and hydrogen; and the use of carbon capture, utilization and storage (CCUS) and other negative emissions technologies across different sectors.



The cleanest cement plant in Canada might be right here in B.C.

Learn more at: CleanBC.gov.bc.ca

CCUS technologies can reduce emissions in hard-to-abate industrial sectors such as oil and gas, pulp and paper, and cement, where emissions associated with chemical processes cannot be eliminated in any other way. Since they are still in the emergent phase, we will develop a coordinated, comprehensive provincial approach to guide their deployment.



2.6 Forest Bioeconomy

B.C.'s expansive forests are central to our bioeconomy – the part of our economy that uses renewable resources to produce things we use every day like textiles and packaging. By using the residuals from conventional forestry, our forest bioeconomy supports the sector's shift from high volume to high value and contributes to a waste-free, circular economy while helping in the fight against climate change.





INDIGENOUS PEOPLES AND FOREST MANAGEMENT

Forests are, and have been, central to many Indigenous communities whose inherent rights are connected to their respective territories. They provide food, shelter, economic opportunities, tools and medicine along with materials for arts, culture and spiritual activities. For example, some Indigenous peoples see cedar as the tree of life, using it for homes, clothing, canoes, baskets and traditional ceremonies.⁶ As the original stewards of the land we now call British Columbia, Indigenous peoples are essential partners in transforming our forest sector from high-volume to high-value, and keeping it sustainable.

What we heard

The Province engages regularly with industry, academia, Indigenous peoples and governments to advance forest sector innovation and build a broader bioeconomy in support of sustainable forest use. Key themes discussed in the consultations informing this Roadmap were:

- *Need for a competitive carbon policy that incentivizes GHG reduction practices and investments in the forest sector*
- *Investments and further engagement to support commercialization of new bioproducts that can replace more GHG intensive products; this includes using lignin in asphalt instead of bitumen and cellulose foams instead of Styrofoam.*

Indigenous peoples we engaged with emphasized the need to balance environmental and economic benefits, noting the alignment between bioeconomy opportunities and their traditional knowledge principles. Some also expressed interest in pursuing carbon offset projects.

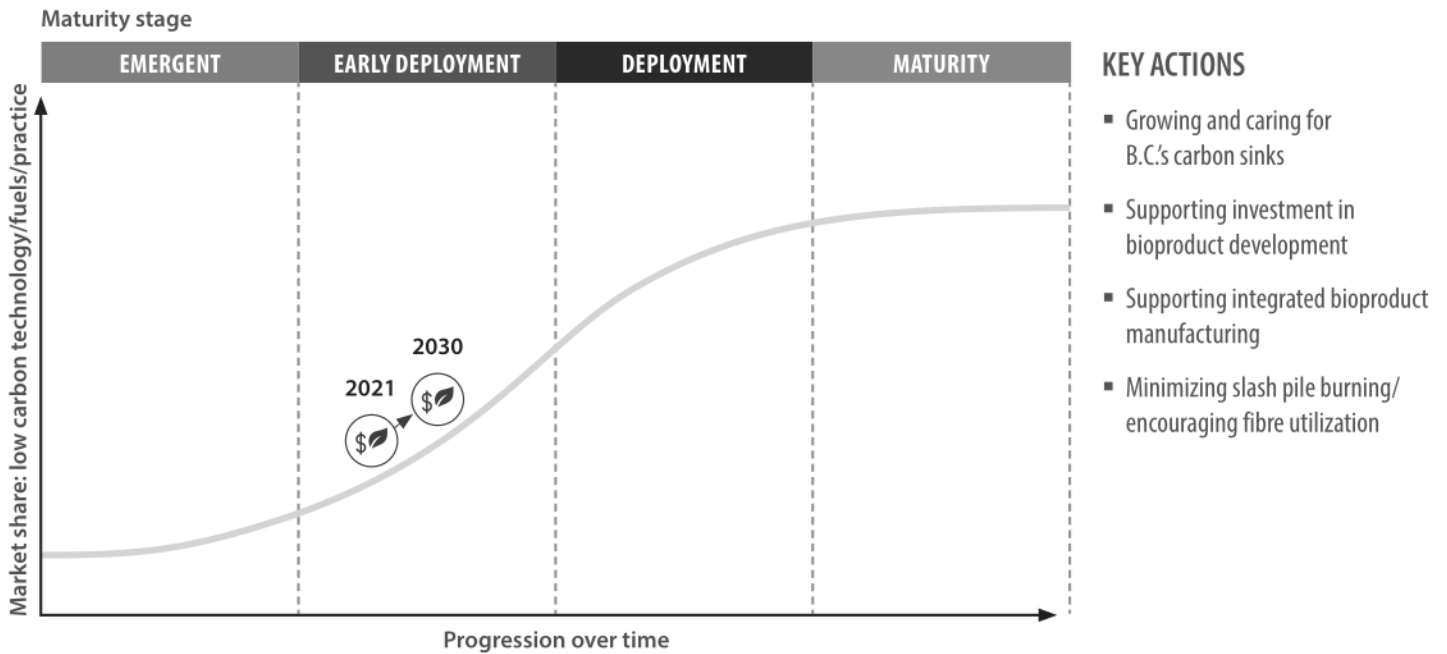
Where we're starting from

The B.C. bioeconomy is currently in early deployment, supported by partnerships with Indigenous peoples and private companies throughout the province. For example, the Indigenous Forest Bioeconomy Program has supported the production of a wide range of innovative high-value bioproducts – from essential oils extracted from conifer needles, to new health beverages from trees, to biochemicals extracted from bark.

There's also a growing market for forest carbon offsets – tradable credits used to offset or counterbalance greenhouse gas emissions. They provide a pathway to meeting climate targets for sectors whose emissions are particularly tough to abate.

⁶ "The Tree of Life": https://umistapotlatch.ca/enseignants-education/cours_4_partie_2-lesson_4_part_2-eng.php

Forest Bioeconomy



THE PATH TO TRANSFORMATION – 2030 AND BEYOND

The global market for bioproducts is expected to undergo a major transition over the next 10 years, with advanced biomaterials and biochemicals making up the largest market segments.

By 2030, the province should be producing bioproducts at scale and providing high-quality jobs in the bioproducts sector. We'll reach these goals through the following actions.

Old Growth Strategy

Old growth forests – those containing trees that are more than 250 years old – make up nearly one quarter of B.C.'s total forested area. Old growth has a range of benefits, on top of protecting biodiversity, watershed protection and helping the Province adapt to the effects of climate change, they also store large amounts of carbon. Because trees store carbon as they grow, old growth seems like a natural ally in the fight against climate change.

Consistent with the recommendations from the Old Growth Strategic Review, we're integrating climate mitigation into forest management and undertaking research to improve our understanding of old growth forests and their impacts on greenhouse gases. B.C. uses many mitigation options in our forests, including reforestation, fertilization, managing forest health, reducing slash pile burning and using more fibre in longer lived products. Conserving old growth forests as carbon sinks is one of those strategies.

Growing and caring for B.C.'s carbon sinks

B.C. will explore opportunities to partner with the federal government to plant more trees, creating larger carbon sinks and rehabilitating wildfire impacted lands – areas that absorb more carbon than they emit into the atmosphere. We'll also evaluate additional reforestation and forest management activities that sequester carbon and foster climate resilience – including through fertilization, forest health improvements and wildfire mitigation – ensuring opportunities for Indigenous businesses.

A new B.C. Forest Carbon Offset Protocol will expand access to the carbon-offset market for Indigenous communities and forest companies, supporting them to generate revenue while helping others meet their climate commitments. The Protocol will also help to focus attention on the value of non-timber forest benefits, including biodiversity protection and carbon sequestration.

Offset projects will include afforestation (planting trees in areas where there is no forest), reforestation, and improved forest management through practices such as letting trees grow longer before they're harvested. The Province will also explore updating policy and laws to allow the use of Crown land for offset purposes.

Supporting investment in bioproduct development

The Province will partner with Indigenous peoples and industry to build the market for high-value wood products that store carbon or displace products made with fossil fuels. This will include:

- Exploring policy actions, such as biomass content requirements, to increase the use of biomaterials in carbon-intensive products such as concrete, asphalt and plastic components used in finishing cabinets, flooring and other materials
- Encouraging the use of biomaterials in the packaging, consumer goods and biochemical sectors; this could include replacing single-use plastic packaging with biobased materials
- Exploring opportunities to support sector growth through measures such as market and supply chain studies, capacity building, technology assessments and pilot projects for scale-up opportunities
- Advancing mass timber production and use through a Mass Timber Action Plan; work to develop the plan is being guided by a steering committee representing Indigenous communities, industry and government
- Exploring the potential for regional bio-hubs to help ensure communities have access to fibre for diversified manufacturing, and to enhance the number of well-paying forest sector jobs across the province.



Supporting integrated bioproduct manufacturing

One of the potential downsides of forest-based bioproduct manufacturing is having to move material from one site to another. Integrating manufacturing with existing pulp and paper facilities and pellet mills eliminates that issue, creating significant logistical and cost advantages. As part of this Roadmap, we will explore ways to streamline regulations and generate investment for bioproducts facilities at pulp mill sites, allowing producers to make full use of B.C.'s forest resources.

Minimizing slash pile burning and encouraging fibre utilization

Slash piles – the residue from conventional forest harvesting– have long been burned as a way to help reduce the risk of wildfires, and to enhance habitat for wildlife and replanting. The Province will work towards near elimination of slash pile burning by 2030 and will increasingly divert materials away from slash piles and into bioproduct development, reducing both air pollution and GHG emissions while creating new economic opportunities.

In the months ahead, we will partner with forest licensees and Indigenous communities to explore ways to make this feasible, taking into account any impact on wildfire risks. We'll also continue to invest in projects that encourage greater use of forest fibre that would otherwise be burned.



2.7 Agriculture, Aquaculture and Fisheries

The agriculture sector directly accounts for just under 4% of B.C.'s GHG emissions. The largest source is from enteric fermentation, a digestive process of cattle and other ruminants that produces methane, a powerful greenhouse gas. The next largest sources of agricultural emissions are on-farm energy, agricultural soils and manure management.

AGRICULTURE, FISHERIES AND ADAPTATION

Adaptation to climate change has been, and continues to be, a key focus of climate action for agriculture, fisheries and aquaculture. These industries are extremely vulnerable to the impacts of changing weather patterns and severe weather events, including high intensity rainfall, heat waves, drought, wildfire and changing marine conditions. Industry and Indigenous partners are acutely aware that the changing climate affects their productivity and livelihoods, and that building resilience is critical. New measures to support the sector's adaptation will be included in the Climate Preparedness and Adaptation Strategy, due for release in 2022.



What we heard

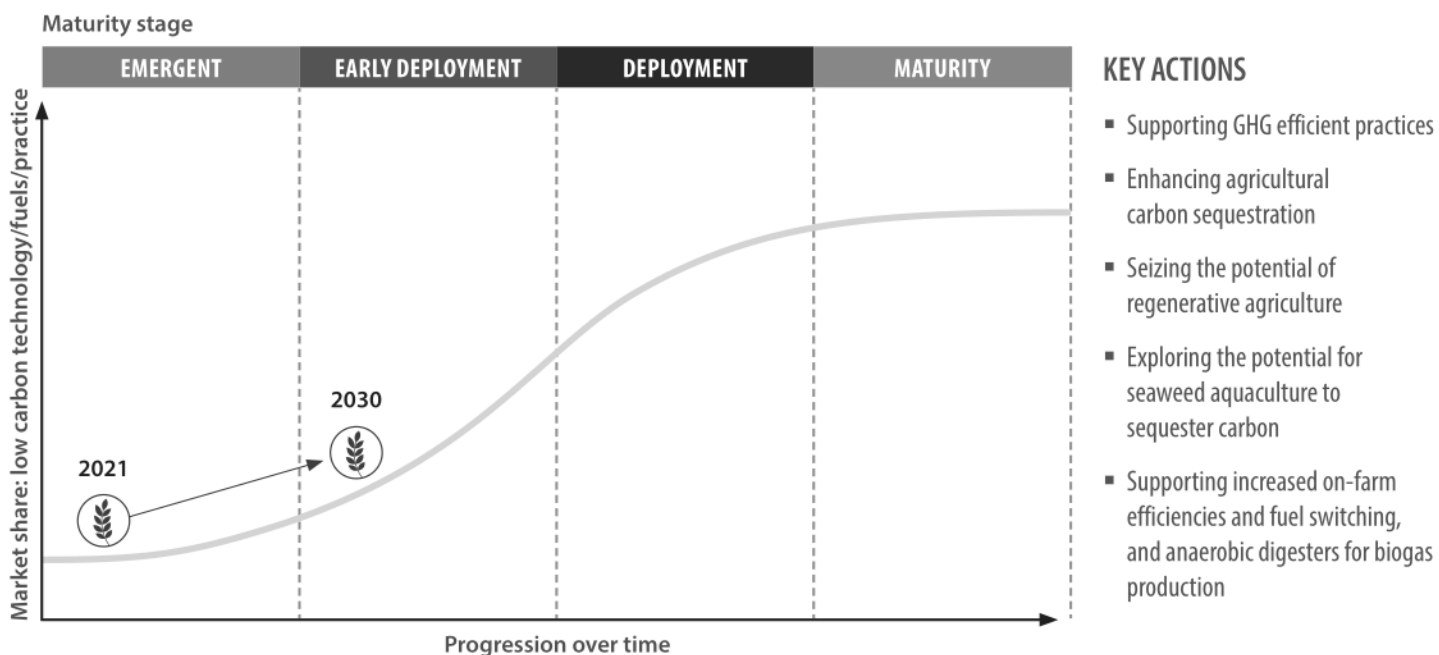
In the consultations that informed this Roadmap, people in the agriculture and aquaculture sectors said they want to continue being informed and consulted as programs and policies are developed and implemented, and want to see their roles and expected contributions more clearly defined. They also highlighted the importance of:

- *Providing financial support to help sectors transition practices and technology*
 - *A high-level of buy-in from producers who will readily take up practices that are economically viable*
 - *Undertaking research and development and developing monitoring and measurement frameworks to establish benchmarks and track GHG reductions.*
-

Where we're starting from

The market for decarbonizing agriculture, aquaculture and fisheries is in the emergent phase. Stakeholders have emphasized the need to be realistic about what can be achieved by 2030, noting that cost and economic viability present significant barriers to adopting new solutions.

Agriculture, Aquaculture and Fisheries



THE PATH TO TRANSFORMATION – 2030 AND BEYOND

To help move the market to early deployment by 2030, we're supporting producers to increase GHG efficient practices and exploring several measures to enhance carbon sequestration.

Supporting GHG efficient practices

As part of this Roadmap, the Province will continue to support the transition to technologies and practices that reduce both net GHG emissions and operating costs for producers. This includes encouraging fuel switching and electrification to reduce emissions from equipment in agriculture, aquaculture and fisheries, along with increased efficiency in manure and nutrient management. We'll encourage the development and piloting of new clean solutions such as electric tractors and technologies to further improve energy efficiency in greenhouses. And, we'll encourage more local, sustainable food production, which has the potential to reduce greenhouse gas emissions in B.C.

Waste management will be supported by growing opportunities to capture biogas, turning farm waste into a valuable resource. Pathway strategies related to biogas will contribute to our goal for renewable energy to make up at least 15% of the content of B.C.'s natural gas by 2030.

Enhancing agricultural carbon sequestration

We will work with the agriculture sector to determine beneficial management practices to maximize carbon sequestration and its benefits to biodiversity, soil and water quality, and farm profitability. Our primary focus in this area is supporting research and monitoring to fill in critical knowledge gaps. We will support applied research, explore piloting promising ideas, monitor results and work to improve local technical knowledge of climate adaptation.



Seaweed aquaculture reduces climate pollution

Learn more at: CleanBC.gov.bc.ca

We will also encourage producers to implement regenerative agricultural practices and technologies that improve soil health and biodiversity, allowing farmland to store more carbon. And we'll work with Indigenous communities and the aquaculture sector to explore the carbon-storage potential of seaweed cultivation.





2.8 Negative Emissions Technologies

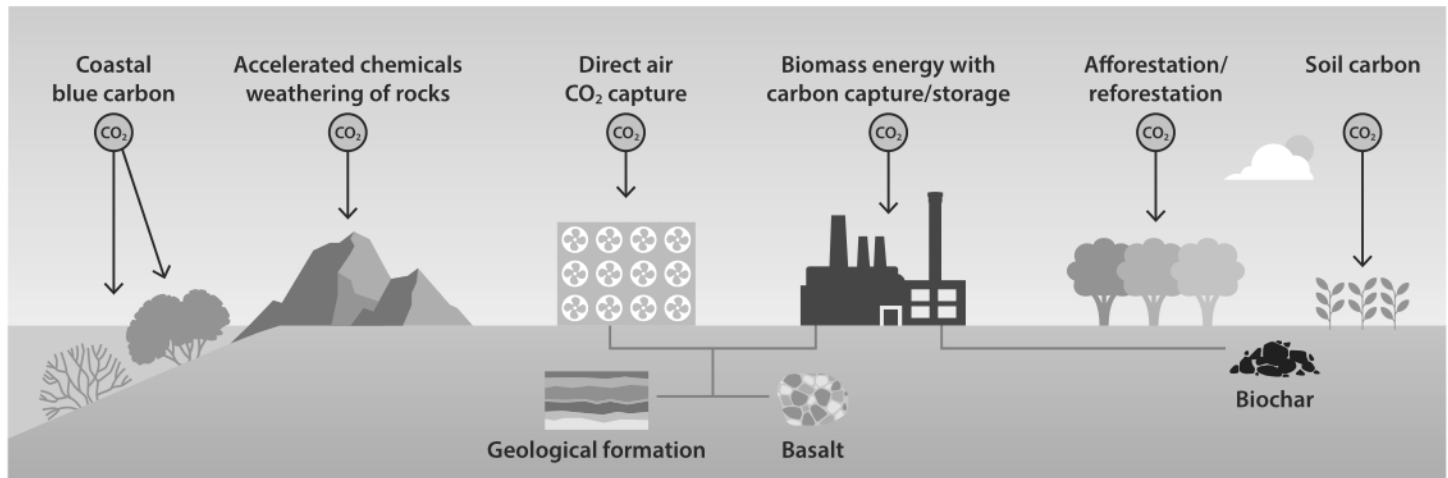
THE NEED FOR NEGATIVE EMISSIONS TECHNOLOGIES

According to the International Energy Agency, almost half the GHG reductions targeted worldwide for 2050 will come from technologies currently in the demonstration phase. Expert groups like the Canadian Institute for Climate Choices agree on the need for high-risk, high-reward technologies, projecting that solutions such as negative emissions technologies (NETs) could deliver two thirds of the reductions needed to meet our 2050 targets.

Negative emissions technologies can play an important role in meeting our climate targets, especially the long-range commitment to reach net-zero by 2050. They remove CO₂ from the atmosphere, offsetting emissions that have already occurred. NETs range from biological options, such as forest and soil ecosystems, to novel engineered technologies. This pathway is focused on the latter.



Negative Emissions Technologies



Adapted from: National Academies of Sciences, Engineering, and Medicine. 2019. *Negative Emissions Technologies and Reliable Sequestration: A Research Agenda*.

Available online: www.nap.edu/download/25259

What we heard

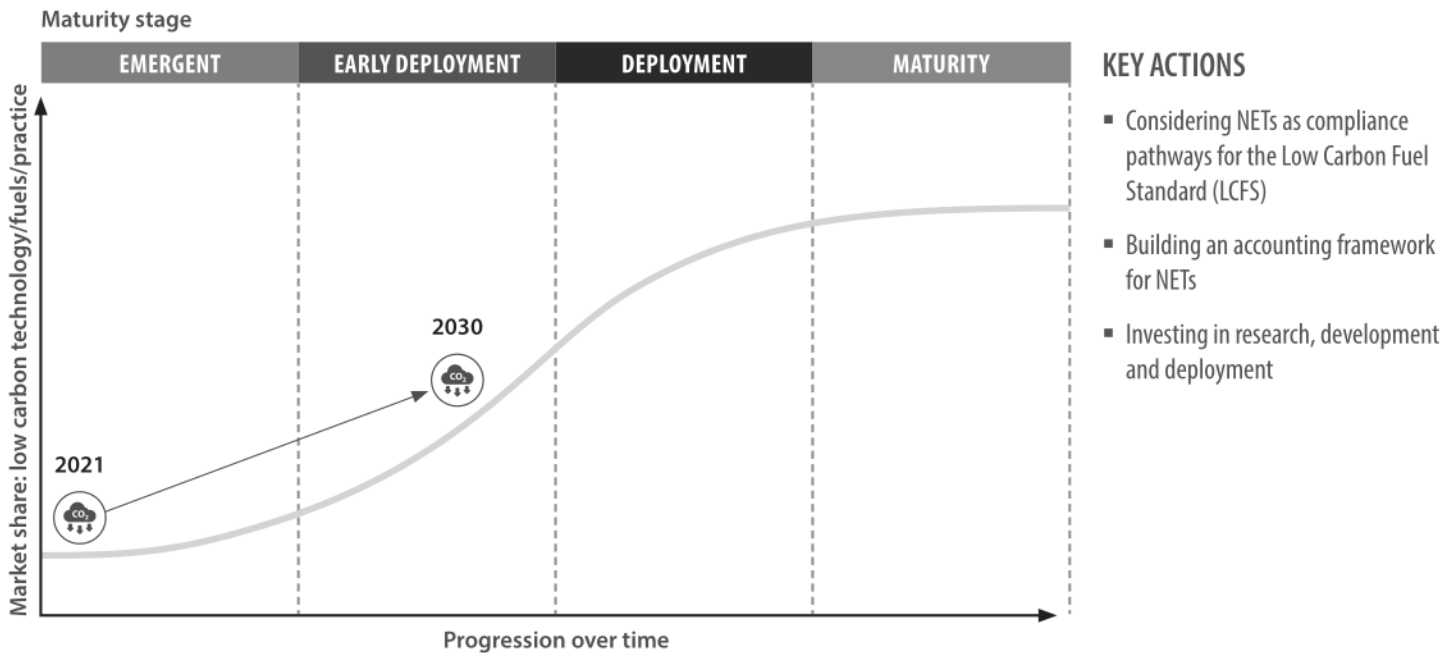
In the consultations that informed this Roadmap, industry, Indigenous peoples, businesses, clean tech companies and others encouraged the Province to explore the potential of NETs. Key themes discussed were:

- Continuing engagement to develop a policy framework including a clear definition of NETs, especially as many technologies are in development or in early stages
- Encouraging NETs as part of a global solution, and considering equity and affordability implications
- Targeting NETs to offset emissions in hard-to-decarbonize industries, not as a replacement for decarbonization
- Providing adequate funding supports for technology development and to scale technologies for adoption

Where we're starting from

The market for NETs is still in the emergent stage but B.C. has the capacity and potential advantage to play a lead role in moving it forward. We're home to a rich ecosystem of innovation and clean tech companies with NET solutions at various stages of development. Because of their novelty and complexity, it will take significant time and investment to determine whether their large-scale deployment is cost-effective and functional.

Negative Emissions Technologies



THE PATH TO TRANSFORMATION – 2030 AND BEYOND

To support the scale-up of NETs by 2030, B.C. needs an enabling environment that supports innovation, incentivizes public-private involvement and is flexible enough to adapt to change. That could include a supportive regulatory and policy climate, economic incentives, measures to reduce costs or new business models to achieve economies of scale.

To achieve these goals and move the market, we will provide investments through InBC to help small- and medium-sized B.C. companies scale up and reach their highest potential. InBC investments will help foster a low carbon economy by anchoring talent, innovation, intellectual property and high-quality, family-supporting jobs throughout the province. We'll also take the following actions.

Considering NETs as compliance pathways for the Low Carbon Fuel Standard (LCFS)

The LCFS requires fuel suppliers to progressively decrease the average carbon intensity of the fuels they supply to users in B.C. By 2030, they'll have to deliver a reduction of more than 20%, with the target continuing to rise in the coming years.

Recognizing the challenges inherent in reducing carbon intensity, we will consider allowing NETs as an option for compliance. This could attract significant new investment to B.C., along with new jobs in clean technology. A final decision on the LCFS will be based on consultations and assessments of recent program changes affecting costs and emissions.

Building an accounting framework for NETs

Currently, our GHG accounting used to measure progress to targets only captures emission reductions from forest-offset projects, since they are the only NET that currently meets our rigorous standards for planning, implementation and monitoring. As more engineered solutions come online, B.C. will build an accounting framework by 2025 to define how other types of NET projects may impact emissions reductions, and how they can be brought into the inventory's scope. This will ensure they're evaluated on a lifecycle basis so we don't adopt technologies that ultimately require more materials and energy, and produce more GHGs, than what they're capturing and storing.

Once we're able to reliably quantify the impacts of NETs, we will clarify their role in carbon offsets. We will also advocate for international collaboration to ensure national inventories can account for NETs consistently.

Investing in research, development and deployment

As noted in the industry pathway, B.C. will develop a comprehensive provincial approach to carbon capture, utilization and storage (CCUS) technologies, leveraging supports such as the federal investment tax credit for CCUS. We'll also consider additional grants and incentives for research and development, pilot projects and commercial scale deployment.



Negative emissions technologies are breathing fresh air into emissions reductions

Learn more at: CleanBC.gov.bc.ca

Some of this support will be delivered through the new B.C. Centre for Innovation and Clean Energy. Its mandate is to bring together innovators, industry, academics and government to accelerate the commercialization and scale-up of B.C. based, clean energy technologies. We will also assess the need for new provincial tools to encourage private-sector investment in NETs. And we will assess the potential of research developed through the University of British Columbia and University of Victoria to mineralize CO₂ from the atmosphere to store it in rock and in other materials.



CHAPTER 3: NEXT STEPS AND IMPLEMENTATION

The CleanBC Roadmap to 2030 is designed to be a living document, to be revisited and updated as we move forward to ensure we stay on track to meet our targets. In the months ahead, we will engage with partners and stakeholders to work out the details of major new measures and find the best ways to put them into practice.

Many of the actions in this Roadmap will expand and accelerate CleanBC policies and programs already in place. Others will require close monitoring and adjustments as we learn from experience. Where policies are working, we'll act quickly to ramp up our efforts. Where they're not as effective, we'll change course, in close collaboration with affected sectors.

As we chart our progress, we will continue to provide detailed reporting to the public through the annual [Climate Change Accountability Report](#), which includes progress indicators for CleanBC programs. In future years, we will also report on the following indicators specific to the Roadmap:

- Market share of technologies, reflecting the extent to which low-emission solutions are being adopted
- Cost of transformation for each sector
- Workforce and skills readiness, reflecting our capacity to adopt new approaches
- Economic and social opportunities, pointing to important co-benefits such as reducing inequality and advancing reconciliation with Indigenous peoples.

The work ahead will be challenging. Transforming British Columbia's economy will require determination, particularly as many of these changes will be made in less than a decade. Achieving our targets will demand an unprecedented level of commitment. It will also offer unprecedented opportunities for the future as we work towards net zero by 2050.

Successful implementation of this plan will require a focused, all of government approach. To support this, the Premier has instructed all Ministers, via mandate letters, to ensure their work continues to achieve CleanBC's goals.

Business and industry will have new opportunities to innovate and build on the CleanBC actions and supports, as well as our global reputation as a place for environmental, social and governance investments and net-zero focused business. Local governments will have new opportunities to build more liveable, compact and energy-efficient communities. Indigenous peoples will have new opportunities to advance their self-determination and participate more fully in every sector of our economy. And everyone in B.C. will have the opportunity to look forward to a cleaner, better future.

We're building a British Columbia where no one's left behind; where innovation drives new advances and keeps us competitive; where we all enjoy improvements in our quality of life and prosper along with – not at the expense of – our natural environment. Meeting our climate targets and building a cleaner economy is fundamental to making this future a reality.

APPENDICES

Roadmap to 2030 Greenhouse Gas Reductions by Initiative

Economy-Wide Initiatives

Increase the price of carbon pollution	Meet or exceed the federal benchmark of \$170 by 2030 Revise industrial carbon pricing in 2023
Reduction of GHGs in 2030 for Economy-Wide Initiatives	
Subtotal 2.4	

Low Carbon Energy

Enhance the Low Carbon Fuel Standard	Increase the carbon intensity reduction requirement Expand to include marine and aviation fuel Double production capacity for made-in-B.C. renewable fuels to 1.3bn litres
Increase benefits of electrification	Implement 100% Clean Electricity Delivery Standard
Reduce emissions from natural gas	New GHG cap for natural gas utilities with a variety of compliance options
Reduction of GHGs in 2030 for Low Carbon Energy	
Subtotal 5.0	

Transportation

Accelerate zero-emission vehicle (ZEV) law	By 2030, ZEVs will account for 90% of all new light-duty vehicle sales in the province New ZEV targets for medium- and heavy-duty vehicles to be developed in alignment with California
Reduce light-duty vehicle travel	Reduce distances travelled by vehicle by 25% relative to 2020 Encourage increase in mode shift to walking, cycling and transit to 30% by 2030
Reduce goods movement emissions	Reduce the energy intensity of goods movement by 10% relative to 2020
Reduction of GHGs in 2030 for Transportation	
Subtotal 4.9	

Buildings

New carbon pollution standard in BC Building Code	Carbon pollution standards introduced for new buildings in 2024, with zero-carbon new construction by 2030
Highest efficiency standards	After 2030, all new space and water heating equipment sold and installed in B.C. will be at least 100% efficient (i.e. electric resistance heating, heat pumps, and hybrid electric heat pump-gas systems)
Reduction of GHGs in 2030 for Buildings	
Subtotal 1.3	

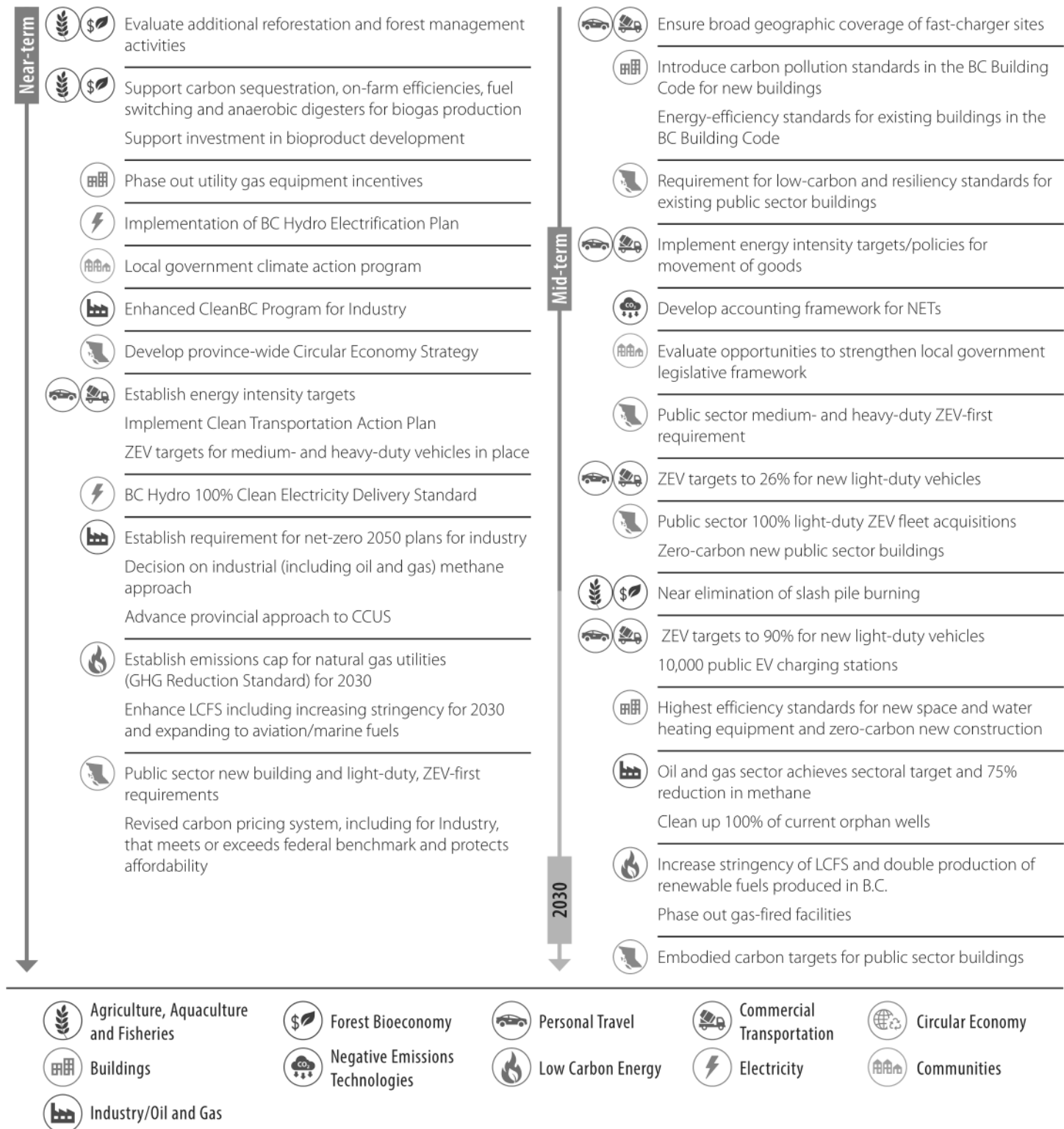
Industry

Enhance CleanBC Program for Industry	Enhance industry program to reduce GHGs and support a strong economy
Reduce methane emissions	Near elimination of methane emissions by 2035 in oil and gas, mining, industrial wood waste and other sectors
Make new industrial operations 'net-zero ready'	New large industrial development to submit plans to achieve net-zero emissions by 2050 and show how they align with interim 2030 and 2040 targets
Reduce oil and gas sector emissions	Implement programs and policies so that oil and gas emissions are reduced in line with sectoral targets (reduction of 33-38% by 2030)
Reduction of GHGs in 2030 for Industry	
Subtotal 2.6	

Other Measures Including: reducing agricultural emissions, supporting compact and resilient communities, and aligning with federal, municipal and Crown Corporation plans.

Reduction of GHGs in 2030 for Other Measures	
Subtotal 0.9	
Note: Individual pathway reductions do not add up to the totals because of interaction effects between policies that target the same emissions	
Roadmap to 2030	16.2 MtCO ₂ e
CleanBC Phase 1	10.5 MtCO ₂ e
Total GHG MtCO₂e reduced by 2030	26.7 MtCO₂e
The legislated target for 2030 is 39.4 MtCO ₂ e (or a reduction of 26.3 MtCO ₂ e from a 2007 baseline), which we are exceeding by 0.4 MtCO ₂ e.	

Roadmap Portfolio of Measures



The Roadmap is an iterative document subject to change on the basis of emerging technologies and changing social, economic and business environments.



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Roadmap to 2030

CleanBC.gov.bc.ca

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Clean Buildings Policy and Programs

KEY FACTS:

- The CleanBC Better Homes and Better Buildings portfolio of programs supports families and businesses to save energy, lower energy bills and reduce emissions.
- The Energy Savings Program (previously the Income Qualified Program) has provided incentives for over 15,000 home retrofits for low- to middle-income households including more than 7,900 heat pumps.
- In fall 2024, the Ministry in collaboration with utilities launched a new whole-building offer for multi-unit residential buildings (MURBs). Offers for individual suites in MURBs will be introduced in June.
- The BC Home Energy Planner is a web tool that provides homeowners with a home energy score and customized recommendations for energy saving retrofit opportunities. ^{Advice/Recommendations} including an application portal for the Energy Savings Program.
- The CleanBC Roadmap to 2030 committed to requiring all space and water heating equipment sold and installed after 2030 to be 100% efficient or greater by using heat pumps, electric resistance or dual fuel technology. Public consultation was undertaken in 2024. Further policy direction is required.
- British Columbians continue to make the shift to heat pumps in record numbers.
 - Average heat pump sales from 2019-2023 were nearly double the average of the previous five years, and since 2022 have exceeded furnace sales.
 - Today, 13% of all households use heat pumps for heating.

ADDITIONAL INFORMATION:

- Ministry efforts are intended to drive energy-efficient and low-carbon solutions to a tipping point of availability, acceptability, and affordability through targeted interventions in the marketplace, followed by progressively more stringent codes and standards that backstop progress and reduce government spending on incentive programs.
- The Ministry supports workforce readiness for programs, codes and standards, and has provided subsidized skills training to establish an approved contractor network of over 1,000 members.

- The CleanBC Better Homes and Better Buildings portfolio includes: point of sale rebates for income-qualified households and energy coaching support; retrofit incentives for commercial buildings, social housing, and multi-unit residential buildings; top-up incentives for northern residential and commercial buildings; and First Nations community retrofit incentives.
- Efficiency Canada’s Provincial Energy Efficiency Policy Scorecard has consistently awarded B.C. the top ranking in Canada since its inception in 2019.

FINANCIAL SUMMARY:

- Government is providing \$100 million over the next two years to support rebate programming for electric heat pumps for low- to middle-income households.
- B.C.’s investments are leveraged by up to \$103.7 million in additional federal funding from Canada’s Low Carbon Economy Fund and the Oil to Heat Pump Affordability (OHPA) program.
- The Province has been awarded \$14 million through FY27 from the federal Codes Acceleration Fund.

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Nat Gosman, EDD	778 698-7282

Clean Transportation Policy & Programs

KEY FACTS:

- British Columbia (B.C.) is a leader in clean vehicle adoption with the second highest zero-emission vehicle (ZEV) adoption rate in Canada in 2024 (22.4 percent of new light-duty vehicle sales in B.C., compared to 33 percent in Quebec).
- B.C. is also a leader in charging infrastructure deployment, with one of the largest (and growing) public charging infrastructure networks in Canada. There are now over 6,000 public charging stations in B.C. (including over 1,500 fast chargers) as of the end of 2024. The network of public fast charging stations continues to expand along B.C.'s primary and secondary highway systems, major roads, and in community centres.
- B.C.'s Electric Highway was completed in September 2024, adding 155 strategic charging sites and over 310 fast-chargers throughout the province. With the completion of the Electric Highway, B.C. residents and visitors can now reliably drive through the entire province along all highways and major roadways with fast charging stations available no more than approximately 150 kilometers apart.
- The B.C. ZEV sector contributes an estimated \$1.6 billion to the provincial gross domestic product (GDP), increasing 142 percent between 2015 and 2023.
- The comprehensive suite of CleanBC Go Electric programs have been successful in transforming the market to ZEVs as evidenced by B.C. continuously exceeding ZEV adoption targets, legislated under the *Zero-Emission Vehicles Act* (ZEV Act).
- Advice/Recommendations; Cabinet Confidences the decision has been taken to discontinue the Go Electric Passenger Vehicle rebate program that provides incentives for purchases of new ZEVs by the end of June 2025. This follows the removal of support for light-duty passenger ZEVs by the Federal government and the Quebec government.
- It is expected that ZEV sales will nevertheless continue to grow under natural market adoption, though at a slower rate.
- The ZEV Act, first introduced in 2019, requires automakers to meet an escalating annual percentage of new light-duty vehicle ZEV sales. ZEV Act targets require 26% of light-duty vehicles supplied in B.C. to be zero-emission by 2026, 90% by 2030, and 100% by 2035.
- The ZEV Act provides flexible pathways (through supply of ZEVs, trading of compliance units, initiative agreements, or purchase agreements), for suppliers to achieve compliance while supporting the Province in working toward its ZEV and greenhouse gas (GHG) emission reduction targets.

- Ministry modelling based on independent third-party data and forecasts indicates that ZEV Act light-duty sales targets by 2026 are achievable, and that an overall compliance unit surplus across all regulated parties is expected to support meeting the increasing compliance requirements in the short-term. Advice/Recommendations; Cabinet Confidences
- The Ministry is currently engaging with manufacturers on the feasibility of B.C.'s ZEV Standard (ZEV Act and Regulation), Advice/Recommendations; Government Financial Information

ADDITIONAL INFORMATION:

- In 2011, B.C. introduced ZEV programming, currently called the CleanBC Go Electric Programs. Including Budget 2024, more than \$600 million has been committed to make ZEVs more affordable and available, while reducing air pollution and GHG emissions.
- The CleanBC Go Electric Programs provide rebates for zero-emission light-duty vehicles, medium- and heavy-duty trucks and buses, marine vessels, and airport and port ground equipment. The Programs also fund charging and refuelling infrastructure, training, public outreach, and economic development initiatives in the sector.
- The CleanBC Go Electric Programs have been highly successful in reducing market barriers; making ZEV adoption more affordable in B.C.; leveraging private, municipal, and federal investment in ZEVs and infrastructure in B.C.; and supporting new economic opportunities in the transportation sector.
- Objective 1.2 of the 2025/26 Ministry Service Plan directs the Ministry to continue working towards the current Government commitment of installing 10,000 public chargers by 2030 (CleanBC Roadmap to 2030). With over 6,000 public EV chargers installed as of the end of 2024, the Province is more than 60 percent of the way towards meeting this target.
- B.C. has a ZEV Advisory Council that includes members from across the ZEV sector including environmental non-governmental organizations, industry (including automaker associations), academia, infrastructure providers and local governments, that provides strategic advice on how to meet B.C.'s ZEV goals.

FINANCIAL SUMMARY:

- As of December 2023, over 84,000 rebates have been issued in the Passenger Vehicle Rebate program, totalling over \$274 million.
- The Passenger Vehicle Rebate Program is currently funded by BC Hydro through revenues from Low Carbon Fuel Credit sales.

- B.C. is the only jurisdiction in Canada to introduce means-testing for a ZEV rebate program.

The below table shows total CleanBC budget expenditures for major Clean Transportation Programs since 2015.

Program Name	Total Budget 2015/16-2025/26 (\$ Millions)
Passenger Vehicle Rebates	234.73
Go Electric Rebates (SUVI)	36.02
Scrap-it	1.45
Commercial Vehicle pilots	89.00
VFPA Port Project (<i>Low emission technology initiative</i>)	1.50
Advanced Research & Commercialization	50.00
Home & Workplace charging rebates	52.43
Public Charging infrastructure	118.80
Hydrogen fuelling infrastructure	15.40
Fleet Charging	10.20
School buses	10.97
Training and Jobs	4.14
Public Outreach a. General, GoElectric Web, & Marketing	9.23
Public Outreach b. Regional	2.09
Local/Indigenous Govt planning	0.66
Research and Data	2.53
TOTAL	\$638.92 M

ATTACHMENTS:

- Attachment 1 - 2023 Zero Emission Vehicle Update report (24 Pages)

ADM(s) Responsible	Contact number
Nat Gosman, EDD	778 698-7282

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Zero-Emission Vehicle Update 2023

A Message from the Minister



It wasn't so long ago that battery-powered electric vehicles were the stuff of science fiction. Today, zero emission vehicles (ZEVs) are here to stay, and they are coming in greater numbers, models and choices than ever before. I'm encouraged to see so many British Columbians taking advantage of the benefits of ZEVs as we drive forward to a cleaner, quieter, low-carbon future.

In 2023, a total of 44,009 new light-duty (passenger) ZEVs were registered in the province, which represented 22.65% of all new light-duty vehicle registrations – that's almost one in four! In total, there were 153,045 light-duty ZEVs on the road in B.C.

Our government continues to work diligently to support British Columbians as they adopt cleaner driving options, and to grow the province's ZEV industry through a suite of CleanBC Go Electric programs and rebates. As of December 2023, the Province had issued rebates for 84,267 light-duty ZEVs through the Go Electric Passenger Vehicle Rebate program. These rebates have put over \$274 million back in the pockets of British Columbians since April 2015.

Our support for ZEVs extends beyond light-duty vehicles. In 2018, B.C.'s commercial transport sector accounted for approximately 60% of B.C.'s transport emissions and 22% of total provincial emissions. We are working to reduce emissions in the medium- and heavy-duty commercial vehicle sector through programs that support technology development and commercialization. These programs are designed to encourage businesses, non-profit organizations, local governments, and other public entities to adopt electric or hydrogen fuel-cell specialty use vehicles for their fleets, replacing gas or diesel vehicles.

The CleanBC Roadmap to 2030 details a range of expanded and ambitious actions to accelerate the transition to a net-zero future and achieve B.C.'s legislated greenhouse gas (GHG) emissions targets. These actions include strengthening the Zero-Emission Vehicles Act in November 2023 to require 26% of light-duty vehicle sales to be ZEVs by 2026, 90% by 2030 and 100% by 2035 - five years ahead of the original target.

We know that as people make the switch to cleaner energy, we need a work force in place to support these new and exciting opportunities. That's why we're supporting training programs in local colleges so that more automotive technicians can upgrade their skills in the wake of a rapidly changing industry. B.C. has one of the largest public charging networks in the country, so we've also provided funding for Red Seal electricians in B.C. to become certified in installing EV charging infrastructure.

To better support public-sector organizations in B.C. that are leading the way to a cleaner future, we have increased rebates for public-sector organizations through the CleanBC Go Electric Fleet Charging program so organizations with fleets can plan for and install the charging infrastructure they need. We continue to support the widespread adoption of EVs by installing more public EV charging stations across B.C. As of the end of 2023, we have over 4,700 public EV charging stations in B.C.

Looking forward into 2024, we're making public charging stations even more accessible, with \$30 million to support over 500 new public fast charging stations for light-duty vehicles across B.C. With this funding, we've invested over \$95 million in the Go Electric Public Charger program over the past two fiscal years.

More charging stations means we're making the EV choice easier for British Columbians, helping to reduce range anxiety by prioritizing new stations to fill geographic gaps in rural, northern and remote communities. Many of these new stations will be installed in popular community spots where people gather, like community halls and recreation centres, and in high density cities where there is a particular need for additional fast chargers.

I also want to highlight a new First Nations Low-Carbon Transportation Project, which is funded by the Province and launched in 2023. The BC Assembly of First Nations is leading a three-year project that aims to promote and accelerate First Nations' equitable access to safe, affordable, reliable, low-carbon and active transportation within and between communities, reduce carbon pollution and uphold the rights and well-being of all First Nations peoples. We look forward to seeing their results!

We are moving forward to a cleaner, quieter, and more sustainable future, and we're doing it responsibly with a view to investing in our strong economy. B.C.'s ZEV sector continues to deliver jobs and significant economic opportunities across the province with an estimated 384 B.C. companies that directly provide 8,280 full-time jobs and contribute \$920 million to the provincial gross domestic product.

This indicates we're cruising smoothly on the CleanBC highway, revving up the economy, shifting into high gear for job creation, and steering towards a more affordable options for people. Our journey to a cleaner, brighter future is picking up speed, and the performance just keeps getting better!

Sincerely,

Josie Osborne

Minister of Energy, Mines and Low Carbon Innovation

Cover photo credit: Michael Stanyer from Plug In BC

Zero-Emission Vehicle Market Highlights

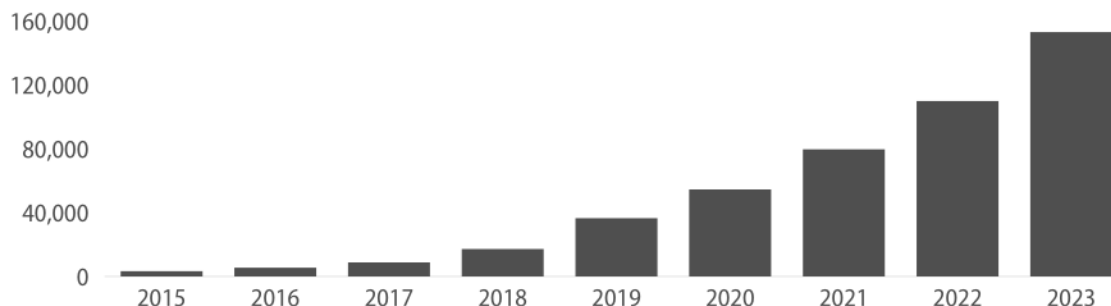
With the suite of CleanBC Go Electric programs and Zero-Emission Vehicle Regulation, we're getting more zero-emission vehicles (ZEVs) on the road in B.C. We're working on the following:

- ▶ Bringing down the price of ZEVs.
- ▶ Making it easier to charge or fuel a ZEV.
- ▶ Supporting research, jobs, training and economic development in B.C.'s ZEV sector.
- ▶ Increasing availability of ZEVs for British Columbians.

B.C. is leading the charge for ZEVs.

- ▶ In 2023, light-duty ZEV sales represented 22.65% of all new light-duty vehicle sales in B.C.¹
- ▶ 153,045 light-duty ZEVs are registered in B.C. as of December 31, 2023.²
- ▶ At the end of 2023, there were 4,756 public charging stations in B.C.
- ▶ In 2023, B.C. had the highest uptake of ZEVs in Canada.
- ▶ In 2023, there were 86 new medium- and heavy-duty ZEVs registered in B.C., which represented 0.57% of all new medium- and heavy-duty vehicle registrations in B.C.³

British Columbia Light-Duty ZEV Registration Totals²



¹ Based on S&P Global Mobility New Vehicle Registration data from January 2023 through December 2023.

² Based on S&P Global Mobility Units in Operation Registration Data as of December 31, 2023 (Model Years 1981 and Newer) for the Province of British Columbia. Figures and information sourced to S&P Global Mobility within this report (the "S&P Global Mobility Materials") are the copyrighted property and of S&P Global Mobility Ltd. and its subsidiaries ("S&P Global Mobility") and represent data, research, or opinions of S&P Global Mobility, and are not representations of fact. The information and opinions expressed in the S&P Global Mobility Materials are subject to change without notice and S&P Global Mobility has no duty or responsibility to update the S&P Global Mobility Materials. Moreover, while the S&P Global Mobility Materials reproduced herein are from sources considered reliable, the accuracy and completeness thereof are not warranted. No further reproduction of this material is allowed without the express written permission of S&P Global Mobility.

³ Based on S&P Global Mobility Registration Data (Year End 2023) for the Province of British Columbia and S&P Global Mobility's definition of Class 3-8 vehicles which excludes vehicles less than 10,000 GVW. Figures and information sourced to S&P Global Mobility within this report (the "S&P Global Mobility Materials") are the copyrighted property and of S&P Global Mobility Ltd. and its subsidiaries ("S&P Global Mobility") and represent data, research, or opinions of S&P Global Mobility, and are not representations of fact. The information and opinions expressed in the S&P Global Mobility Materials are subject to change without notice and S&P Global Mobility has no duty or responsibility to update the S&P Global Mobility Materials. Moreover, while the S&P Global Mobility Materials reproduced herein are from sources considered reliable, the accuracy and completeness thereof are not warranted. No further reproduction of this material is allowed without the express written permission of S&P Global Mobility.

ZEV Targets

B.C. became the first jurisdiction in the world to legislate a 100% ZEV sales requirement. The *ZEV Act*, passed on May 30, 2019, requires automakers to meet ZEV sales targets reaching 10% of new light-duty vehicle sales by 2025, 30% by 2030, and 100% by 2040. In 2023, the Province increased the stringency of the *ZEV Act* such that ZEVs will make up 26% of light-duty vehicle sales by 2026, 90% by 2030, and 100% by 2035. The legislation aims to ensure a greater availability of ZEVs at more affordable prices in B.C.

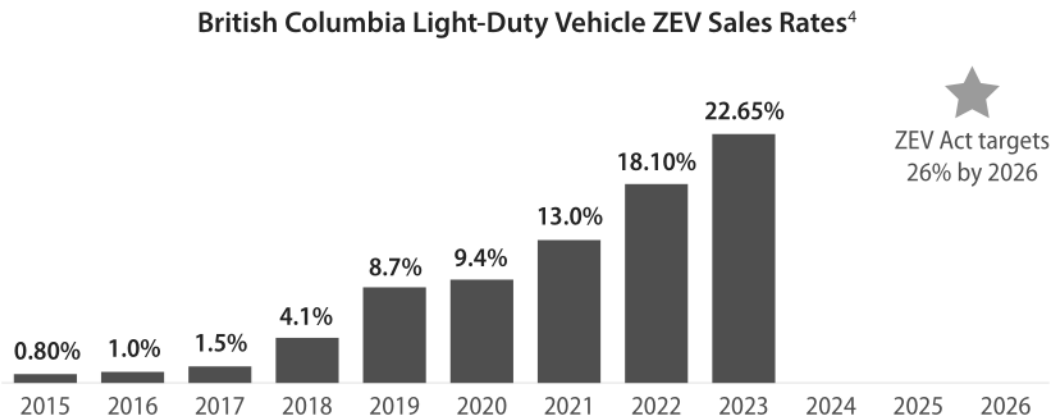


Cover photo credit: Michael Stanyer from Plug In BC

In the CleanBC Roadmap to 2030, the Province also committed to implement ZEV targets for medium- and heavy-duty vehicles, and to develop a Clean Transportation Action Plan that will identify the next set of actions to reduce greenhouse gas emissions in the transportation sector by 27-32% by 2030, including actions to shift transportation to more energy-efficient modes. We are well on our way to achieving the 2026 ZEV sales targets. In 2023, there were 44,009 new ZEVs registered in B.C., which represented 22.65% of all new light-duty vehicle registrations in B.C.

In 2023, there were 86 new medium- and heavy-duty ZEVs registered in B.C., which represented 0.57% of all new medium- and heavy-duty vehicle registrations in B.C.

Note: Recent amendments to the ZEV Act, which received Royal Assent on November 30, 2023, increased the weight of vehicles captured under the Provincial ZEV sales targets and Provincial targets report to include Class 2b vehicles.

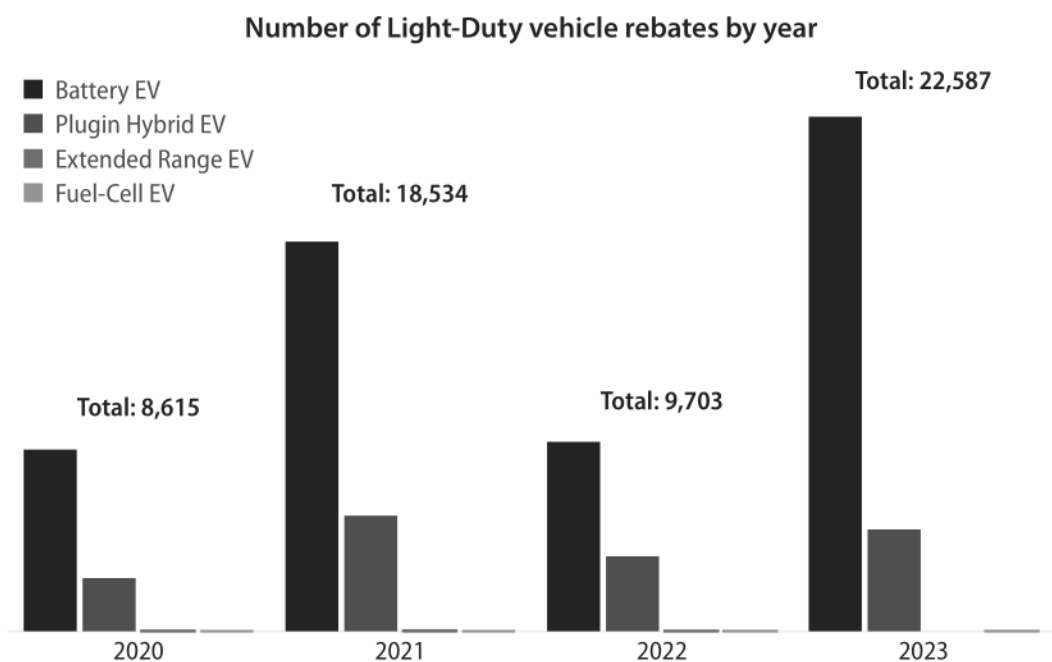


⁴ Based on S&P Global Mobility New Vehicle Registration data from January 2023 through December 2023. Figures and information sourced to S&P Global Mobility within this report (the "S&P Global Mobility Materials") are the copyrighted property and of S&P Global Mobility Ltd. and its subsidiaries ("S&P Global Mobility") and represent data, research, or opinions of S&P Global Mobility, and are not representations of fact. The information and opinions expressed in the S&P Global Mobility Materials are subject to change without notice and S&P Global Mobility has no duty or responsibility to update the S&P Global Mobility Materials. Moreover, while the S&P Global Mobility Materials reproduced herein are from sources considered reliable, the accuracy and completeness thereof are not warranted. No further reproduction of this material is allowed without the express written permission of S&P Global Mobility.

Passenger Vehicle Rebate

As of December 2023, the Province has issued rebates for 84,267 ZEVs through the Go Electric Passenger Vehicle Rebate Program, totalling \$274,414,698 since April 2015.

The program continues to use an income-tested rebate approach to ensure EV rebates are accessible to those who need them most. In May 2023, BC Hydro started funding the rebate program in collaboration with the Province of British Columbia. The program continues to be delivered by the New Car Dealers Association of BC. The top applicant cities for rebates in 2023 were Surrey, Vancouver, and Richmond.



In 2023, five rebates were issued for FCEVs and zero rebates were issued for EREVs.

Light duty ZEVs that received the most rebates in 2023
Tesla Model Y
Tesla Model 3
Chevrolet Bolt
Volkswagen ID.4
Mitsubishi Outlander





Photo credit: Seaspán

Commercial Vehicles

The Go Electric Commercial Vehicle Pilots (CVP) program and Go Electric Rebates (GER) program are designed to support the adoption of commercial⁵ ZEVs in a variety of applications.

The CVP program is a competitive program that supports pilot projects focused on the development and deployment of commercial zero-emission medium and heavy-duty vehicles. The CVP program also supports fuelling infrastructure across all modes of transportation. The program is available to B.C. businesses, local and regional governments, public sector organizations, and non-profit organizations. Selected projects can receive up to 33% of the cost for both eligible vehicles and fuelling infrastructure.

The GER program provides post-purchase rebates for eligible commercial and specialty use vehicles for B.C. businesses, local and regional governments, public sector organizations, and non-profit organizations. Individuals can also receive rebates on zero-emission motorcycles and neighbourhood ZEVs under the low-speed category. In 2023, Class 2b vehicles were added as an eligible vehicle type in the Medium and Heavy Duty (MHD) Vehicle rebate category.

⁵ Commercial vehicles include on-road and off-road medium, heavy-duty trucks, vans, buses, marine vessels, port, airport equipment, etc

HIGHLIGHTS:

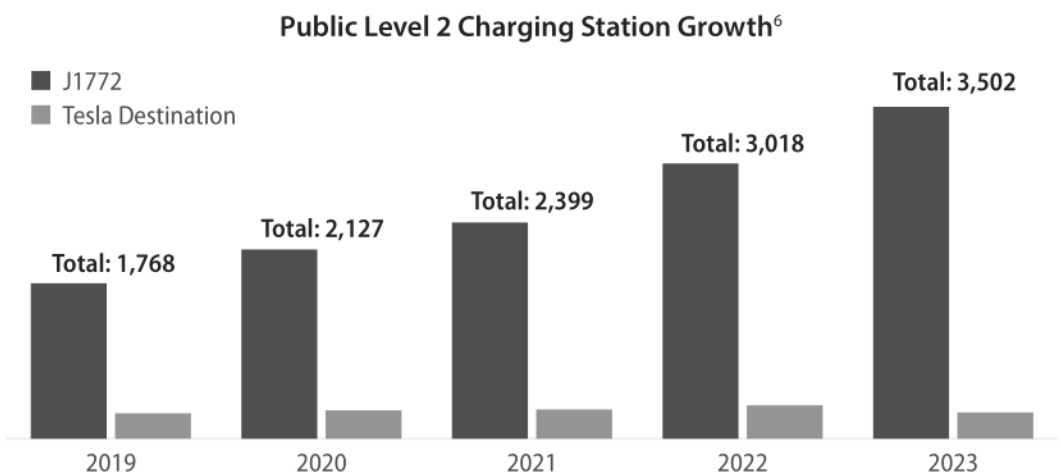
- ▶ Since November 2017, the Go Electric Rebate (GER) program has distributed \$10,684,929, providing a total of 1428 rebates to eligible commercial vehicles and other specialty use vehicles.
- ▶ Since the CVP Program launched in January 2021, \$47 million has been allocated across 29 projects representing 86 on-road battery electric vehicles (BEV), 25 off-road BEVs, one off-road plug-in hybrid electric vehicle (PHEV), and five off-road hydrogen fuel-cell electric vehicles (FCEV), as well as 118 total commercial vehicle charging points and fuelling stations.
- ▶ In 2023 elibird aero's proposal for \$491,000 was approved to acquire two fully electric training aircraft and two accompanying level 3 chargers. elibird aero is a 100% Indigenous-owned company offering pilot and aircraft maintenance training as well as sightseeing tours out of the Boundary Bay Airport in Delta. This is the second 100% Indigenous-owned project to be supported by CVP.
- ▶ Gat Leedm, an Indigenous-owned logistics and freight company, was granted \$914,000 in 2021 for the purchase of three battery electric drayage trucks and supporting charging infrastructure for operations out of the Port of Prince Rupert.
- ▶ Since 2020, a total of 96 electric school buses have been ordered through the Go Electric School Bus program, a successful partnership between the Ministry of Education, the Ministry of Energy, Mines and Low Carbon Innovation and the Association of School Transportation Services of B.C. Out of the 75 school buses (all fuel types) ordered in 2023, 28 were electric, representing a 37% adoption rate.

Public Charging and Fuelling Infrastructure

Public EV Charging Infrastructure Funding

Through the Go Electric Public Charger program, Indigenous applicants can receive up to 90% of project costs to a maximum of \$130,000 per fast-charging station and \$7,500 per level 2 charging station, while all other applicants can receive up to 50% of project costs, to a maximum of \$80,000 per fast-charging station and \$5,000 per level 2 charging station. In the CleanBC Roadmap to 2030, the Province committed to having 10,000 public EV charging stations in B.C. by 2030.

Additionally, Go Electric funding provides successful applicants of Natural Resources Canada’s (NRCan) Zero Emission Vehicle Infrastructure Program (ZEVIP) with top up funding of up to 25% of project costs to a maximum of \$25,000 for public fast-charging projects located in B.C. This funding is in addition to funding of up to 50% of project costs provided by NRCan.



Hydrogen Fuelling

The Go Electric Hydrogen Fuelling Program provides funding to public hydrogen fuelling station developers in B.C. At the end of 2023, there was a network of five public hydrogen fuelling stations for light-duty vehicles in B.C., with six more planned for completion.



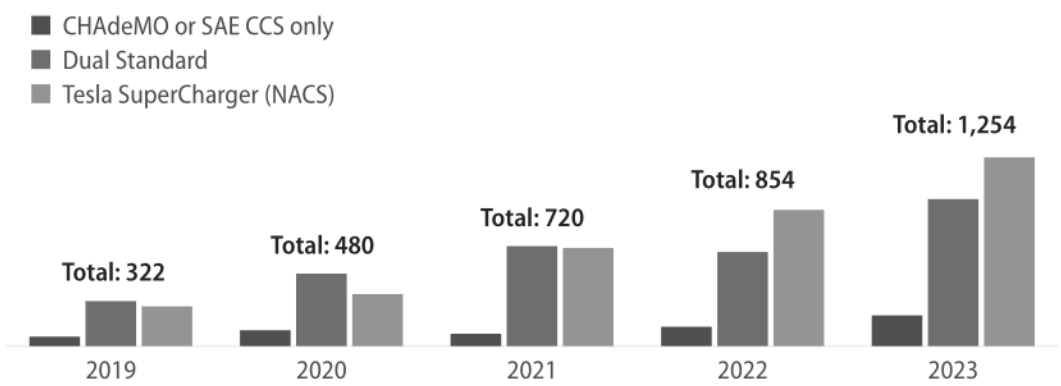
⁶ Data for 2023, 2021, 2020, and 2019 is provided by PlugShare. Data from 2022 is from the NRCan Electric Charging and Alternative Fuelling Stations Locator.



Photo credit: Michael Stanyer from Plug In BC

Public Charging and Fuelling Infrastructure

Public Fast-Charging Station Growth⁷



Public charging station numbers grew by 47% in 2023, compared with 2022. By the end of 2023 in B.C., there were 1,257 fast charging stations across 402 public fast-charging sites (of those sites 62 were Tesla Supercharger sites). Approximately 80% of the core network of fast-charging sites enabling travel throughout B.C. are now ready.

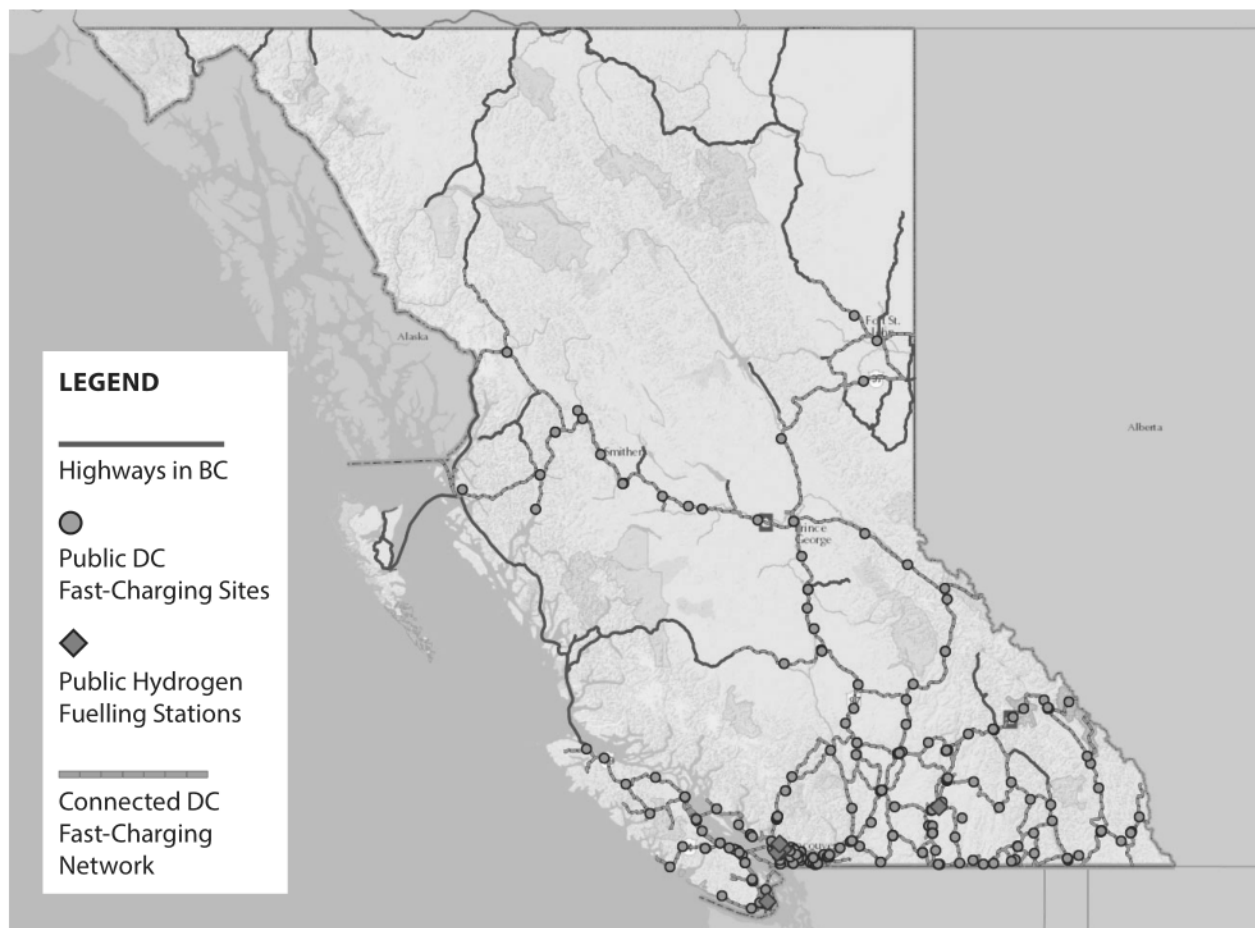
Charger Type	Description
SAE CCS	A type of connector for charging an EV at a public fast charger, mostly associated with American-brand EVs.
CHAdeMO	A type of connector for charging at a public fast charger, mostly associated with Japanese brand EVs.
Dual Standard	A station that has both a CHAdeMO and a SAE CCS connector. Public fast charging stations being deployed in B.C. are largely dual standard. All EVs with fast-charging capability can charge at these stations (including Teslas with an adaptor).
Tesla Supercharger or NACS	Tesla connector for fast charging stations. In November 2022, Tesla changed the name of its charging connector to the North American Charging Standard (NACS) and opened its connector to the industry as a public standard.

⁷ Data for 2023, 2021, 2020, and 2019 is provided by PlugShare. Data from 2022 is from the NRCan Electric Charging and Alternative Fuelling Stations Locator.

Public ZEV Infrastructure Network

The network of public fast-charging and hydrogen-fuelling stations is expanding along B.C.'s primary and secondary highway systems, major roads, and in community centres. In the CleanBC Roadmap to 2030, the Province committed to completing B.C.'s Electric Highway by ensuring broad geographic coverage of EV fast-charging sites by summer 2024. The Ministry is working with its partners to support a network that will allow safe and convenient travel in a ZEV throughout B.C.

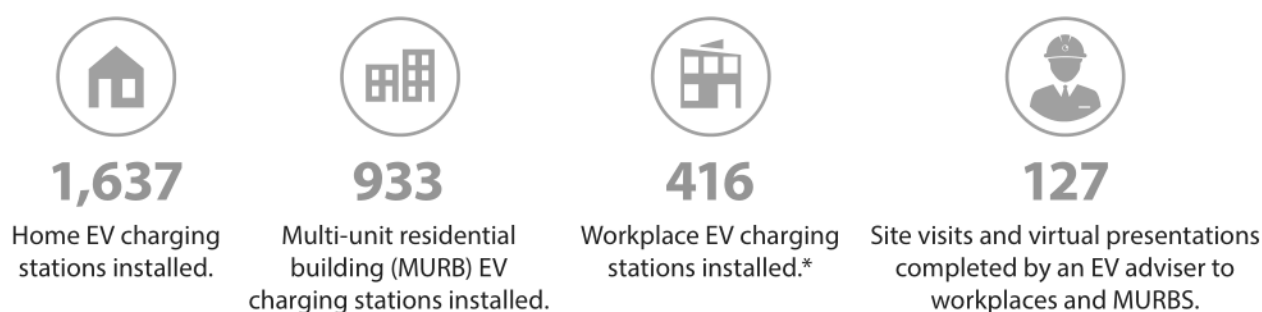
The British Columbia Public Light-Duty ZEV Infrastructure Study serves as a guide for utilities, municipalities, First Nations communities, and the private sector to invest in further expansion of the EV fast-charging and hydrogen-fuelling network in B.C. Based on modelling all routes with a 30-kWh EV, the study identified 194 charging sites that are needed to have geographic coverage along primary and secondary highways. Due to the evolution of the EV market towards having larger battery sizes since original geographic connectivity modelling was conducted in 2017, the routes were remodeled with a 60-kWh vehicle – resulting in 170 strategically located sites being required for geographic connectivity province-wide. Further analysis of existing level 2 charging infrastructure resulted in identifying 155 sites being deemed necessary for completing B.C.'s Electric Highway. Approximately 124, or 80%, of the 155 sites identified have active fast charging stations.



Home, Workplace, and Fleet Charger Rebates

The Go Electric EV Charger Rebate program offers rebates for the purchase and installation of Level 2 charging stations in single-family homes, apartments, condominiums, and workplaces. Increased rebates are available for First Nations communities and businesses. Up to five hours of free support services provided by an EV Advisor are available for apartments, condos, and workplaces. The program also provides rebates for apartment and condo buildings to complete an EV Ready plan, install electrical infrastructure to implement the EV Ready plan, and install charging stations.

EV Charger Rebate Program Statistics (January to December 2023)



*Please note that the 2022 ZEV Annual Report incorrectly stated that 547 MURB EV charging stations were installed during the 2022 calendar year – total EV chargers installed at MURBs in 2022 was 998. The 547 charging stations cited were associated with the standalone MURB rebate stream, though an additional 451 MURB charging stations were also supported through the EV Ready rebate stream.

The Go Electric Fleet Charging program offers rebates for ZEV fleet assessments, infrastructure assessments, electrical upgrades, and Level 2 and fast-charging stations for fleets. Eligible businesses and municipalities can also access technical support, including up to 40 hours of free support services from a ZEV fleet advisor. Increased rebates are available for First Nations communities and businesses. In 2023, the Fleet Charging program provided rebates for 71 Level 2 chargers and 15 fast chargers.



Photo credit: Michael Stanyer from Plug In BC

HIGHLIGHTS:

- ▶ With additional federal funding from Natural Resources Canada's Zero Emission Vehicle Infrastructure Program, increased rebate offers of up to \$5,000 per charging station supported the purchase and installation of 680 level-2 chargers at over 130 MURBs and workplaces across B.C.
- ▶ Total combined charger rebates/installs at MURBs and workplaces increased by 8% compared to 2022, which includes a 67% increase in charging installations at workplaces.
- ▶ As of the end of 2023, approximately 3.4% of the roughly 15,000 multi-unit residential buildings in B.C. have EV Ready Plans.
- ▶ The number of EV Ready stalls increased by 63% and the number of EV Ready buildings increased by 81% since 2022.

Training and Jobs

The Go Electric Training programs help prepare B.C.'s workforce to be leaders in the transition to ZEVs. Go Electric funding supports Red Seal Electricians in B.C. to complete the Electric Vehicle Infrastructure Training Program (EVITP) delivered by the Electrical Joint Training Committee (EJTC). This program provides training and certification for electricians to safely install EV charging infrastructure. A total of 349 electricians have now taken the course, including 37 in 2023.

The EV Maintenance Training program offers courses for the servicing of ZEVs. Courses are designed as an upgrade option for existing Red Seal Automotive Service Technicians. A total of 468 students have now taken the course, including 205 in 2023. Red Seal Automotive Service Technicians can now access this training program at the following schools:

- ▶ British Columbia Institute of Technology (BCIT)
- ▶ Camosun College
- ▶ Okanagan College
- ▶ College of New Caledonia
- ▶ Kwantlen Polytechnic University
- ▶ College of the Rockies
- ▶ Vancouver Island University

In addition, the Province is working with BCIT to develop a ZEV Maintenance Training Program for Medium- and Heavy-Duty Mechanics. This project aims to provide commercial truck and transport mechanics and MHD equipment technicians with ZEV and hydrogen fuel cell vehicle (HFCV) training in service and repair. A ZEV truck, bus and heavy-duty equipment training curriculum will be developed, with courses designed as an upgrade option directed at certified Red Seal Heavy Duty Equipment Technicians (HDET).



349

Electricians trained through the Electric Vehicle Infrastructure Training Program*



468

Automotive Technicians have completed the Electric Vehicle Maintenance Training Program*

* As of the end of December 2023. The number shown is the total number of people who have been trained since the program became available.



First Nations Low-Carbon Transportation Project

The First Nations Low-Carbon Transportation Project is funded by the Ministry of Energy, Mines and Low Carbon Innovation, and developed, delivered, and led by the BC Assembly of First Nations (BCAFN). This three-year project aims to promote and accelerate First Nations' access to safe, reliable, and affordable low-carbon transportation. As part of the implementation of the [BC First Nations Climate Strategy and Action Plan](#) (Theme 4.2, Objectives 4.2.1 and 4.2.2), the [First Nations Low-Carbon Transportation Project](#) aims to:

- ▶ Assess gaps and opportunities that restrict and assist First Nations access to transportation.
- ▶ Advocate for transportation-related policies that help reduce greenhouse gas emissions and uphold First Nations' Title, Rights and Treaty Rights.
- ▶ Strengthen community capacity and climate awareness.

Key project activities include developing a Transportation Assessment Report, preparing a First Nations Low-Carbon Transportation Planning Guide, and undertaking five community-led First Nations pilot projects that reflect the diversity of First Nations in B.C., including coastal, remote, and urban communities. In 2023, Nisga'a Nation, ʔEsdilagh First Nation, Daylu Dena Council (Lower Post First Nation), Heiltsuk First Nation and Squamish Nation were selected as the pilot project communities. These communities will be receiving up to \$65,000 in flexible funding to support the creation of their own Low-Carbon Transportation Plan and Gap Analysis Report.



With input from the pilot communities and support from the Community Energy Association, the BCAFN started preparing a First Nations Low-Carbon Transportation Planning Guide that can support all interested First Nations in developing their own comprehensive low-carbon transportation plans. During the past year, the BCAFN also began drafting a Transportation Assessment Report to assess barriers and opportunities and provide recommendations to address gaps and strengthen opportunities to ensure that First Nations across B.C. have equitable access to transportation.

In 2024, the BCAFN will continue to work with project partners on key project activities, including preparing and delivering a transportation survey to all First Nations communities in B.C. and engaging with the Province to explore solutions to the findings and recommendations associated with the project's Transportation Assessment Report, which is expected in 2025.



Public Outreach

The Go Electric Community Outreach Incentive Program (COIP) provides funding to communities and non-profit organizations in B.C. to deliver EV outreach activities and events. To date, COIP has delivered funding to 76 community-led awareness projects. In 2023, COIP funding was provided to 15 projects from a variety of regions across British Columbia to support EV awareness, including digital marketing campaigns, educational videos, virtual events, and in-person EV demonstrations.

In 2023, 56 Emotive events, supported by Go Electric, occurred in communities across B.C. that included car show demonstrations, test-drive events, scavenger hunts, and various local events.

To learn more about Emotive, the provincial and local government outreach partnership, visit emotivebc.ca or follow them on [Instagram](#), [Facebook](#) or [YouTube](#).

COIP PROJECT SPOTLIGHT
Charge FWD produced a [video](#) that highlights the positive impact of an Indigenous-owned public charging station in the territory of the Leq'a:mel First Nation in Deroche, B.C.



ZEV Economic Development

The Go Electric Advanced Research and Commercialization (ARC) program supports B.C.'s zero emission vehicle sector by providing reliable and targeted support for research and development, commercialization and demonstration of B.C.-based zero-emission vehicle technologies, services, and products.

Since the ARC program launched in 2018, more than \$9 million has been committed to 21 projects across two funding calls. Approximately 175 full-time equivalent jobs are anticipated to be created and sustained by the projects. Two projects from the first funding call and one project from the second funding call are complete.

The ARC program is investing \$5 million in a third funding call that launched in August 2023, with funding decisions expected in 2024.

The Go Electric Commercial Vehicle Innovation Challenge (CVIC) is a funding initiative launched through the ARC program. CVIC is designed to support technology innovation in the hard-to-decarbonize commercial vehicle sector, while also creating economic growth, high-value jobs, and investment in a growing B.C.-based ZEV technology sector. CVIC has a total of \$30 million in funding that will be distributed over two funding calls. The first CVIC funding call launched in April 2023 with \$20 million in available funds. Funding decisions are expected in 2024, and the second CVIC funding call is expected to launch in 2025.



Other ZEV Data

Light-duty ZEVs Registered in B.C.⁸



There were 146 medium and heavy-duty ZEVs (Class 3 – Class 8 on the road as of the end of December 2023. 100% of these vehicles are battery electric vehicles.⁶

Light-duty Registration Totals for 2023 by Development Region⁶

Region	ZEV Registrations
Cariboo	667
Kootenay	1,279
Lower Mainland/Southwest	118,614
Nechako	133
North Coast	218
Northeast	127
Thompson-Okanagan	7,942
Vancouver Island/Coast	23,451
Other	614



⁸ Based on S&P Global Mobility Units in Operation Registration Data as of December 31, 2023 (Model Years 1981 and Newer) for the Province of British Columbia. Figures and information sourced to S&P Global Mobility within this report (the "S&P Global Mobility Materials") are the copyrighted property and of S&P Global Mobility Ltd. and its subsidiaries ("S&P Global Mobility") and represent data, research, or opinions of S&P Global Mobility, and are not representations of fact. The information and opinions expressed in the S&P Global Mobility Materials are subject to change without notice and S&P Global Mobility has no duty or responsibility to update the S&P Global Mobility Materials. Moreover, while the S&P Global Mobility Materials reproduced herein are from sources considered reliable, the accuracy and completeness thereof are not warranted. No further reproduction of this material is allowed without the express written permission of S&P Global Mobility.

Model Year 2022 *Zero-Emission Vehicle Act* Compliance Report

The purpose of this report is to provide data on the status of vehicle suppliers' compliance with B.C.'s *ZEV Act* and *ZEV Regulation*. The *ZEV Act* establishes a ZEV unit credit system in which suppliers must obtain ZEV credits (positive ZEV units) in each model year compliance period, equal to or greater than, the ZEV units that will be deducted from their ZEV unit balance each year on the compliance date.

Model Year 2022 Annual Compliance Requirements

Vehicle suppliers are required to demonstrate compliance with the *ZEV Act* for each model year. For model year 2022, medium and large volume class suppliers must have a minimum number of ZEV credits equivalent to 14.5% of their total consumer sales of model year 2022 light duty vehicles. Small volume suppliers are not required to meet an annual compliance requirement.

A total credit balance of zero or greater at the end of the compliance date of September 30, 2023 indicates the supplier is compliant with the *ZEV Act* for model year 2022. There is no restriction on which model year of credits a supplier uses to meet their compliance requirements for a given model year, but as a rule, the oldest model year of credits are used first to meet compliance requirements.

Suppliers earn credits for consumer sales of ZEVs where the credit value of each model is based on the ZEV type (e.g., BEV, PHEV, FCEV) and range of the vehicle model. Suppliers can also obtain credits through credit transfers with other suppliers, initiative agreements, and credit agreements.

Consumer sales of ZEVs generate credits based on the ZEV Class and range of the vehicle model. The definitions of the types of ZEVs eligible to generate credits, and the formulas for calculating credits, are set out in the *ZEV Regulation* Sections (1) and (14), respectively.

ZEV models are divided into Class A, Class B, and Class C. The class of credits a supplier receives corresponds with the ZEV class of the vehicle that was sold. Medium volume supplier compliance requirements can be met with either Class A or Class B credits. For model year 2022, large volume supplier compliance requirements must be met with at least 10% Class A credits, while the remaining 4.5% may be met with Class B or Class A credits. Credits are not issued for consumer sales of Class C vehicles.

Vehicle Suppliers Total Light-Duty Sales and Credit Requirements for MY 2022

The table below shows the volume class and credit requirements for vehicle suppliers that have a ZEV requirement for model year 2022. The table also shows suppliers' total number of new model year 2022 light-duty consumer sales in B.C., which is used to calculate suppliers' compliance credit requirements.

Vehicle Supplier	Volume Class	Total Light-duty Consumer Sales MY 2022	Minimum A Credits Required	A or B Credits Required	Total Credits Required
BMW	Large	5,064	506.40	227.88	734.28
FCA	Large	16,210	1,621.00	729.45	2,350.45
Ford	Large	20,960	2,096.00	943.20	3,039.20
GM	Large	14,598	1,459.80	656.91	2,116.71
Honda	Large	12,938	1,293.80	582.21	1,876.01
Hyundai	Large	13,131	1,313.10	590.90	1,904.00
Jaguar Land Rover	Medium	914	N/A	132.53	132.53
Kia	Large	6,297	629.70	283.37	913.07
Mazda	Large	4,798	479.80	215.91	695.71
Mercedes	Large	5,235	523.50	235.58	759.08
Mitsubishi	Medium	3,545	N/A	514.03	514.03
Nissan	Large	6,583	658.30	296.24	954.54
Porsche	Medium	1,443	N/A	209.24	209.24
Subaru	Large	4,376	437.60	196.92	634.52
Tesla	Large	14,235	1,423.5	640.58	2,064.08
Toyota	Large	29,649	2,964.90	1,334.21	4,299.11
Volkswagen	Large	8,810	881.00	396.45	1,277.45
Volvo	Medium	1,320	N/A	191.40	191.40
Total	-		16,288.40	8,377.01	24,665.41



Photo credit: Community Energy Association

Credits Issued for Vehicle Supplier's Consumer ZEV Sales

The table below shows the number of consumer ZEV sales and the number of credits issued to each supplier, by ZEV class, during the model year 2022 compliance period.

Vehicle Supplier	Model Year 2022 Compliance Period			
	ZEV Class A Consumer Sales	ZEV Class A Credits Issued	ZEV Class B Consumer Sales	ZEV Class B Credits Issued
BMW	422	1,105.83	784	409.20
FCA	0	0	654	365.06
Ford	1,300	3,956.99	705	466.91
GM	1,636	4,940.43	0	0
Honda	0	0	0	0
Hyundai	1,849	5,755.04	760	469.76
Jaguar Land Rover	11	29.20	3	1.47
Kia	688	2,036.83	290	170.56
Mazda	241	361.50	0	0
Mercedes	80	298.44	0	0
Mitsubishi	0	0	2044	1,305.36
Nissan	306	749.46	0	0
Porsche	121	315.97	55	25.95
Subaru	0	0	0	0
Tesla	15889	57,244.06	0	0
Toyota	13	52.00	1,471	1,177.40
Volkswagen	731	2,061.08	43	22.80
Volvo	369	1,063.72	459	267.57
Total	23,656	79,970.55	7,268	4,682.04

Credits Issued for Vehicle Supplier Initiative Agreements

The table below shows the credits issued under initiative agreements for the model year 2022 adjustment period from October 1, 2022 to September 30, 2023.

Vehicle Supplier	ZEV Class of Credit	Model Year of Credits	Total Credits Issued
Ford	A	2022	120.34

Credits Recorded for Vehicle Supplier Credit Transfers

The table below shows the credit transfers between vehicle suppliers recorded by the Director, by ZEV Class and model year, for the model year 2022 adjustment period from October 1, 2022 to September 30, 2023.

Seller	ZEV Class of Credit	Model Year of Credits	Total Credits	Buyer	ZEV Class of Credit	Model Year of Credits	Total Credits
Tesla	A	2022	1195	Mazda	A	2022	1195

Vehicle Supplier Credit Balances for Model Year 2022

The table below shows each suppliers' credit balance prior to, and after, their compliance credit reduction, as well as the compliance ratio credit reduction, broken down by ZEV Class, on the model year 2022 compliance date of September 30th, 2023.

Vehicle Supplier	ZEV Class of Credit	Credit Balance Before Compliance Reduction*	Compliance Ratio Credit Reduction*	Credit Balance After Compliance Reduction*
BMW	A	1,265.59	506.40	759.19
	B	458.10	227.88	230.22
FCA	A	2,512.65	1,985.39	527.26
	B	365.06	365.06	–
Ford	A	6,401.27	3,039.20	3,362.07
	B	466.91	–	466.91
GM	A	9,624.73	2,116.71	7,508.02
	B	–	–	–
Honda	A	17,529.69	1,876.01	15,653.68
	B	–	–	–
Hyundai	A	14,929.58	1,434.24	13,495.34
	B	469.76	469.76	–
Jaguar Land Rover	A	46.91	46.91	–
	B	1.47	85.62	-84.15
Kia	A	7,949.57	742.51	7,207.06
	B	170.56	170.56	–
Mazda	A	2,354.54	695.71	1,658.83
	B	–	–	–
Mercedes	A	1,140.22	759.08	381.14
	B	–	–	–
Mitsubishi	A	–	–	–
	B	1,888.28	514.03	1,374.25
Nissan	A	3,309.44	954.54	2,354.90
	B	–	–	–
Porsche	A	1,041.91	183.29	858.62
	B	25.95	25.95	–

Vehicle Supplier	ZEV Class of Credit	Credit Balance Before Compliance Reduction*	Compliance Ratio Credit Reduction*	Credit Balance After Compliance Reduction*
Subaru	A	41.46	437.60	-396.14
	B	–	196.92	-196.92
Tesla	A	105,144.85	2,064.08	103,080.77
	B	–	–	–
Toyota	A	7,361.48	2,964.90	4,396.58
	B	1,746.45	1,334.21	412.24
Volkswagen	A	4,403.96	1,254.65	3,149.31
	B	22.80	22.80	–
Volvo	A	1,576.99	–	1,576.99
	B	272.17	191.40	80.77
Total	–	192,522.35	24,665.41	167,856.94

*Note: Reported information may be subject to change due to reassessments of previous model years.

For model year 2022, 16 of the 18 vehicle suppliers were assessed to have a total credit balance of zero or greater at the end of the compliance date. The two vehicle suppliers assessed with a total credit balance containing a credit deficit have not met their compliance obligation for model year 2022. Both vehicle suppliers were assessed to have a total credit balance of zero or greater at the end of the compliance date for model year 2021. Therefore, section 10 (3) under the ZEV Act, which refers to automatic administrative penalties does not apply, as per section 10 (4) under the ZEV Act.



Photo credit: BC Ministry of Transportation



Glossary

Acronym	Description
ZEV	Zero-Emission Vehicle – used interchangeably with “EV”, and includes BEVs, FCEVs, EREVs, and PHEVs.
DCFC	Direct Current Fast Charger – the public fast chargers that today allow EVs to get 100 - 300km in 30 minutes of charging (but faster chargers giving more range in less time are coming out every year).
EV	Electric Vehicle – used interchangeably with “ZEV”, and includes BEVs, FCEVs, EREVs, and PHEVs.
BEV	Battery Electric Vehicle – powered 100% with electricity.
FCEV	Fuel-Cell Electric Vehicle – powered 100% with hydrogen.
EREV	Extended Range Electric Vehicle – has an electric motor and battery, but the battery is recharged with a combination of electricity and gas.
PHEV	Plug-in Hybrid Electric Vehicle – has both an electric motor powered by electricity from a battery and a gas engine fueled by conventional gas.
EVSE	Electric Vehicle Supply Equipment – an industry term for charging stations.
MHD	Medium- and Heavy-Duty – refers to medium- and heavy-duty vehicles.

To learn more about the Province’s clean transportation actions, visit gov.bc.ca/zeroemissionvehicles. To find CleanBC Go Electric rebates, visit goelectricbc.gov.bc.ca.

Thank You To Our Partners

Thank you to all the EV associations, local communities, academic institutions, original equipment manufacturers, industry associations, infrastructure vendors and installers, and other organizations for continuing to support the adoption of EVs in B.C. and contributing to the implementation of EV policies and programs.



Energy at work



MNP



PlugInBC 



NCDA



AUTOMOTIVE RETAILERS ASSOCIATION
Driving Industry Excellence





cleanBC
GO ELECTRIC

CleanBC Go Electric Advanced Research and Commercialization Program Issue

KEY FACTS:

- Under the suite of CleanBC Go Electric programs, the Advanced Research and Commercialization (ARC) program is designed to support the economic development of British Columbia's (B.C.) zero-emission vehicle (ZEV) industry sector. The ARC program provides targeted commercialization support through competitive funding calls for researching, developing, and demonstrating B.C.-based ZEV technologies.
- The ARC program is inclusive of the Commercial Vehicle Innovation Challenge (CVIC), a targeted grant program that focuses on funding the research, development and demonstration of commercial ZEVs in B.C.
- In April 2024, allegations were made that MNP LLP (MNP) – the program administrator – acted in a conflict of interest in its administration of the ARC/CVIC program.
Advice/Recommendations
- On April 8, 2024, the Legislative Assembly passed a resolution to request that the Office of the Auditor General (OAG) undertake an examination of the administration of grants by MNP LLP under the ARC program and CVIC. In addition, the Office of the Comptroller General (OCG) was assigned to complete a compliance assessment of the programs with Core Policy and Legislation.
- On August 28, 2024, the OAG published the final report on the examination of MNP's administration of the ARC program and found no evidence that MNP wrote grant applications for ARC program applicants, influenced application evaluations to benefit its clients, or used ARC program information to recruit clients for its other services. This result is further supported by the OCG's compliance assessment that found the Ministry adheres with Core Policy and Legislation.
- Advice/Recommendations; Government Financial Information

ADDITIONAL INFORMATION:

- The ARC program has completed two funding calls and supported 21 approved and completed projects in 5 sub-sectors, including testing and certification services, fuelling infrastructure, vehicles, and vehicle components.
- Advice/Recommendations
- The first CVIC funding call launched in June 2023, with \$19.5 million committed to 8 projects in early February 2024.

FINANCIAL SUMMARY:

Table 1: ARC and CVIC Program funding summary table by funding call.

Funding Call	Funds Committed¹	Funds Disbursed	Total Project Value²	Jobs Completed/Approved Projects²	Jobs (FTEs)²
ARC					
ARC-2018-1	\$1,003,606.00	\$697,644.00	\$2,201,840.00	N/A	4
ARC-2020-2	\$7,626,821.00	\$4,356,680.00	\$25,326,414.00	175	17
Total	\$8,630,427.00³	\$5,054,325.00	\$27,528,254.00	175	21
CVIC					
CVIC-2023-1	\$19,500,000.00	\$4,145,035.00	\$62,255,828.00	340	8
Grand Total	\$28,130,427.00	\$9,199,360.00	\$89,784,082.00	515	29

¹Committed funds is considered as the funds committed to approved projects and funds disbursed to completed and terminated projects.

²Figures for Total Project Value, Jobs (FTEs) and Completed/Approved Projects does not include terminated projects.

Advice/Recommendations; Government Financial Information

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Nat Gosman, EDD	778-698-7282
Adria Fradley, CAS	250-893-4329

CleanBC Program for Industry

KEY FACTS:

CleanBC Program for Industry (CPI)

- This program is designed to support large industrial facilities in transitioning to cleaner, lower-emitting operations through two initiatives:
 - CleanBC Industrial Incentive Program: rewards operators based on how their emissions intensities compare to leading emissions benchmarks.
 - CleanBC Industry Fund: invests directly into emission-reduction and technology advancement projects.
- CPI leverages industry investments in clean technology to substantially cut pollution and support jobs in the clean economy.
- The Program supports industries such as oil and gas, pulp and paper, mining, cement, greenhouses, and other sectors.
- The Program is open to most¹ industrial reporters that emit over 10,000 tonnes of carbon dioxide equivalent (tCO₂e) per year (i.e., the size of a small sawmill)

CleanBC Industrial Incentive Initiative (CIIP):

- This initiative has rewarded operators based on how their facilities' emissions intensity compares to emissions benchmarks.
- On April 1, 2024, the Province transitioned CIIP to the B.C. Output-Based Pricing System (B.C. OBPS), phasing out the program. The ministry will issue final CIIP payments to industrial operators before March 31, 2025.
- In 2024/25 the CIIP program received 481 applications represented by 82 reporting operations and \$138.1M in payments were made.
 - CIIP payments were \$33.4M in 2019, \$81.7M in 2020, \$65.5M in 2021, and \$109.4M in 2022.
 - 2023 CIIP payments totaled \$331.5M and included \$186.7M in prepayments for 2024.
- Incentive payments to the operators were calculated according to their emissions performance compared to published benchmarks for different industrial sectors.

¹ Sectors that are not eligible for the CleanBC Incentive Program include natural gas distribution, waste treatment and disposal and sewage treatment, fossil fuel and hydro electricity generation and electricity transmission.

CleanBC Industry Fund (CIF)

- The CIF supports industry's transition to cleaner and more competitive operations by investing carbon tax revenues directly into projects that reduce emissions, trial new innovations, and develop future plans to improve industrial operations.
- CIF projects are jointly funded between the Province and industry proponents, with requirements for minimum industry contributions.
- CIF has four funding streams:
 1. Emissions Performance (EP) – projects that invest in commercially available clean technologies that directly reduce greenhouse gas emissions (provincial funding up to 50% of total project cost, with a \$25M cap);
 2. Innovation Accelerator (IA) – pilot and pre-commercial demonstration projects (provincial funding up to 75%);
 3. Feasibility Studies (FS) – preliminary studies for potential projects intended for the Emissions Performance and Innovation Accelerator streams (provincial funding up to 75%).
 4. Industrial Electrification (IE) – a partnership with BC Hydro to support large electrification projects that require a new or upgraded connection to the BC Hydro integrated grid (provincial funding up to 50% of total project cost, with a \$25M cap).
- The fund employs a competitive process to assess project proposals. Projects are assessed and ranked according to technical evaluation criteria, with highest ranked projects selected for funding.
- Previous rounds of Emissions Performance projects are expected to reduce approximately 9.5 MtCO₂e cumulatively over a ten-year period.
- Through the Innovation Accelerator and Feasibility Studies funding streams the CIF has advanced emission reduction opportunities and technologies such as Carbon Capture Utilization and Storage, Hydrogen and Biofuels Production, and Electrification.
- See Appendices A, B, and C for CIF projects that have been approved between 2019-2023.

ADDITIONAL INFORMATION:

Industrial Emissions

- Annual greenhouse gas (GHG) reporting for industrial operations emitting over 10,000 tonnes of GHGs/year is a requirement of the Greenhouse Gas Emission Reporting Regulation under the *Greenhouse Gas Industrial Reporting and Control Act*.
- Operations that emit 25,000 tonnes or more of GHGs must have their annual reports

verified by an accredited verification body by May 31st the following calendar year to ensure accuracy and consistency in the data across industries and over time.

- Posting of reported GHG emissions provides open and transparent information to industry and the public and is in keeping with commitments to open government.

Advice/Recommendations; Government Financial Information

FINANCIAL SUMMARY:

Advice/Recommendations; Government Financial Information

ATTACHMENTS:

- Appendix A - CleanBC Industry Fund Emissions Performance Projects
- Appendix B – CleanBC Industry Fund Innovation Accelerator Projects
- Appendix C – CleanBC Industry Fund Feasibility Studies Projects

ADM Responsible	Contact number
Adria Fradley, CAS	250-893-4329

Appendix A – CleanBC Industry Fund Emissions Performance Projects

The information provided in this Appendix is accurate as of 2024 and information relating to funded projects is subject to change.

84 Emissions Performance (EP) projects totaling \$191.85 million

Emissions Performance Totals					
	2019	2020	2021	2022	2023
# of Projects:	13	21	31	17	2
Total CIF Contribution:	\$9,585,883	\$29,652,189	\$74,552,669	\$64,615,037	\$13,440,750
Proponent + Other:	\$16,200,000	\$51,000,000	\$90,700,000	\$233,000,000	\$35,400,000
Total Project Costs:	\$25,785,883	\$80,652,189	\$165,252,669	\$297,615,037	\$48,840,750
Est. tCO ₂ e Reduced (10 years):	422,667	939,229	4,833,192	2,552,674	1,259,780
Total Projects by Sector:					
Agriculture	1	1	0	0	0
Cement	1	0	0	0	1
Lime and Gypsum	1	1	1	0	0
Mining	4	6	1	3	0
Oil and Gas	4	10	19	12	0
Pulp and Paper	2	1	9	2	0
Utility	0	1	0	0	0

Waste	0	1	1	0	1
Wood Product	0	0	0	0	0

2019 EP PROJECTS

Copper Mountain Mine Ltd. – Princeton, B.C.

Project type: Fuel Switching, Energy Efficiency

Project description: Copper Mountain Mine near Princeton will pilot an electric trolley system for haul trucks to transport material from the mine to the surface processing facility. The project will help prove the technology for wider application. Four haul trucks will be upgraded to be compatible with the new trolley technology. A new laneway with an overhead electric trolley power supply will be installed in a steep section of the current mine haul road.

Funding: \$2 million

Emissions reduced: 54,063 tCO₂e through 2030

Domtar Inc. – Kamloops, B.C.

Project type: Process Improvement

Project description: Domtar's Kamloops Mill will install new equipment to more efficiently feed waste-wood like bark and sawdust from sawmills into its boilers to provide steam heat for the facility using less natural gas.

Funding: \$1.3 million

Emissions reduced: 18,199 tCO₂e through 2030

Lafarge Canada Inc. – Richmond, B.C.

Project type: Fuel Switching

Project description: Lafarge Canada and the Capital Regional District are partnering on a project to use dried biosolid waste pellets from the Victoria area as a low carbon fuel to replace coal and natural gas used in the manufacture of clinker for the cement-making process.

Funding: \$753,500

Emissions reduced: 46,520 tCO₂e through 2030

Lhoist North America of Canada, Inc. – Langley, B.C.

Project type: Waste Heat Recovery, Energy Efficiency, Process Improvement

Project description: Lhoist's calcium quicklime facility will insulate its natural gas-fired kiln system to improve energy efficiency.

Funding: \$67,605

Emissions reduced: 4,730 tCO₂e through 2030

Ovintiv Canada ULC – Dawson Creek, B.C.

Project type: Methane Capture

Project description: Ovintiv will retrofit gas processing equipment at its Cutbank Ridge facility near Dawson Creek to run on compressed air instead of methane, eliminating venting of the fossil fuel into the atmosphere and repurposing it into the company's feedstock.

Funding: \$1.3 million

Emissions reduced: 10,709 tCO₂e through 2030

Shell Canada Energy – Northeast B.C.

Project type: Fuel Switching

Project description: Shell Canada Energy will replace methane venting equipment with new technology powered by clean electricity at its Groundbirch natural gas facility located west of Dawson Creek.

Funding: \$375,387

Emissions reduced: 19,419 tCO₂e through 2030

Teck Coal Ltd. – Kootenay B.C. (Trail and Elkview)

Project type: Fuel Switching, Process Improvement

Project description: Teck Coal will implement two CIF projects. The company will pilot a zero-emissions shuttle program with two electric buses for staff at its Elkview mining operation. It will also replace the burner head in its smelting furnace at its Trail operation with a more efficient model.

Funding: \$433,000

Emissions reduced: 61,248 tCO₂e through 2030

Thompson Creek Metals Company Inc. – North Coast and Nechako B.C.

Project type: Fuel Switching

Project description: Thompson Creek Metals will replace all diesel-powered generators with electric-powered equipment at the Philip Lake pumping station at its Mount Milligan copper and gold mine located northwest of Prince George, B.C.

Funding: \$439,440

Emissions reduced: 47,763 tCO₂e through 2030

Tidewater Midstream and Infrastructure Ltd. – Prince George, B.C.

Project type: Waste Heat Recovery, Energy Efficiency, Process Improvement

Project description: Tidewater Midstream and Infrastructure will implement a project at its Prince George oil refinery that will increase energy efficiency by automating part of its gas flaring process.

Funding: \$197,995

Emissions reduced: 13,661 tCO₂e through 2030

Veresen Midstream LP – Dawson Creek, B.C.

Project type: Methane Capture

Project description: Veresen Midstream will significantly reduce flaring of methane gas during normal operations at its Steeprock sour gas processing plant near Dawson Creek by installing electric vapour recovery equipment that will capture methane and repurpose it into its feedstock.

Funding: \$817,839

Emissions reduced: 26,509 tCO₂e through 2030

West Fraser Mills Ltd. – Quesnel, B.C.

Project type: Process Improvement, Energy Efficiency

Project description: West Fraser's Quesnel River Pulp will install a new pressurized scrubber and reconfigure its existing heat-exchange technology to improve energy efficiency at the mill site. The direct benefit will be less natural gas usage in the processing of converting wood chips into mechanical pulp.

Funding: \$1.53 million

Emissions reduced: 95,367 tCO₂e through 2030

Windset Farms – Delta, B.C.

Project type: Energy Efficiency

Project description: Windset Farms will install a retractable thermal climate screen over one of its greenhouses in Delta to trap heat in low-light conditions. The technology is anticipated to reduce natural gas use by nearly 50%.

Funding: \$353,933

Emissions reduced: 24,480 tCO₂e through 2030

2020 EP PROJECTS

Canadian Natural Resources Ltd. – Fort St. John, B.C.

Project type: Fuel Switching

Project description: Canadian Natural will retrofit its three facilities' pneumatic devices to run on air instead of fuel gas.

Funding: \$87,748

Emissions reduced: 38,056 tCO₂e through 2030

City of Vancouver – Delta, B.C.

Project type: Methane Capture

Project description: The City of Vancouver will expand the current landfill gas collection

capacity at the Vancouver Landfill. The work for this project will include horizontal and side slope collectors, vertical wells, header piping with condensate removal, and automated well tuning for high-producing wells.

Funding: \$4.26 million

Emissions reduced: 485,967 tCO₂e through 2030

ConocoPhillips Canada Resources Corp. – Fort St. John, B.C.

Project type: Renewable Energy

Project description: ConocoPhillips Canada will replace five gas-driven pumps with five solar-electric pumps at two heritage sites near Fort St. John.

Funding: \$51,150

Emissions reduced: 1,597 tCO₂e through 2030

Copper Mountain Mine Ltd. – Princeton, B.C.

Project type: Energy Efficiency, Renewable Energy

Project description: Copper Mountain Mine near Princeton will pilot an electric trolley system for haul trucks to transport material from the mine to the surface processing facility. This project expanded the scope of the 2019 CIF-funded Copper Mountain Electric Trolley Project.

Funding: \$8 million

Emissions reduced: 29,793 tCO₂e through 2030

Crew Energy Inc. – Fort St. John, B.C.

Project type: Waste Heat Recovery

Project description: Crew Energy will install waste heat recovery units at its gas processing facility near Fort St. John. Each waste heat recovery unit will recover additional thermal energy to a new hot oil loop that will be installed as a part of this project.

Funding: \$1.26 million

Emissions reduced: 68,047 tCO₂e through 2030

Domtar Inc. – Kamloops, B.C.

Project type: Energy Efficiency

Project description: Domtar Inc. will replace the generation bank tubes in the #3 wood waste burning boiler at the Kamloops Pulp Mill. This will improve the reliability of the boiler and reduce the need to burn natural gas at the pulp mill.

Funding: \$1.75 million

Emissions reduced: 26,935 tCO₂e through 2030

Foothills Pipelines Ltd. – Sparwood, B.C.

Project type: Methane Capture

Project description: Foothills Pipelines will install new above ground small diameter piping at the TC Energy Crowsnest Compressor Station, with the objective of capturing and utilizing the natural gas that would otherwise be released to the atmosphere during

planned blowdown events.

Funding: \$364,740

Emissions reduced: 10,081 tCO₂e through 2030

FortisBC Energy Inc. – Mainland and Southwest B.C.

Project type: Methane Capture

Project description: FortisBC Energy will use Zero Emission Vacuum and Compression mobile compressors in order to reduce the atmospheric venting of natural gas during transmission pipeline maintenance activities.

Funding: \$1.08 million

Emissions reduced: 20,378 tCO₂e through 2030

Lhoist North America of Canada, Inc. – Langley, B.C.

Project type: Energy Efficiency

Project description: Lhoist Canada will install new insulation around the outside of Kiln 1 at the Langley facility. Retaining this insulation will result in improved fuel efficiency and a reduction in natural gas consumed.

Funding: \$70,000

Emissions reduced: 1,428 tCO₂e through 2030

Murphy Oil Company Ltd. – Dawson Creek, B.C.

Project type: Methane Reduction, Process Improvement

Project description: Murphy Oil will retrofit high-bleed pneumatic devices to low-bleed pneumatic devices equivalents across numerous well sites in the Dawson Creek area.

Funding: \$40,138

Emissions reduced: 5,980 tCO₂e through 2030

Pacific Canbriam Energy Ltd. – Fort St. John, B.C.

Project type: Fuel Switching

Project description: Pacific Canbriam Energy will retrofit its five pneumatic devices to run on instrument air instead of fuel gas.

Funding: \$23,871

Emissions reduced: 1,310 tCO₂e through 2030

PETRONAS Energy Canada Ltd. – Fort St. John, B.C.

Project type: Fuel Switching

Project description: PETRONAS will replace nine natural gas driven pneumatic pumps with electric pumps at its seven compressor stations near Fort St. John.

Funding: \$526,161

Emissions reduced: 17,432 tCO₂e through 2030

PETRONAS Energy Canada Ltd. – Fort St. John, B.C.

Project type: Energy Efficiency

Project description: PETRONAS will install electric boilers at its three gas plants near Fort St. John. This project will reduce heat demand on the natural gas fired boilers.

Funding: \$265,029

Emissions reduced: 10,645 tCO₂e through 2030

Pretium Resources Inc. – North Coast and Nechako B.C.

Project type: Fuel Switching

Project description: Pretium will replace 13 diesel-powered haul trucks with seven electric haul trucks at the Brucejack Mine. These new trucks are emission free and have self-swapping batteries.

Funding: \$7.83 million

Emissions reduced: 64,481 tCO₂e through 2030

Teck Coal Ltd. – Kootenay B.C.

Project type: Fuel Switching

Project description: Teck Coal will replace two diesel buses with two zero-emission electric buses that will transport workers from Elkford to the Fording River Mine.

Funding: \$410,000

Emissions reduced: 868 tCO₂e through 2030

Teck Coal Ltd. – Kootenay B.C.

Project type: Fuel Switching

Project description: Teck Coal will replace two diesel buses with two zero-emission electric buses that will transport workers from Elkford to the Greenhills Mine.

Funding: \$410,000

Emissions reduced: 338 tCO₂e through 2030

Teck Coal Ltd. – Kootenay B.C.

Project type: Waste Heat Recovery

Project description: Teck Coal will have two improvements at its maintenance shop at the Line Creek operation: install heat exchange units between the exhaust and intake air to recover waste heat from the exhaust; and upgrade the fans to variable speed operation in order to reduce airflow during times when the air quality allows.

Funding: \$325,000

Emissions reduced: 13,450 tCO₂e through 2030

Teck Coal Ltd. – Thompson-Okanagan B.C.

Project type: Fuel Switching

Project description: Teck Coal will replace existing tractor trucks with a zero-emissions electric truck that will transport copper concentrate from the Highland Valley Copper Mine to the CN Terminal in Ashcroft, B.C.

Funding: \$768,670

Emissions reduced: 3,243 tCO₂e through 2030

Tidewater Midstream and Infrastructure Ltd. – Prince George, B.C.

Project type: Energy Efficiency

Project description: Tidewater Midstream will upgrade the Prince George Refinery's #2 Crude Heater to improve energy efficiency.

Funding: \$159,588

Emissions reduced: 5,397 tCO₂e through 2030

Tourmaline Oil Corp. – Fort St. John, B.C.

Project type: Waste Heat Recovery

Project description: Tourmaline will install four waste heat exchangers at its gas processing facility near Fort St. John. This project will reduce the fuel gas usage at the facility operation and improve the facility greenhouse gas efficiency.

Funding: \$1.5 million

Emissions reduced: 81,002 tCO₂e through 2030

Windset Farms Ltd. – Delta, B.C.

Project type: Energy Efficiency

Project description: Windset Farms will install thermal curtains at its Delta operation. Adding this insulation will result in improved energy efficiency and a reduction in natural gas consumed.

Funding: \$469,032

Emissions reduced: 52,800 tCO₂e through 2030

2021 EP PROJECTS

ARC Resources Ltd. – Dawson Creek, B.C.

Project type: Fuel Switching

Project description: ARC Resources will connect their Dawson Creek Processing Plant to the low-carbon BC Hydro electric grid, replacing four onsite natural gas turbine generators that will be retired.

Funding: \$13.66 million

Emissions reduced: 1 million tCO₂e through 2031

Canadian Natural Resources Ltd. – Northeast B.C.

Project type: Fuel Switching, Process Improvement

Project description: Canadian Natural Resources will replace 254 wellsite pneumatic methanol pumps with electric pumps operated by solar energy.

Funding: \$2.08 million

Emissions reduced: 298,913 tCO₂e through 2031

Canadian Natural Resources Ltd. – Fort St. John, B.C.

Project type: Waste Heat Recovery, Energy Efficiency

Project description: Canadian Natural Resources will install heat exchangers on each of the two condensate trains at their Fort St. John gas processing facility to transfer the excess heat from the hot outlet condensate to the cold inlet condensate. This will recover waste heat, reducing fuel gas consumption and making the process more energy efficient.

Funding: \$282,781

Emissions reduced: 6,336 tCO₂e through 2031

Canlin Energy Corp. – Fort St. John and Fort Nelson, B.C.

Project type: Fuel Switching

Project description: Canlin Energy will replace four natural gas compressor drivers and associated equipment with electric alternatives at four compressor stations located near Fort St. John and Fort Nelson.

Funding: \$708,000

Emissions reduced: 90,587 tCO₂e through 2031

Canlin Energy Corp. – Fort St. John, B.C.

Project type: Fuel Switching

Project description: Canlin Energy will replace 21 wellsite pneumatic methanol pumps with electric pumps operated by solar energy near Fort St. John.

Funding: \$119,186

Emissions reduced: 12,584 tCO₂e through 2031

Catalyst Paper Corp. – Port Alberni, B.C.

Project type: Process Improvement

Project description: Catalyst Paper Port Alberni Division will install a new auxiliary hog wood waste feed system at its pulp and paper mill, improving the reliability of biomass fuel supply to the main onsite steam boiler and reducing natural gas use.

Funding: \$323,100

Emissions reduced: 24,490 tCO₂e through 2031

Catalyst Paper Corp. – Crofton, B.C.

Project type: Process Improvement

Project description: Catalyst Paper Crofton Division will reduce steam use by improving the efficiency of black liquor evaporation process at its pulp and paper mill. This will reduce natural gas use in the onsite steam boilers.

Funding: \$5.85 million

Emissions reduced: 289,393 tCO₂e through 2031

Catalyst Paper Corp. – Port Alberni, B.C.

Project type: Process Improvement

Project description: Catalyst Paper Port Alberni Division will replace the drum and inner roll on a bark press at the facility with a more efficient system to optimize the wood-waste press system and reduce the amount of natural gas required to burn higher moisture hog.

Funding: \$258,500

Emissions reduced: 12,580 tCO₂e through 2031

CertainTeed Canada Inc. – Delta, B.C.

Project type: Waste Heat Recovery

Project description: CertainTeed Gypsum will install a heat exchanger on a gypsum board dryer at their Vancouver manufacturing site. This will recover currently wasted heat and reduce the natural gas consumption of the drying process.

Funding: \$1.40 million

Emissions reduced: 25,565 tCO₂e through 2031

City of Vancouver – Delta, B.C.

Project type: Methane Capture

Project description: The City of Vancouver will install additional landfill gas capture infrastructure to increase the amount of methane captured from the landfill and reduce fugitive emissions. The City of Vancouver is considering possible end uses for the captured gas, which may include selling it for use as renewable natural gas.

Funding: \$1.43 million

Emissions reduced: 87,949 tCO₂e through 2031

ConocoPhillips Canada Resources Corp. – Northeast B.C.

Project type: Process Improvement

Project description: ConocoPhillips Canada will capture and recover waste gas flare gas from the completion flowback processes at an average of nearly 50 wells annually in northeastern B.C. through 2031 by utilizing pressurized gas storage and compression technology.

Funding: \$763,886

Emissions reduced: 70,228 tCO₂e through 2031

Crew Energy Inc. – Northeast B.C.

Project type: Methane Capture

Project description: Crew Energy will utilize a higher efficiency compressor to convert an existing natural gas-fired model at their Wilder Sweet Gas Plant in northeastern B.C., reducing natural gas use.

Funding: \$103,308

Emissions reduced: 2,464 tCO₂e through 2031

Howe Sound Pulp & Paper Corp – Port Mellon, B.C.

Project type: Process Improvement

Project description: Howe Sound Pulp & Paper will upgrade the existing bottom sand hopper of their biomass boiler at its Port Mellon pulp and paper mill in order to reduce maintenance, reduce natural gas consumption, and increase the facility's capacity to consume waste biomass fuels.

Funding: \$347,276

Emissions reduced: 50,630 tCO₂e through 2031

Howe Sound Pulp & Paper Corp. – Port Mellon, B.C.

Project type: Process Improvement

Project description: Howe Sound Pulp & Paper will upgrade an existing system that captures and recycles lime kiln dust to increase efficiency and lower natural gas consumption.

Funding: \$522,883

Emissions reduced: 40,153 tCO₂e through 2031

Kruger Products Inc. – New Westminster, B.C.

Project type: Fuel Switching

Project description: Kruger Products will replace propane-powered lift trucks with electric trucks at the New Westminster Plant.

Funding: \$43,750

Emissions reduced: 660 tCO₂e through 2031

Nanaimo Forest Products Ltd. – Nanaimo, B.C.

Project type: Fuel Switching

Project description: Nanaimo Forest Products will install processing, control, and dust collection upgrades to their biomass boiler system at their Harmac Pacific pulp mill in Nanaimo to significantly lower natural gas consumption.

Funding: \$12.07 million

Emissions reduced: 296,978 tCO₂e through 2031

Nanaimo Forest Products Ltd. – Nanaimo, B.C.

Project type: Waste Heat Recovery

Project description: Nanaimo Forest Products will install upgrades to their largest pulp dryer and building heating and ventilation systems to recover waste heat and lower natural gas consumption at their Harmac Pacific pulp mill in Nanaimo.

Funding: \$525,453

Emissions reduced: 22,903 tCO₂e through 2031

Newcrest Red Chris Mining Ltd. – Northwest B.C.

Project type: Fuel Switching

Project description: Newcrest Red Chris Mining will connect to the BC Hydro electricity grid, allowing them to disconnect a diesel generator that currently powers four water pumps, and electrify a separate diesel-powered water pump in order to reduce fossil fuel consumption at the mine.

Funding: \$448,243

Emissions reduced: 9,846 tCO₂e through 2031

NorthRiver Midstream Inc. – Dawson Creek, B.C.

Project type: Electrification

Project description: NorthRiver Midstream will connect their Dawson Processing Facility to the low-carbon BC Hydro electrical grid to replace onsite natural gas generation.

Funding: \$7.5 million

Emissions reduced: 690,797 tCO₂e through 2031

NorthRiver Midstream Inc. – Dawson Creek, B.C.

Project type: Waste Heat Recovery

Project description: NorthRiver Midstream will install a waste heat recovery system at their Highway Processing Facility in order to reduce natural gas use in the heat medium system.

Funding: \$1 million

Emissions reduced: 72,172 tCO₂e through 2031

NorthRiver Midstream Inc. – Fort St. John, B.C.

Project type: Carbon Sequestration

Project description: NorthRiver Midstream will install a carbon and acid gas compression and injection system at their McMahon gas plant near Fort St. John to permanently store carbon dioxide rich acid gas in a subsurface reservoir.

Funding: \$10 million

Emissions reduced: 1.08 million tCO₂e through 2031

NorthRiver Midstream Inc. – Northeast B.C.

Project type: Waste Heat Recovery

Project description: NorthRiver Midstream will install a system comprised of 15 waste heat recovery units and five diverter valves to capture heat from drivers during unplanned outages and planned maintenance. The installation will reduce the annual overall emissions at the Jedney Facility by exchanging heat from the engine exhausts with the process.

Funding: \$3.99 million

Emissions reduced: 177,690 tCO₂e through 2031

Ovintiv Canada ULC – Northeast B.C.

Project type: Energy Efficiency, Process Improvement

Project description: Phase 1 of 3 – Ovintiv will upgrade four Waukesha compressor engines across compression stations in northeastern B.C. to new high-efficiency units. This will reduce the amount of methane leakage and fuel consumed by the older series engines.

Funding: \$1.8 million

Emissions reduced: 39,233 tCO₂e through 2031

Ovintiv Canada ULC – Northeast B.C.

Project type: Energy Efficiency, Process Improvement

Project description: Ovintiv will upgrade approximately 78 compressors with more efficient valves across 20 gas processing facilities in northeastern B.C. This will reduce the energy required and fuel needed to continuously run these compressors.

Funding: \$2.43 million

Emissions reduced: 73,261 tCO₂e through 2031

PETRONAS Energy Canada Ltd. – Fort St. John, B.C.

Project type: Process Improvement

Project description: PETRONAS will install a vapour recovery unit at a gas processing plant in the Fort St. John area to capture natural gas currently flared and vented to atmosphere and utilize it in the production process.

Funding: \$482,320

Emissions reduced: 11,497 tCO₂e through 2031

PETRONAS Energy Canada Ltd. – Northeast B.C.

Project type: Energy Efficiency, Process Improvement

Project description: PETRONAS will eliminate venting of methane used to operate facility equipment by installing a new instrument air compression system. The air compressor will be run by a set of new 25 kilowatt (kW) generators. The small generators will allow the facility to shut down a set of larger 75kW generators. More efficient generator use will reduce fuel consumption and eliminate methane venting.

Funding: \$240,808

Emissions reduced: 6,549 tCO₂e through 2031

Skookumchuck Pulp Inc. – Skookumchuck, B.C.

Project type: Process Improvement

Project description: Skookumchuck Pulp will modify their mill's hog feeding system by improving the conveyor belt system, increasing reliability and reducing natural gas use in their onsite boiler.

Funding: \$843,500

Emissions reduced: 59,875 tCO₂e through 2031

Storm Resources Ltd. – Fort St. John, B.C.

Project type: Waste Heat Recovery

Project description: Storm Resources' Nig Creek Gas Plant will install a heat exchanger to recover waste heat energy from compressor exhaust. The recovered heat will be used to pre-heat the hot oil system and reduce natural gas combustion.

Funding: \$652,500

Emissions reduced: 12,176 tCO₂e through 2031

Tourmaline Oil Corp. – Northeast B.C.

Project type: Methane Capture

Project description: Tourmaline will connect vented gas capture units on 35 compressors at various processing and compressing stations, recovering natural gas currently vented to the atmosphere.

Funding: \$1.46 million

Emissions reduced: 152,488 tCO₂e through 2031

Tourmaline Oil Corp. – Northeast B.C.

Project type: Methane Capture

Project description: Tourmaline will replace 222 pneumatic drive actuators with electric drive equivalents, eliminating vented natural gas to the atmosphere.

Funding: \$707,300

Emissions reduced: 44,596 tCO₂e through 2031

Tourmaline Oil Corp. – Northeast B.C.

Project type: Waste Heat Recovery

Project description: Tourmaline will install five waste-heat exchangers on compressors within their natural gas processing facility. These new waste-heat exchangers are expected to meet the heat demand for the facility, replacing a natural gas fired boiler as the primary heating source for the operation. This will reduce the amount of natural gas necessary for heating and increase the energy efficiency of the facility.

Funding: \$2.5 million

Emissions reduced: 49,608 tCO₂e through 2031

2022 EP PROJECTS

ARC Resources Ltd. – Dawson Creek, B.C.

Project type: Carbon Capture and Storage

Project description: ARC Resources Ltd. at its Dawson III and IV facilities in northeastern B.C. will install carbon capture and storage equipment on process heaters in order to sequester emissions from combustion of fuels.

Funding: \$7.42 million

Emissions reduced: 169,480 tCO₂e through 2032

ARC Resources Ltd. – Northeast B.C.

Project type: Fuel Switching

Project description: ARC Resources Ltd. at three locations in northeastern B.C. will replace natural gas driven compressors and generators with electric compressors and connect the facility to the B.C. grid in order to reduce emissions from combustion of fuels.

Funding: \$1.84 million

Emissions reduced: 52,730 tCO₂e through 2032

ARC Resources Ltd. – Dawson Creek, B.C.

Project type: Fuel Switching

Project description: ARC Resources Ltd. at its Dawson 01-34 facility in northeastern B.C. will replace natural gas driven compressors with electric compressors and connect the facility to the B.C. grid in order to reduce emissions from combustion of fuels.

Funding: \$2.60 million

Emissions reduced: 130,761 tCO₂e through 2032

Copper Mountain Mine Ltd. – Princeton, B.C.

Project type: Fuel Switching

Project description: Copper Mountain, at its mine in the Thompson-Okanagan, will replace a diesel mining shovel with an electric mining shovel including associated support equipment in order to reduce emissions from combustion of fuel.

Funding: \$2.65 million

Emissions reduced: 51,953 tCO₂e through 2032

Copper Mountain Mine Ltd. – Princeton, B.C.

Project type: Fuel Switching

Project description: Copper Mountain, at its mine in the Thompson-Okanagan, will replace a diesel mining drill with an electric mining drill including associated support equipment in order to reduce emissions from combustion of fuels.

Funding: \$1 million

Emissions reduced: 16,667 tCO₂e through 2032

Canadian Natural Resources Ltd. – Northeast B.C.

Project type: Renewable Energy

Project description: Canadian Natural Resources, at several remote facilities in northeastern B.C., will replace pneumatic devices with solar powered equivalents in order to reduce emissions from methane venting.

Funding: \$1.57 million

Emissions reduced: 292,528 tCO₂e through 2032

Crew Energy Inc. – Fort St. John, B.C.

Project type: Fuel Switching

Project description: Crew Energy, at its Wilder facility northeastern B.C., will replace

natural gas driven compressors and generators with electric compressors and connect the facility to the B.C. grid in order to reduce emissions from combustion of fuels.

Funding: \$18.22 million

Emissions reduced: 481,220 tCO₂e through 2032

Coeur Silvertip Holdings Ltd. – Northwest B.C.

Project type: Fuel Switching

Project description: Coeur Silvertip, at its mine in northeastern B.C., will replace site diesel generators and propane heaters with equipment that runs on natural gas in order to improve fuel efficiency.

Funding: \$407,000

Emissions reduced: 6,718 tCO₂e through 2032

Kruger Products Inc. – New Westminster, B.C.

Project type: Energy Efficiency

Project description: Kruger Products, at its facility in southwestern B.C., will replace an existing dryer hood with an improved paper drying hood in order to reduce emissions from combustion of fuels.

Funding: \$700,000

Emissions reduced: 25,077 tCO₂e through 2032

Ovintiv Canada ULC – Dawson Creek, B.C.

Project type: Fuel Switching

Project description: Ovintiv, at its Saturn facility in northeastern B.C., will replace natural gas driven compressors with electric compressors and connect the facility to the B.C. grid in order to reduce emissions from combustion of fuels.

Funding: \$3.66 million

Emissions reduced: 57,397 tCO₂e through 2032

Ovintiv Canada ULC – Northeast B.C.

Project type: Energy Efficiency

Project description: Phase 2 of 3 – Ovintiv, at two facilities in northeastern B.C., will replace natural gas driven compressor engines with higher efficiency models in order to reduce emissions from combustion of fuels.

Funding: \$1.30 million

Emissions reduced: 39,048 tCO₂e through 2032

Ovintiv Canada ULC – Northeast B.C.

Project type: Energy Efficiency

Project description: Phase 3 of 3 – Ovintiv, at two facilities in northeastern B.C., will replace natural gas driven compressor engines with higher efficiency models in order to reduce emissions from combustion of fuels.

Funding: \$1.30 million

Emissions reduced: 38,350 tCO₂e through 2032

Pacific Canbriam Energy Ltd. – Northeast B.C.

Project type: Process Improvement

Project description: Pacific Canbriam, at its facility in northeastern B.C., will recover vented gases for use as fuel in order to reduce emissions from methane venting.

Funding: \$212,000

Emissions reduced: 3,931 tCO₂e through 2032

PETRONAS Energy Canada Ltd. – Northeast B.C.

Project type: Process Improvement

Project description: PETRONAS, at its Town North facility in northeastern B.C., will install equipment to recover vented gasses and to transport gas by-products for sequestration in order to reduce emissions from flaring.

Funding: \$4.06 million

Emissions reduced: 74,259 tCO₂e through 2032

Shell Canada Ltd. – Fort St. John, B.C.

Project type: Fuel Switching

Project description: Shell Canada, at its Groundbirch Montney facility in northeastern B.C., will replace natural gas driven compressors with electric compressors and connect the facility to the B.C. grid in order to reduce emissions from combustion of fuels.

Funding: \$17 million

Emissions reduced: 1,077,099 tCO₂e through 2032

Skookumchuck Pulp Inc. – Skookumchuck, B.C.

Project type: Process Improvement

Project description: Skookumchuck Pulp, at its facility in the Kootenay region of B.C., will replace lime-kiln instrumentation with improved process controls in order to reduce emissions from combustion of fuels.

Funding: \$193,000

Emissions reduced: 6,764 tCO₂e through 2032

Tourmaline Oil Corp. – Northeast B.C.

Project type: Methane Capture, Process Improvement

Project description: Tourmaline, at its facility in northeastern B.C., will install equipment to recover vented gases and convert cooler units to electric in order to reduce emissions from vented methane and combustion of fuels.

Funding: \$478,000

Emissions reduced: 28,691 tCO₂e through 2032

2023 EP PROJECTS

Lafarge Canada Inc. – Richmond, B.C.

Project type: Fuel Switching

Project description: Lafarge at its Richmond Cement Plant in the Mainland/Southwest region of B.C. will upgrade the facility to accept and process additional alternative fuels in order to reduce combustion of natural gas.

Funding: \$7.3 million

Emissions reduced: 543,454 tCO₂e through 2033

City of Vancouver – Delta, B.C.

Project type: Methane Capture

Project description: The City of Vancouver at its Vancouver Landfill facility in the Mainland/Southwest region of B.C. will expand the current landfill gas collection in order to increase the amount of methane captured from the landfill and reduce fugitive methane emissions. Collected landfill gas will be used beneficially as renewable natural gas for energy or, when necessary, flared.

Funding: \$6.15 million

Emissions reduced: 716,325 tCO₂e through 2033

Appendix B – CleanBC Industry Fund Innovation Accelerator Projects:

The information provided in this Appendix is accurate as of 2024 and information relating to funded projects is subject to change.

11 Innovation Accelerator (IA) projects totaling \$46.45 million

Advice/Recommendations

Innovation Accelerator Totals			
	2021	2022	2023
# of Projects:	4	6	1
Total CIF Contribution:	\$7,295,062	\$21,983,774.00	\$17,175,000
Proponent + Other:	\$7,900,000	\$16,000,000	\$21,000,000
Total Project Costs:	\$15,195,062	\$37,983,774	\$38,175,000
Total Projects by Sector*:			
Agriculture	0	0	0
Cement	0	1	0
Lime and Gypsum	0	0	0
Mining	0	1	0
Oil and Gas	3	2	0
Pulp and Paper	0	1	1
Utility	1	0	0
Waste	0	1	0
Wood Product	0	0	0

2021 IA PROJECTS

ConocoPhillips Canada Resources Corp. – Northeast B.C.

Project name: Continuous Methane Detection and Measurement

Project description: ConocoPhillips Canada will pilot and refine a real-time and continuous methane emission detection, measurement, and monitoring solution at their production facilities. This leak detection improves on the current practice of conducting methane fugitive surveys one to three times a year in person, allowing for enhanced ability to detect and reduce fugitive methane emissions.

Funding: \$270,946

FortisBC Energy Inc. – Kootenay B.C.

Project name: Burrard Terminal Hazer Methane Pyrolysis Hydrogen Production

Project description: Commercial Demonstration Project – Phase 1 –FortisBC will work with tech company Hazer at Suncor’s Burrard terminal to pilot an innovative methane pyrolysis technology that will produce zero-carbon emissions hydrogen. The process will store the carbon by-product as solid synthetic graphite instead of emitting it to the atmosphere. The graphite can then be sold for manufacturing or industrial use. If the pilot continues as a full commercial build out, the project would be expected to produce up to 2,500 tonnes of hydrogen per year, replacing the equivalent annual natural gas usage of approximately 3,300 B.C. households. Project funding will go toward initial engineering and preliminary work on the reactor pilot.

Funding: \$6.6 million

FortisBC Energy Inc. – Richmond, B.C.

Project name: Satellite Leak Survey

Project description: Utilizing the natural gas distribution system around Richmond as a testbed, FortisBC will investigate the feasibility of a satellite-based methane detection technology. Learnings will help detect and quantify leaks throughout B.C. along FortisBC Energy Inc.’s natural gas distribution system.

Funding: \$127,500

PETRONAS Energy Canada Ltd. – Northeast B.C.

Project name: Continuous Methane Detection and Measurement

Project description: PETRONAS will pilot and refine a real-time and continuous methane emissions detection, measurement, and monitoring solution at their production facilities. This leak detection improves on the current practice of conducting methane fugitive surveys one to three times a year in person, allowing for enhanced ability to detect and reduce fugitive methane emissions.

Funding: \$290,116

2022 IA PROJECTS

Aitken Creek Gas Storage ULC (FortisBC) – Fort St. John, B.C.

Project name: Pressure Energy Recovery Pilot

Project description: FortisBC will demonstrate a technology which recovers pressure energy from natural gas contained in production wells or storage reservoirs and converts it to electricity to power wellsite operations and reduce emissions from combustion of fuels.

Funding: \$741,225

City of Vancouver – Delta, B.C.

Project name: 3D Satellite Methane Detection and Measurement

Project description: The City of Vancouver will demonstrate a technology which locates methane gas within the body of the landfill using satellite-based radar to improve placement of gas collection infrastructure and reduce emissions from fugitive methane.

Funding: \$186,750

Lafarge Canada Inc. – Richmond, B.C.

Project name: Lafarge Carbon Utilization Hub

Project description: Lafarge will demonstrate two technologies which utilize carbon dioxide captured from their facility in order to reduce emissions from combustion of fuels. One technology will mineralize carbon dioxide into a cement additive and the other technology will produce synthetic fuels.

Funding: \$5 million

Nanaimo Forest Products Ltd. – Nanaimo, B.C.

Project name: Hydrogen Blending Demonstration

Project description: Nanaimo Forest Products, with support from HTEC and FortisBC, will demonstrate blending of hydrogen made by electrolysis into their lime kiln in order to reduce emissions from combustion of fuels.

Funding: \$2.99 million

PETRONAS Energy Canada Ltd. – Northeast B.C.

Project name: Carbon Capture Demonstration Pilot

Project description: PETRONAS will demonstrate innovative carbon capture technology and storage on two natural gas fired engines to sequester emissions from combustion of fuels.

Funding: \$3 million

Teck Metals Ltd. – Trail, B.C.

Project name: CO₂ Utilization and Storage Pilot Project

Project description: Teck Metals will investigate carbon dioxide (CO₂) utilization and

storage opportunities at the Trail smelter facility including underground local basaltic rock formations to sequester emissions from metallurgical processing.

Funding: \$10.06 million

2023 IA PROJECTS

Skookumchuk Pulp Inc. – Skookumchuk, B.C.

Project name: Lime Kiln Decarbonization Through Pulverized Wood Burning

Project description: Skookumchuck Pulp at its Skookumchuck Mill facility in the Kootenay region of B.C. will demonstrate the direct firing of pulverized wood into the lime kiln in order to displace combustion of natural gas without compromising lime production, quality, or reliability.

Funding: \$17.18 million

Appendix C – CleanBC Industry Fund Feasibility Studies Projects:

The information provided in this Appendix is accurate as of 2024 and information relating to funded projects is subject to change.

Advice/Recommendations

2021 FS PROJECTS

Canoe Forest Products Ltd. – Canoe, B.C.

Study name: Waste Heat Recovery for Log Conditioning

Study description: Canoe Forest Products will evaluate the potential heat recovery from a natural gas fired regenerative thermal oxidizer (used to burn off excess organic vapour and control emissions) to be used in the log conditioning process when making plywood.

Funding: \$23,781

Copper Mountain Mine Ltd. – Thompson-Okanagan B.C.

Study name: Electric Haul Truck Trolley Assist System

Study description: Copper Mountain Mine will determine the technical and economic feasibility of adding corners to a haul truck trolley assist system which is to help understand the design requirements at the Copper Mountain Mine.

Funding: \$174,093

Howe Sound Pulp & Paper Corp. – Port Mellon, B.C.

Study name: Flash Dryer System Installation

Study description: Howe Sound Pulp & Paper will investigate the feasibility and estimate the natural gas emissions reductions of installing a higher efficiency kiln flash dryer at the Howe Sound mill.

Funding: \$61,094

Lehigh Hanson Materials Ltd. – Delta, B.C.

Study name: SCM Grinding Facility's BC Hydro System Impact Study

Study description: Lehigh Hanson Materials will investigate the technical and commercial considerations of building and operating a marine terminal and large-scale grinding facility adjacent to Lehigh's Delta Portland Cement manufacturing plant. The terminal and facility will import and grind granulated blast furnace slag to displace the use of higher-carbon clinker for their own facility and for concrete producers.

Funding: \$247,275

NorthRiver Midstream Inc. – District of Taylor, B.C.

Study name: Blue Hydrogen Production and Associated Carbon Capture and Storage

Study description: NorthRiver Midstream will evaluate the opportunity to update a gas-processing facility to produce blue hydrogen. The study includes a feasibility assessment of the technology required to produce hydrogen and capture emissions, reservoir storage, hydrogen transportation and commercial hydrogen utilization in the area.

Funding: \$133,114

NorthRiver Midstream Inc. –Fort Nelson, B.C.

Study name: Blue Hydrogen Production and Associated Carbon Capture and Storage

Study description: NorthRiver Midstream will evaluate the opportunity to update a gas-processing facility to produce blue hydrogen. The study includes a feasibility assessment of the technology required to produce hydrogen and capture emissions, reservoir storage, hydrogen transportation and commercial hydrogen utilization in the area.

Funding: \$180,000

NorthRiver Midstream Inc. – District of Taylor, B.C.

Study name: Cogeneration Facility Post-Combustion Capture Technology

Study description: NorthRiver Midstream will evaluate the technical feasibility of post-combustion carbon capture technologies and reservoir storage options for the Taylor Cogeneration facility, which is a natural gas power station primarily used to supply steam to a NorthRiver Midstream gas-processing plant and provide power to the electricity grid.

Funding: \$117,859

NorthRiver Midstream Inc. – Lower Mainland, B.C.

Study name: Compressed Natural Gas Fueling Hub Implementation

Study description: NorthRiver Midstream, in partnership with Tourmaline Oil Corporation, will assess the costs and business case of implementation of a compressed natural gas fueling hub at its McMahon facility. Compressed natural gas could displace the use of higher-carbon diesel for vehicles. The study will help remove barriers for the project, including decreasing implementation and market risks.

Funding: \$75,000

NOVA Gas Transmission Ltd. – Northeast, B.C.

Study name: Turboexpander Installation at Compressor Stations

Study description: NOVA Gas Transmission Ltd. will determine the suitability of installing turboexpander technology at existing NOVA Gas Transmission Ltd. natural gas compressor stations located in B.C. A turboexpander has been identified as a potential emissions-free energy source that harnesses energy created through the pressure reduction of natural gas from a high pressure to a lower, usable pressure. The energy derived from this usable pressure can be used to generate up to 42 kilowatts of clean power by spinning a direct-drive generator shaft.

Funding: \$47,169

Teck Metals Ltd. – Kootenay B.C.

Study name: Carbon Capture, Utilization and Storage Pilot Plant Study

Study description: Teck Metals will assess the feasibility and determine the appropriate technology and associated cost estimate for a carbon capture, utilization and storage facility at Teck's Trail Operations.

Funding: \$350,000

Tidewater Midstream and Infrastructure Ltd. – Prince George, B.C.

Study name: Carbon Capture & Sequestration from Steam Methane Reformers

Study description: Tidewater Midstream will determine the feasibility of a combined carbon capture and sequestration scheme in cooperation with another partner facility. The carbon capture and sequestration scheme would capture carbon dioxide emissions from two steam-methane reformers at the Tidewater refinery and one steam-methane reformer at the partner site.

Funding: \$48,750

Tolko Industries Ltd. – Thompson-Okanagan – Coldstream, B.C.

Study name: Biomass Fuel Switching: Installation and Operation

Study description: Tolko will investigate the technical and commercial considerations of installing and operating a single biomass-fired energy system to displace the natural gas systems currently used at a sawmill and the adjacent wood-pellet facility.

Funding: \$52,581

Tourmaline Oil Corp. – Northeast B.C.

Study name: Carbon Capture Utilization and Storage

Study description: Tourmaline will assess the technical and economic feasibility of different post-combustion flue gas carbon capture technologies, including chemical solvents, membranes, solid sorbents and hybrid systems at multiple natural gas processing plants.

Funding: \$300,000

Veresen Midstream LP – Northeast B.C.

Study name: Steeprock Plan Carbon Capture

Study description: Veresen Midstream will help determine the scope, cost and schedule for capturing emissions from the flue gas of two process heat medium heaters for the purpose of potential carbon dioxide recovery and underground sequestration which would mitigate a significant part of the emissions to atmosphere from the Steeprock gas plant.

Funding: \$65,761

2022 FS PROJECTS

Barkerville Gold Mines Ltd. – Cariboo B.C.

Study name: Cariboo Gold Mine Electrification Project

Study description: Barkerville Gold Mines will assess the feasibility of building and operating the first-of-its-kind, all-electric, large-scale underground mining operation at the Cariboo Gold Mine. The study will include a cost-benefit analysis of operating and capital

costs comparing electric to diesel and propane equipment. If deemed feasible, the results of this study will support the design, engineering, and clean energy operation of the Cariboo Gold Project.

Funding: \$226,928

Canfor Pulp Ltd. – Cariboo B.C.

Study name: Recovery Boiler Advanced Combustion Controls

Study description: Canfor will investigate the potential of an advanced liquor combustion control system for the facility recovery boilers. By improving the efficiency of the recovery boilers, more steam will be generated for the same amount of black liquor combusted. As more steam is produced by the recovery boilers, less steam from the power boiler will be required, resulting in a decrease of natural gas combustion in the power boiler.

Funding: \$55,419

Canfor Pulp Ltd. – Cariboo B.C.

Study name: Evaporators Advanced Process Control and Optimization

Study description: Canfor will evaluate how an advanced process control system implemented in the site's distributed control system can increase hot water production from the evaporators at the Canfor Northwood Pulp Mill. The facility power boiler generates steam which is used to heat water required in the production process by burning biomass and natural gas. Reducing the requirement of steam to heat the water will result in a decrease in natural gas combustion in the power boiler.

Funding: \$34,875

Catalyst Paper Corp. – Vancouver Island and Coast B.C.

Study name: Powerhouse Decarbonization Through APC

Study description: Catalyst Paper will identify emissions-reducing projects through the application of advanced process controls (APC) at the Catalyst Crofton Mill's kraft pulp mill powerhouse and utility area.

Funding: \$492,511

Gibraltar Mines Ltd. – Cariboo B.C.

Study name: Biosalix Carbon Neutral Mine Reclamation Using Pulp and Paper Residuals

Study description: The study will focus on alternative mine reclamation using process by-products (residuals) from Cariboo Pulp and Paper's Quesnel mill at Taseko's Gibraltar Mine, a copper mine in McLeese Lake, B.C. Pulp and paper residuals include biosolids, fines, and lime mud. Gibraltar Mine's tailings may require additional nutrients for successful long-term reclamation. The residuals will be mixed to create a growth medium for use in mine reclamation where willows will be grown for biomass and to further develop soils. Irrigation of reclamation areas using mine tailings water will be assessed.

Funding: \$138,173

Howe Sound Pulp & Paper Corp. – Vancouver Island and Coast B.C.

Study name: GHG Emission Reduction Through Waste-To-Biofuel Hydrothermal Conversion

Study description: Howe Sound Pulp & Paper will demonstrate the use of a technology that processes a mixture of sludge and/or low-quality and salt-laden biomass and converts it into marketable biochar. Currently, this material received by Howe Sound Pulp and Paper is expensive to dispose and requires fossil fuels to process. Howe Sound intends to valorize this low-quality biomass and sludge by converting it into sustainable biofuels and biomaterials.

Funding: \$123,375

Howe Sound Pulp & Paper Corp. – Vancouver Island and Coast B.C.

Study name: Lime Kiln Decarbonization Options Feasibility Study

Study description: Howe Sound Pulp & Paper will investigate the feasibility of utilizing carbon neutral fuels to displace natural gas in the facility lime kiln. Potential carbon neutral fuels include but are not limited to wood powder, gasified biomass, lignin powder, tall oil, liquid methanol, and turpentine.

Funding: \$48,675

Lafarge Canada Inc. – Mainland and Southwest B.C.

Study Name: Richmond Cement Plant Carbon Capture and Utilization

Study Description: Lafarge Canada will evaluate how to increase carbon capture with utilization technology at a commercial scale. Lafarge has been working with Svante since 2019 to demonstrate carbon capture on facility kiln flue gases in order to produce liquid-grade carbon dioxide. A utilization technology would transform the carbon dioxide into a substitute for crude oil known as Syncrude which will be subsequently refined into fuel.

Funding: \$306,267

Lhoist North America of Canada Inc. – Mainland and Southwest B.C.

Study name: Kiln Biofuel Feasibility Assessment

Study description: Lhoist Canada will assess the viability of adding a secondary heat source using bio-fuel combustion in order to further pre-heat combustion air entering the kiln. This will reduce the amount of natural gas required to reach the target temperature in the kiln.

Funding: \$18,750

Nanaimo Forest Products Ltd. – Vancouver Island and Coast B.C.

Study name: Lime Kiln Decarbonization Study

Study description: Nanaimo Forest Products will evaluate the implications of fuel switching using solid biofuel to replace natural gas consumed in the lime kilns. The kilns currently consume natural gas to produce heat and are one of the largest producers of

greenhouse gas emissions on site.

Funding: \$102,824

Nanaimo Forest Products Ltd. – Vancouver Island and Coast B.C.

Study name: Lime Kiln Flash Dryer Study

Study description: TNanaimo Forest Products will assess the implications of integrating a lime flash dryer into facility lime kilns. This would reduce greenhouse gas emissions produced by the kilns by utilizing waste heat to dry and heat the lime prior to entering the kiln.

Funding: \$74,084

Orca Pacific Terminal Ltd. – Vancouver Island and Coast B.C.

Study Name: Renewable Dimethyl Ether (DME) Low Carbon Fuel Standard (LCFS)

Innovation at B.C. Pulp Mill

Study Description: Orca Pacific Terminal will determine if there is a business case for producing renewable DME, meeting B.C.'s LCFS and Canada's Clean Fuel Standard, using a technology and processes that converts wood waste to renewable fuel.

Funding: \$295,631

Teck Coal Ltd. – Kootenay B.C.

Study name: Trolley Assist Study

Study description: Teck Resources will evaluate the feasibility of a trolley assist system in order to reduce carbon emissions from the existing diesel electric truck fleet.

Funding: \$150,000

Teck Metals Ltd. – Trail, B.C.

Study name: Microwave Drying

Study description: Teck Metals will investigate the feasibility of electrifying solids drying processes with a microwave system powered by hydroelectricity. Heating for the existing hot-air rotary dryers is from natural gas combustion. Using microwaves may provide more efficient heating and a lower carbon footprint.

Funding: \$72,600

Teck Metals Ltd. – Kootenay B.C.

Study name: Electrification of Molten Pot Heating

Study description: Teck Metals will investigate the feasibility of converting existing natural gas heated molten metal pots to hydroelectric-powered induction heating. The refining of lead requires melting and maintaining metal in a molten state. Induction heating may provide the required heat more efficiently and with a lower carbon footprint.

Funding: \$114,000

Tidewater Midstream and Infrastructure Ltd. – Cariboo B.C.

Study name: Prince George Refinery - Steam Methane Reformer Carbon Capture & Sequestration

Study description: Tidewater Midstream will advance a carbon capture and sequestration study which was conducted in 2021. The focus of this study will be on the capture of carbon dioxide from one steam methane reformer at the refinery and subsequent considerations for liquefaction, transportation, and sequestration of the estimated 148 tonnes per day of captured carbon dioxide.

Funding: \$250,000

Tourmaline Oil Corp. – Northeast B.C.

Study name: Synergy Testing Center

Study description: Tourmaline will advance the planning of a waste-heat recovery and renewable energy testing center. Understanding of the amount of waste-heat, carbon dioxide, electricity, and local biomass available at the subject site will help inform development of opportunities to capture carbon and produce renewable fuels.

Funding: \$200,000

Veresen Midstream LP – Northeast, B.C.

Study name: Steeprock Plant CO₂ Capture Reservoir Screening

Study description: Veresen Midstream will determine the location, characteristics, storage capacity, and first-pass risk assessment of depleted (or nearly so) reservoirs and deep saline aquifers for potential carbon dioxide (CO₂) sequestration in B.C. that are in reasonable proximity to the facility.

Funding: \$45,021

2023 FS PROJECTS

Canfor Pulp Ltd. – Cariboo B.C.

Study name: Residual Fibre Haul Renewable Diesel

Study description: Canfor Pulp will explore the potential of renewable diesel as an alternative fuel to reduce emissions in the pulp industry's transportation of raw materials. This study can inform the forestry sector and policymakers about the costs, risks, and benefits associated with future emissions reduction projects in the industry.

Funding: \$86,000

Catalyst Paper – Vancouver Island and Coast B.C.

Study name: Hog Fuel Offloading and Delivery Optimization

Study description: Catalyst Paper will investigate options to enhance biofuel delivery at the coastal site. Increasing biofuel steam production can reduce natural gas consumption in its power boiler #4 and auxiliary boilers on site.

Funding: \$51,000

Catalyst Paper – Vancouver Island and Coast B.C.

Study name: Power Boiler Stack Heat Recovery

Study description: Catalyst Paper will investigate the opportunity of installing a heat recovery system in the power boiler exhaust at its site. Recovered heat can offset the heat generated from fuel combustion.

Funding: \$94,000

Creative Energy Vancouver Platforms – Mainland and Southwest B.C.

Study name: Power Boiler Stack Heat Recovery

Study description: Creative Energy will provide a detailed assessment of the costs and uncertainties associated with converting the existing steam distribution system to a hot-water system. This assessment can help clarify design details to reduce energy losses and improve district-heating efficiency.

Funding: \$398,000

Creative Energy Vancouver Platforms – Mainland and Southwest B.C.

Study name: Eavor-Loop Feasibility

Study description: Creative Energy will investigate the potential for installing a deep geothermal system (Eavor-Loop) for Creative Energy's Core district energy system in Vancouver. This exploration can guide future plans of utilizing sustainable geothermal energy at the facility.

Funding: \$190,000

NorthRiver Midstream Inc. – Northeast B.C.

Study name: Electrification and Carbon Capture Tradeoff Assessment

Study description: NorthRiver Midstream will evaluate tradeoffs between two decarbonization pathways at several facilities. Advancement of work implementing electrification and carbon capture and sequestration will reduce emissions from gas-fired turbines and compressors at the subject sites. This evaluation can guide facilities towards effective strategies for reducing greenhouse gas emissions.

Funding: \$180,000

Skookumchuk Pulp Inc. – Skookumchuk, B.C.

Study name: High-temperature Pyrolysis for Syngas/ Renewable Natural Gas and Biochar from Waste Forestry Residuals

Study description: Skookumchuk Pulp will investigate the use of high-temperature pyrolysis on waste forestry residuals from the B.C. interior to produce high-quality/caloric

content syngas while producing high-quality biochar. Syngas can be used to displace natural gas combusted at the facility for heat and electricity generation.

Funding: \$111,000

Teck Resources Ltd. – Kootenay B.C.

Study name: Electrification of Slag Fuming Furnaces at Trail Operations

Study description: Teck Resources will investigate the use of plasma torches within the smelter at the facility. The use of this technology can lead to significant reductions in coal usage and smelter emissions.

Funding: \$490,000

Teck Resources Ltd. – Kootenay B.C.

Study name: Sulphur as Fuel in the KIVCET Flash Smelter at Trail Operations

Study description: Teck Resources will investigate the use of sulfur as a fuel in the lead smelter at the facility. This innovation can reduce the combustion of coal in the largest furnace at the facility resulting in lower emissions, while producing additional sulfuric acid product for sale.

Funding: \$341,000

CleanBC and Affordability

KEY FACTS:

- CleanBC is a policy package that has tried to-date to mitigate short-run household affordability impacts through targeted measures while supporting long-run affordability through greater efficiency in energy use and buffering British Columbians against fossil fuel commodity price volatility.
- CleanBC policies generally require low-carbon technology adoption (e.g. zero-emission vehicles (ZEV) mandate) to drive emissions reductions at a household level. With the removal of the consumer carbon tax, CleanBC will no longer intentionally raise the cost of fossil fuels for households and no longer offer an explicit price-driven incentive to substitute fossil fuels for low carbon alternatives.
- The household cost burden of reducing emissions has historically been eased through a suite of targeted financial supports for households CleanBC heat pump purchase incentives, CleanBC ZEV purchase incentives, PST exemption for electricity).
- (C) Energy consumption for an average household in B.C. is expected to be 5-6% lower in 2030 with CleanBC policies¹ than without (reflecting both increased efficiency and a changing mix of fossil and renewable energy use). Energy bills are projected to be 2-4% lower in 2030 with CleanBC policies than without (reflecting fuel switching, changing energy prices and added policy costs²). For the lowest income quintile, energy bills are projected to be 3-4% lower with CleanBC than without, while for the highest quintile energy bills are projected to be 2-3% lower.
- There is considerably more uncertainty in understanding changes in capital and equipment costs with and without CleanBC. Costs for an average household may be higher or lower in 2030 depending on the continued availability of purchase incentive programs, the rate of technology cost declines, and the depreciation rates of capital, among other things.

ADDITIONAL INFORMATION:

- This analysis provides a limited assessment of affordability under CleanBC and does not account for all factors that impact household affordability. Further, the assessment

¹ All quantitative analysis in this note was done assuming that the carbon tax would be removed from the CleanBC policy package in 2025, but prior to its repeal through legislation. Results may differ slightly between the modelling done for this note and future CleanBC modelling iterations, including results prepared for the Climate Change Accountability Report.

² (C) Household natural gas and gasoline prices are projected to be 1-2% higher and 12% higher, respectively, in 2030 with CleanBC compared to a scenario without CleanBC.

focuses on average households³ and there are likely to be affordability impacts across and within income quintiles dictated by housing type, transportation access/requirements, family structure, region, and other variables.

- Supporting household affordability under CleanBC has been a major area of focus, especially for low-income households. Policies and programs that ensure CleanBC is affordable and accessible include:
 - Continuing incentives for heat pumps and other home energy improvements, with greater support for lower- and moderate-income households, and homeowners in colder climates.
 - PST exemptions for heat pumps, e-bikes, and electricity itself.
 - Free public transit for children 12 and under.
 - Further investments in active transportation and transit projects.
- Household clean technology adoption is already occurring in B.C:
 - In 2023, ZEVs made up 22.65% of all new light-duty vehicle sales and B.C. had the highest uptake of ZEVs in Canada.
 - 12% of households had heat pumps as primary or secondary heating in 2023 – an increase of more than 70% since 2021.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADM Responsible	Contact number
Adria Fradley, CAS	250-893-4329
Nat Gosman, EDD	250-886-1755

³ Average here is determined by the sum total of the relevant household metric (e.g. energy expenditures) in B.C. divided by the number of households in B.C or in an income quintile.

Climate Infrastructure / CleanBC Communities Fund

KEY FACTS:

- The CleanBC Communities Fund (CCF) was created under the Investing in Canada Infrastructure Program (ICIP, 2018) with the provincial and federal governments (Housing, Infrastructure, Communities Canada) investing up to \$244M over three intakes of CCF:
 - Intake 1: up to \$62.94M (\$28.61M provincial and \$34.33M federal)
 - Intake 2: up to \$47.39M (\$21.54M provincial and \$25.85M federal)
 - Intake 3: up to \$133.7M (\$60.6M provincial and \$73.1M federal)
- CCF projects are intended to reduce GHG emissions through the generation of clean or renewable energy, improved building energy efficiency, or improved access to clean-energy transportation.
- Funded projects include district energy waste heat recovery systems, fuel switching from fossil fuels to biomass or electricity, building retrofits and the installation of electric vehicle charging infrastructure.
- The majority of CCF funding went to projects that generate and manage clean energy (72% of funding), followed by supporting building efficiency (22%), and clean transportation (6%).
- Local governments were the primary recipients of funding (57%), followed by Indigenous groups (36%), non-profits (4%), and for-profits (3%).
- CCF is a collaboration between ECS and the Ministry of Housing and Municipal Affairs (HMA). HMA holds the budget and leads program administration and financial management. ECS completes technical evaluation and coordinates the provincial approval process.

ADDITIONAL INFORMATION:

- Additional background information can be found at the public [CCF CleanBC webpage](#).
- Project funding is jointly announced by B.C. and Canada. All but seven projects have been announced.
- ECS works with Government Communications and Public Engagement to coordinate public communications for funding announcements and project completion events.

FINANCIAL SUMMARY:

- Not applicable (financial management held by HMA).

ATTACHMENTS:

- Not applicable

ADM Responsible	Contact number
Adria Fradley, CAS	250-893-4329

Greenhouse Gas Reduction Targets

KEY FACTS:

- B.C.'s greenhouse gas (GHG) emissions have been flat since 2007 (the base year of the Province's GHG targets) and increased 3% from the previous year according to the most recently published data (for emissions year 2022).
- Since 2007, B.C. has experienced population and GDP growth that is much higher than the national average which places upwards pressure on GHG emissions.
 - Despite this, the GHG intensity of the economy (emissions per unit of GDP) fell by 31% over this period and GHG emissions per person declined by 22%.
- CleanBC is expected to achieve significant GHG reductions.
 - (C) The ECS modelling to be published as part of the 2024 Climate Change Accountability Report projects that CleanBC measures that have been implemented to date will reduce provincial GHG emissions 20% by 2030 (50% of the reductions needed to achieve the 2030 target). This includes the removal of the carbon tax.
- (C) B.C. is not on track to achieve its GHG reduction targets.
- (C) The gap to achieving the 2030 target is larger than in previous years.
 - (C) This is due to the projections now taking stock of current policy implementation rather than assessing the potential of a fully implemented CleanBC plan.

ADDITIONAL INFORMATION:

B.C.'s GHG targets

- The Ministry of Energy and Climate Solutions is responsible for the *Climate Change Accountability Act* (CCAA), which includes establishing provincial greenhouse gas (GHG) emission reduction targets and reporting on progress towards these targets annually.
- The CCAA includes the following province-wide GHG emission reduction targets, which guide B.C.'s overall climate strategy (CleanBC):
 - By 2025: achieve a 16% reduction below 2007 levels (established by Ministerial order)
 - By 2030: achieve a 40% reduction below 2007 levels
 - By 2040: achieve a 60% reduction below 2007 levels
 - By 2050: achieve an 80% reduction below 2007 levels

- In the CleanBC Roadmap to 2030 (Roadmap), Government committed to legislate a 2050 net-zero emission reduction target, which aligns with federal and international commitments.
- Additionally, the following sector-based emission reduction targets for 2030 were established by Ministerial order:
 - Oil and gas emissions: at least 33% to 38% below 2007 levels
 - Other industry emissions: at least 38% to 43% below 2007 levels
 - Buildings and communities emissions: at least 59% to 64% below 2007 levels
 - Transportation emissions: at least 27% to 32% below 2007 levels

Current GHG emission levels

- B.C. publishes GHG emissions data in the Provincial Inventory.
- B.C.'s gross GHG emissions in 2022 were 65.6 million tonnes of carbon dioxide equivalent (MtCO₂e), 0.1 MtCO₂e higher (+0.2%) than they were in 2007.
- B.C.'s gross emissions showed a one-year increase of 1.8 MtCO₂e (+3%) over 2021 levels.
- The following sectoral GHG emission trends have been observed since 2007:
 - Transportation sector: +18%
 - Oil and gas sector: -11%
 - Other industry: -11%
 - Buildings and communities: -6%
- For reporting progress to its targets in the Climate Change Accountability Report, B.C. also includes carbon sequestration by forest management offset projects to produce B.C.'s net emissions total. In 2022, offsets represented 1.5 MtCO₂e of carbon sequestration, bringing net emissions to 64.1 MtCO₂e: an increase in net emissions of 2.2 MtCO₂e (+3%) from 2021.

FINANCIAL SUMMARY:

- Not applicable.

ATTACHMENTS:

- Not applicable.

ADM Responsible	Contact number
Adria Fradley, CAS	250-893-4329

Climate Preparedness and Adaptation Strategy

KEY FACTS:

- Climate change poses social, economic, and environmental threats to British Columbia.
- Assessing and managing climate-related risks will protect our health and well-being, reduce climate-related costs, and ensure that B.C. continues to thrive in a changing climate.
- The Climate Preparedness and Adaptation Strategy (CPAS), Actions 2022-2025, was developed through broad and meaningful consultation and strengthens B.C.'s capacity to anticipate, reduce, and manage climate risks and impacts.
- CPAS includes actions across 13 ministries and is part of broader investments by the provincial government to help people and communities recover from disasters and prepare for future climate impacts.
- CPAS priority adaptation actions have generated consequential program-specific outcomes and advanced climate adaptation work across government.
- Consistent with the Declaration Act Action Plan, Action 2.12, CPAS is being collaboratively implemented with Indigenous Peoples and as a complement to Indigenous-led climate action.
- The 2022 Ministerial Mandate Letters directed the Climate Action Secretariat within the then Ministry of Environment and Climate Change Strategy (CAS is now part of ECS) and the Ministry of Emergency Management and Climate Readiness (EMCR) to collaborate on a provincial Disaster and Climate Risk and Resilience Assessment (DCRRA). This direction is also reflected in the ECS 2025/2026-2027/2028 Ministry Service Plan.
- Climate and disaster risk assessment and planning currently underway, is being undertaken in consultation with communities and Indigenous Peoples, builds on the 2019 Preliminary Strategic Climate Risk Assessment and integrates climate and disaster risk.
 - A provincial scale risk assessment is expected to be released in 2025, with regional scale risk assessments beginning in 2025.

ADDITIONAL INFORMATION:

- Risk assessment and climate adaptation is a pressing need in B.C., since climate change is already impacting us.

- For example, in 2021 an extreme heat event claimed over 600 lives,¹ severe wildfire destroyed the town of Lytton, and a fall atmospheric river and subsequent flooding represented the costliest weather event in B.C. history.² In 2023, B.C. experienced its most destructive wildfire season in recorded history with 2.84 million hectares of forest and land burned, tens of thousands evacuated and hundreds of homes and structures lost or damaged. Wildfire activity in 2024 was not as widespread as in 2023 but was significant, resulting in 51 evacuation orders affecting more than 4,100 properties.
- B.C. is committed to robust climate risk assessments.
- The Climate Change Accountability Act (CCAA) requires the Province to assess and report on climate risk every five years (With 2020 as the start year).
- The 2019 Preliminary Strategic Climate Risk Assessment for B.C. highlighted climate-related risks, including increased wildfire and flooding, glacier loss, ocean acidification, ecosystem changes, and water scarcity, which will continue to have significant consequences for public health, infrastructure, the environment, and the economy.
- The provincial DCRRRA (to be released in 2025) includes an assessment of climate risk and will fulfill the CCAA regular risk assessment requirement. Subsequent regional disaster and climate risk assessments will add further detail and region-specific climate risk assessment.

FINANCIAL SUMMARY:

- Budget 2022 committed \$513M to support climate adaptation in B.C. from 2021/22 to 2024/25 (Appendix 1).
 - Of this, \$83M Government Financial Information was committed to adaptation-specific initiatives (See Appendix 2).
 - \$348M in funding was allocated to community and government preparedness for floods, wildfires and extreme heat, and emergency management.
 - \$30M was provided to support watershed security projects.
- Ministries across government are continuing existing and initiating new adaptation initiatives and are delivering programs in climate adaptive ways.
- The annual Climate Change Accountability Report contains details on cross ministry adaptation programming and expenditures (See Appendix 3 for examples).

ATTACHMENTS:

- Appendix 1: Overview of CPAS Operating Funding from Budget 2022
- Appendix 2: Breakdown of “Essential Foundations” Row in Appendix 1

¹B.C. Coroner’s Service. June 7, 2022. [Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021](#).

² Insurance Bureau of Canada, December 9, 2021, “British Columbia floods cause \$450 million in insured damage.”

- Appendix 3: Examples of Adaptation in the 2024 Climate Change Accountability Report (c)

ADM Responsible	Contact number
Adria Fradley, CAS	250-893-4329

Appendix 1: Overview of CPAS Operating Funding from Budget 2022

Investment	Ministry /Agency	2021/2022	2022/2023	2023/2024	2024/2025	Total
Supports to Communities – Emergency Preparedness (Community Emergency Preparedness Fund)	EMBC	95 ³	-	-	-	95
Supports to Communities – Wildfire Prevention (Community Resiliency Investment Program)	BCWS	90	-	-	-	90
Wildfire Prevention Projects and Services (Wildfire Risk Reduction and Cultural and Prescribed Burning)	BCWS	-	52	23	23	98
Draft Climate Preparedness and Adaptation Strategy Phase 1 Actions Government Financial Information	ENV	Go ver	-	-	-	Go
Essential Foundations for Climate Preparedness and Adaptation⁴	ENV	30	13	20	20	83
Climate Ready Transportation Networks (Highway Infrastructure Climate Adaptation Program)	TRAN	-	15	20	30	65
Local Government Climate Action Program (Budget 2022)	ENV	-	26 ⁵	25	25	76
Total Per Fiscal Year	-	221	106	88	98	-
Total						513

³ Total *Budget 2022* funding for the Community Emergency Preparedness Fund is \$120 million of which \$95 million is available to fund to adaptation-related actions.

⁴ This line item is further broken down in Appendix 2.

⁵ Funding from CleanBC Roadmap to 2030.

Appendix 2: Breakdown of “Essential Foundations” Row in Appendix 1 with updated actuals from 2022/2023 & 2023/2024

Ministry and Action Group	2022/ 2023	2023/ 2024	2024/ 2025	Total
Agriculture and Food				
Agricultural weather monitoring networks, extreme weather preparedness and water infrastructure for agriculture	3.0	4.0	4.0	11.0
EMERGENCY MANAGEMENT BC [now Emergency Management and Climate Readiness]				
Provincial extreme heat framework, Provincial hazard, risk, vulnerability assessment	0.1	0.1	0.1	0.3
Environment and Climate Change Strategy				
Strategy governance and corporate leadership	0.5	0.5	0.5	1.5
Climate risk assessment, cross-sector climate services, hydroclimatological program expansion	2.5	4.5	4.5	11.5
Collaboration with Indigenous Peoples: climate change resilience partnerships, Indigenous climate resilience capacity-building pilot project, Indigenous climate engagement	1.3	1.3	1.3	3.9
Healthy Watersheds (2021-2022 funding of \$30M)	-	-	-	30.0
Forests				
Increasing climate change capacity and expertise: Climate change governance and decision-making, forest landscape planning, ClimatEx project, and establishment of an Ecosystem Forecast Centre (Future Forest Ecosystem Centre, FFEC)	2.0	3.0	3.0	8.0
Enhanced flood and drought management: Forecasting and real-time information on flood and drought, B.C. flood strategy and resilience plan, floodplain mapping.	0.7	1.1	1.2	3.0
Climate-resilient resource roads	0.4	0.8	0.8	2.1
Health				
Low carbon climate-resilient health system	3.0	5.0	5.0	13.0
Total Per Fiscal Year	43.5	20.3	20.4	-
Total*	84.3			

*Note: Budget 2022, and Table 2 of the 2022 CPAS document show totals of \$83 M and 84.3 M respectively. The difference between these numbers and the total above (83.2 M) is due to rounding.

(C) Appendix 3: Examples of Adaptation in the 2024 Climate Change Accountability Report

- **Renewing B.C.'s commitment to the Coastal First Nations-Great Bear Initiative**, the Province has committed to contributing \$1.6 million a year for four years beginning in 2024 to help facilitate government-to-government forums between B.C. and the Coastal First Nations (CFN) alliance of First Nations.
- The third annual **Indigenous Climate Resilience Forum**, hosted by the Province and the Indigenous Climate Adaptation Working Group, was held in February 2024.
- In July 2023, the Province provided \$2 million for the **Indigenous Climate Resilience Capacity-building Pilot Project**, led by the First Nations Emergency Services Society and the Coastal First Nations-Great Bear Initiative. An additional \$250k was provided in 2024/25 to extend the project for a second year.
- The Province invested \$3 million over two years in the **BC Tourism Climate Resiliency Initiative** to develop climate preparedness and adaptation strategies and action plans to mitigate climate risks starting in 2023/2024.
- Budget 2024 included \$3 million to support the **Youth Climate Corp BC** to serve more communities and advance local progress in wildfire-risk reduction, local food security, energy efficiency, ecosystem restoration and community engagement.
- In 2023/24, the **Beneficial Management Practices Program** supported 302 projects to help improve productivity and sustainability in the agriculture sector and more than 600 agri-food producers completed or renewed Environmental Farm Plans, which identify ways to adapt and respond to emerging environmental and climate challenges.
- In March 2024, the Province announced the provision of \$80 million to the **Agricultural Water Infrastructure Program** to help farmers make irrigation more efficient or improve water access and storage. The Province also provided \$2 million to the Extreme Weather Preparedness for Agriculture program to help farmers and ranchers protect their operations from wildfires, flooding and extreme heat.
- The **Extreme Weather Preparedness for Agriculture** program saw 120 assessments and projects completed in 2023/24 to enhance on-farm resilience.
- More than 400 watersheds in B.C. are being modelled and forecasted by the River Forecast Centre as of October 1st, 2024, up 35% from 2021/22.
- The Province has developed floodplain mapping standards to guide the creation of critical planning and response information for high-risk locations. In addition, more than 3,000 km of rivers and lakeshore have been mapped.
- The **B.C. Coastal Marine Strategy**, co-developed with coastal First Nations and other partners, including business, industry and environmental organizations, was launched with a 20-year vision to ensure a climate-resilient coastal marine ecosystem.
- The Province is taking new steps to protect wild Pacific salmon through a trilateral accord with the Government of Canada and the First Nations Fisheries Council of B.C., addressing priorities such as climate adaptation, habitat restoration and watershed security.

Climate Solutions Council

KEY FACTS:

- The Climate Solutions Council (CSC) is a legislated advisory group that provides the Minister of Energy and Climate Solutions (Minister) with advice on climate action and clean economic growth.
- The *Climate Change Accountability Act* (the Act) sets requirements on CSC mandate and membership.
- Appointed by the Minister, members are selected for their expertise and diverse perspectives to ensure compliance with the Act and support the effective delivery of climate policy.
- The Act stipulates the CSC can have up to 20 members, including representation from Indigenous peoples, local governments, environmental organizations, academics, unions, persons living in rural and remote communities, and the business community. At least half the members must be women. Typically, the Minister also appoints at least one youth member. See Attachment 1 for a list of current members.

ADDITIONAL INFORMATION:

- (C) In 2025 the CSC has provided verbal advice by request to the Minister regarding EV subsidies, economic growth in response to tariffs and political uncertainty, and framing the public discussion on the release of the Provincial Climate Change Accountability Report and BC's progress to targets.
- The CSC releases an annual report, with their 2024 report expected in spring.
- In 2024, the CSC submitted their annual report (for 2023) and one letter of advice to the Minister:
 - The CSC 2023 annual report, titled 'Boosting Connectivity in 2024 and Beyond' was published prior to the election, and provided a report card on provincial policies in development based on feasibility, ambition and stage of development.
 - A November 26 letter of advice outlined priorities for the new Minister of Energy and Climate Solutions regarding implementation of the CleanBC Roadmap, the BC Clean Energy Strategy and preparing for a changing climate.
- Letters from the CSC are included in the Climate Change Accountability Report.

FINANCIAL SUMMARY:

- The CSC is supported by Climate Action Secretariat (CAS) for strategic and secretariat services.
- (C) CAS pays travel costs for members to attend meetings and provides facilitation, communications, and other support, including via contractors. Expenses for CSC in 2024 were approximately \$40,000.

ATTACHMENTS:

- Attachment 1: Climate Solutions Council Members

ADM Responsible	Contact number
Adria Fradley, CAS	250-893-4329

Attachment 1: Climate Solutions Council Members

- **Co-Chairs:**
 - Colleen Giroux-Schmidt, VP at Innergex
 - Nancy Olewiler, professor emerita, SFU
- **Members:**
 - Denni Clement, peer network lead, Coastal First Nations-Great Bear Initiative
 - Linda Coady, recent president and CEO, BC Council of Forest Industries
 - Ashley Duncan, president, BC Insulators Local 118
 - Mahmudur Fatmi, associate professor, UBCO
 - Thomas Green, senior climate policy adviser, David Suzuki Foundation
 - Kathryn Harrison, professor, UBC
 - Matt Horne, climate manager, City of Vancouver
 - Eden Luymes, youth engagement coordinator, Canadian Parks and Wilderness Society of BC
 - Scott Maloney, VP, Teck Resources
 - Skye McConnell, head of corporate relations, Shell Canada
 - Madeleine McPherson, associate professor, UVic
 - Nangkilsas, Trent Moraes, Deputy Chief Councillor, Skidegate Band Council
 - Freya Phillips, senior energy specialist, Regional District of Kootenay Boundary
 - DJ Pohl, VP, BC General Employees' Union, Administrative Professionals Component 12
 - Andrea Reimer, community organizer, educator and policymaker
 - Michelle Staples, Mayor of Duncan
 - Jill Tipping, CEO, BC Tech

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Low Carbon Fuel Standard

KEY FACTS:

- British Columbia's (B.C.) Low Carbon Fuel Standard (LCFS) sets the following requirements on diesel, gasoline and jet fuel class fuels:
 - Minimum volumetric renewable content requirements, and
 - Annual carbon intensity (CI) requirements that apply to fuels used in transportation and other applicable purposes.
- Annual compliance with CI targets is calculated in terms of compliance units, issuing 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 more credits to avoid non-compliance penalties.
- In February 2025, regulations under the *Low Carbon Fuels Act* (LCFA) were updated to support biofuel production in B.C. and Canada. The changes increased the renewable fuel target for the diesel fuel category from 4 percent (%) to 8% for the 2025 compliance year onwards, and introduced Canadian production requirements for the renewable fuel targets for gasoline and diesel.
- While the amendments set a minimum volumetric requirement for Canadian produced renewable fuels, suppliers can still supply non-Canadian renewable fuels above the minimums to comply with the more stringent carbon intensity reduction requirements. In 2023, for example, the average renewable content in diesel fuel was over 21%; the Canadian production requirement is only for the first 8% of this fuel.
- The LCFS is the single largest contributor to meeting the Province's greenhouse gas (GHG) reduction targets:
 - At a 30% reduction in CI in the diesel and gasoline categories and a 10% reduction in the jet fuel category by 2030, the LCFS is expected to deliver nearly 5 million tonnes CO₂e (Mt) of reductions in B.C.'s GHG inventory emissions in 2030, which represents about 18% of the legislated 2030 target.
 - Between 2011 and 2023, actions to comply with the LCFS have resulted in 20.44 Mt avoided in B.C., including 3.3 Mt avoided in 2023.
- Initiative Agreements, funded through compliance units, support actions that increase the use of low carbon fuels, including the production of made-in-B.C. renewable fuel, increasing energy security and ensuring B.C. benefits from a low carbon economy.

- Initiative Agreements have supported 43 projects with investments expected to exceed \$2.25 billion. Supported projects are expected to cumulatively reduce emissions by 24 million tonnes of carbon dioxide equivalent by 2030.
- Both Parkland Refinery in Burnaby and Tidewater Refinery in Prince George have been supported by Initiative Agreements.
- B.C.'s renewable fuel production capacity in 2025 reached 460 million litres and is expected to increase to 660 million litres by 2028.

ADDITIONAL INFORMATION:

Jet fuel

- The supply of alternative jet fuel currently earns LCFS credits, providing an incentive for the initial use of the fuel. The carbon intensity reduction requirements start at 2% in 2026, increase by 2% each year, and reach a 10% reduction in 2030 and subsequent years.
- The minimum renewable content requirement for jet fuel is 1% in 2028, 2% in 2029 and 3% in 2030 and subsequent years.
- The Initiative Agreement program established the B.C. Low Carbon Jet Fuel Incentive Program in partnership with the Vancouver Airport Authority, which incentivizes the early adoption of low carbon jet fuel in B.C. by providing a cash or credit incentive that temporarily addresses its price premium.
- West Jet and Air Canada have both announced planned supply of low carbon jet fuel to B.C., including Air Canada's announcement of 78 million litres purchased from Neste in Singapore.

Fuel Pricing

- Since 2022, renewable diesel supply has rapidly expanded due to low-cost imports from the United States, where biofuel producers benefit from significant subsidies, now including those under the *Inflation Reduction Act*.
- In response to these market changes, the February 25 amendments to regulations under the LCFA create a firm, semi-protected market large enough to sustain B.C. and Canadian biofuel producers, while at the same time limiting fuel price impacts.
- These changes strike a careful balance between supporting domestic biofuel producers and allowing fuel suppliers compliance flexibility to import renewable fuels (beyond the Canadian renewable fuel requirement) and purchase credits, helping them minimize costs in meeting their compliance obligations.

- Advice/Recommendations

FINANCIAL SUMMARY:

- The LCFS is a market based regulatory mechanism supported by renewable content requirements, target CI requirements, and compliance units that does not require government funding.

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Nat Gosman, EDD	778 698-7282

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Demand Side Management

KEY FACTS:

- Utility demand-side management (DSM) helps families and businesses reduce their electricity and natural gas bills. It also allows electric utilities to address energy and capacity needs through energy efficiency and electrical capacity-focused programs.
- Electricity demand side management programs, including heat pump retrofits of electrically heat homes, can help offset growing electricity demand.
- The Province provides the regulatory framework for DSM through the Utilities Commission Act, the Clean Energy Act, and the Demand-Side Measures Regulation (DSM Regulation).
- Utilities DSM expenditures must meet adequacy and cost-effectiveness requirements set out in the DSM Regulation and be approved by the British Columbia Utilities Commission (BCUC).
- In recent years, the Province has enabled more support for low-income and Indigenous customers, through the DSM Regulation.
- Utilities have significantly increased DSM spending in recent years.
- BC Hydro's approved DSM plan includes \$110M in FY25, over 40% more than the \$76.5 million spent in FY23.
- FortisBC's approved plans include a yearly average of \$140M a year over the FY24-YF27 period, 13% more than the \$124M in DSM expenditures for both gas and electricity in FY23. These plans represent a five-fold increase in spending since 2013.
- Pacific Northern Gas, which serves portions of northern B.C., has proposed a \$5.2 million DSM portfolio for 2025-2027, over double from 2020-2022.

ADDITIONAL INFORMATION:

- The CleanBC 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."
- These objectives were achieved when the new DSM Regulation was implemented in June 2023, resulting in more flexibility to accommodate low-income and Indigenous programs, and focus on more energy-efficient equipment through the phaseout of conventional gas space and water heating equipment incentives.

- MECS also helps utilities achieve DSM objectives through minimum energy performance standards (MEPS), development and maintenance of National Standards and administration of Canada’s national Energy Efficiency Verification Program.
- Electrification DSM is currently considered separately from energy efficiency and capacity-focused DSM in legislation. Utilities in B.C. are authorized by the Greenhouse Gas Reduction Regulation to undertake electrification projects and programs to reduce GHG emissions, provided they are cost-effective to the utility. The BCUC can still rule on the prudence of these expenditures.

FINANCIAL SUMMARY:

- Not applicable, as the funding for DSM programs comes from the utilities.

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Nat Gosman, ADM EDD	778 698-7282
Chris Gilmore, ADM EURD	778-698-1670

Remote Community Energy Strategy

KEY FACTS:

- The Remote Community Energy Strategy (RCES) is a multi-stakeholder initiative to achieve the CleanBC goal of reducing diesel consumption from electricity generation and heating in remote communities by 80% by 2030.
- RCES includes three streams of action: (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 RCES programs to support capacity building in remote First Nation communities and for the Community Energy Diesel Reduction (CEDR) program, which supports diesel-displacing energy efficiency and renewable energy generation projects.
- In February 2023, Treasury Board approved an additional \$30 million for CEDR, extending the program until March 2028.
- Since 2022, CEDR has provided \$23.6 million to 42 projects in 22 remote communities.

ADDITIONAL INFORMATION:

- There are approximately 44 remote communities in B.C. that are not connected to the provincial electricity grid. Most are First Nation communities that depend on diesel fuel to generate electricity and heat.
- In 2019 (prior to RCES), remote communities consumed approximately 20 million liters of diesel fuel per year.
- In 2021, the Ministry established the RCES Working Group with seven remote First Nations to strengthen relationships and gain a further understanding of community priorities and effective program approaches. In 2022, the Working Group provided recommendations for provincial action to achieve the provincial diesel reduction target and support reconciliation commitments.
- The recommendations informed the development of the Ministry's RCES Action Plan, which includes regulatory measures to enable diesel-displacing projects.
- In spring 2024, the Ministry amended the Greenhouse Gas Reduction Regulation to enhance regulatory certainty for renewable energy projects that displace diesel in remote communities served by BC Hydro. The amendments ensure the BC Utilities Commission will allow BC Hydro to recover costs for electricity purchase agreements.

- RCES projects currently in development in Non-Integrated Areas are forecast to reduce approximately one third of diesel consumption by 2030. In independent communities not served by BC Hydro, diesel use has been reduced by over 80%.
- In 2025, RCES won the Premier’s Award for Innovation and Excellence in the Regional Impact category.

FINANCIAL SUMMARY:

- Not applicable – no new financial commitments in Budget 2025

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Nat Gosman, EDD	778-698-7282

Natural Gas Decarbonization

KEY FACTS:

- As noted in Powering Our Future: British Columbia's (BC) Clean Energy Strategy, the provincial gas system will continue to play an important role for many years in maintaining system resiliency, meet peak energy demand, and provide home heating in colder climates.
- The natural gas utilities are transitioning to a low carbon future and increasingly providing low-carbon options to their customers to limit the emissions. However, low-cost opportunities, such as inexpensive renewable gas, energy efficiency and conservation, are limited and quickly become exhausted.
- The CleanBC Roadmap to 2030 committed to requiring natural gas utilities to limit the greenhouse gas (GHG) emissions of their buildings and industry customers to 6.11 megatons. Known as the Greenhouse Gas Reduction Standard (GHGRS), this cap on emissions was part of a suite of policies introduced under the Province's CleanBC Roadmap to 2030.
- Advice/Recommendations; Cabinet Confidences
- Gas utilities, like FortisBC, have already begun work towards meeting CleanBC targets by acquiring and producing hydrogen, renewable natural gas and other lower carbon gases.
- As part of the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR), gas utilities may choose to carry out activities to reduce GHG emissions while recovering the costs through rates they charge their customers.
- The GGRR protects the ratepayer by setting limits to the amount of money the gas utility can pay for renewable and low-carbon gases (\$31 per gigajoule plus inflation) as well as limits to the amount they can procure or produce (15 percent of the total amount of natural gas provided by the gas utility in the 2019).
 - Amendments made in 2024 enable the utilities to acquire or produce hydrogen as well as providing grants or loans for the domestic production of renewable and low carbon gas.
 - The amendments also established a maximum carbon intensity threshold for hydrogen, renewable natural gas, syngas, and lignin that must be verified by a certified, independent body.

ADDITIONAL INFORMATION:

- Pacific Northern Gas (PNG) and FortisBC Energy Inc (FEI) are the primary natural gas utilities operating in B.C.. Other, smaller gas utilities, such Big White ski resort, are site-specific.
- PNG-West owns and operates a natural gas transportation system and distributes gas to approximately 20,800 residential, commercial and industrial customers between Summit Lake and Prince Rupert.
- PNG (NE) is also a natural gas distribution utility, providing service to approximately 21,600 residential, commercial and industrial customers in the communities of Fort St. John, Dawson Creek, and Tumbler Ridge.
- FEI provides energy distribution services to 1.3 million residential, commercial, and industrial customers in 135 communities, and 58 First Nations communities, making it among the largest gas utilities in Canada and the Pacific Northwest. FEI owns approximately 51,600 kilometers of gas transmission and distribution lines.

FINANCIAL SUMMARY:

- There are no fiscal implications to government from gas utility action to reduce emissions.

ATTACHMENTS:

- No attachment

ADM(s) Responsible	Contact number
Chris Gilmore, EURD	250-217-7163

Carbon Capture and Storage

KEY FACTS:

- The Province is prioritizing carbon capture, utilization and storage (CCUS) as a key strategy to mitigate greenhouse gas emissions, especially in hard-to-abate industries, and ultimately to achieve full decarbonization.
- The Province has established a comprehensive regulatory framework governing subsurface rights and permitting for CCUS projects, providing certainty to industry stakeholders.
- Northeast British Columbia (NEBC) has an estimated carbon dioxide (CO₂) storage capacity of 4.2 billion tonnes in depleted oil and gas pools and deep saline aquifers, sufficient to store over 300 years' worth of the province's oil and gas sector CO₂ emissions at current rates.
- BC also contains extensive volumes of rock types suitable for CO₂ storage via mineralization though more work is needed to determine the storage capacity of specific project opportunities.
- Since 2017, the Province has allocated over \$45 million through programs like the CleanBC Industry Fund (CIF) and the Innovative Clean Energy (ICE) Fund to support CCUS projects and research initiatives. See CleanBC Program for Industry Estimates Note (Section G, Tab 6) for specific details on CIF projects.
- In 2024, federal legislation recognized BC's regulatory framework for geological sequestration, deeming it sufficient for permanent CO₂ storage. Consequently, CCUS projects in the province now qualify for the federal Carbon Capture, Utilization, and Storage Investment Tax Credit, which aims to reduce investor capital costs.
- The Ministry of Energy and Climate Solutions (ECS), in collaboration with the BC Energy Regulator (BCER), released a new Carbon Capture and Sequestration (CCS) Offset Protocol for two rounds of public consultation in Fall 2023 and in February 2025. The finalized CCS Protocol is expected to be released by summer 2025.
 - The protocol will apply to two main activities:
 - Injecting and permanently storing captured carbon in a storage, or
 - Chemically transforming captured carbon capable of permanently storing captured carbon (mineralization)
 - The BCER regulates and issues permits and orders under its regulatory framework for all activities.
- Carbon offsets can be used in the output-based pricing system to meet a portion of the compliance obligations as well as sold on the voluntary market.

ADDITIONAL INFORMATION:

- Provincial CCUS funding supports furthering our understanding of BC's geological storage potential, advancing CCUS technologies and facilitating project deployment. Refer to Table 1 in the Financial Summary section below for an overview of CCUS funding streams, number of projects and studies funded, and total funding provided. Note that all funding is from budgets prior to FY2025/26.
- In February 2025, a storage reservoir licence was granted to NorthRiver Midstream. This could pave the way for the development of the first dedicated CCUS project in BC.
- The BCER has been overseeing subsurface storage projects since 1996, primarily through acid gas disposal. To date, over 2.7 million tonnes of CO₂ have been permanently stored in NEBC.

FINANCIAL SUMMARY:

Table 1: Provincially Funded CCUS-related Projects and Studies Since 2017

Name of Provincial Fund	Number of Projects & Studies	Funding (\$)
CleanBC Industry Fund (*)	16	\$37.4 million
Innovative Clean Energy (ICE) Fund	6	\$6.2 million
CleanBC Industrial Decarbonization Funding	7	\$1.5 million
Total	29	\$45.1 million

* For more information on CleanBC Industry Fund projects, refer to Industry Estimates Note (Section G, Tab 6).

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Rachel Shaw, ERD	250-507-6047
Adria Fradley, CAS	250-893-4329

Clean/low Carbon Competitiveness

KEY FACTS:

- According to the Provincial Inventory of greenhouse gas emissions, oil and gas sector emissions have decreased since 2007 while natural gas production more than doubled over the same period.
 - Relative to North American and global oil and gas production, B.C.'s oil and gas sector has one of the lowest methane emissions intensity levels (methane emissions per unit of natural gas produced).
 - With facilities powered predominantly by hydroelectricity, liquefied natural gas facilities in B.C. will have the lowest emission intensities in the world.
 - Availability of clean and renewable electricity at reasonable rates is a critical component of expanding our low-carbon economy and maintaining British Columbia's (B.C.) competitive advantage.
 - BC Hydro's rates were the second or third lowest among 22 North American utilities surveyed depending on customer type (see appendix 1).
 - Cost-based rate increases from BC Hydro of 3.75% each year in 2025/26 and 2026/27 compare very favourably with other gas and electric utilities' increases (see appendix 2).
 - Cumulative increases in BC Hydro rates since 2017 are forecast to be 12.4% below cumulative inflation in 2026/27, aligned with the *Clean Energy Act* objective through to 2030/31.
 - B.C. already has enviable electric generation assets with large hydroelectricity power plants on two rivers, with the ability to provide electricity at any hour of the year.
 - Wind and solar power provide energy and complement large hydro to enable a balanced system.
 - The 2024 Call for Power will secure nearly 5,000 GWh of competitive new electricity supply from ten wind and solar power plants in B.C. by 2031, equivalent to the annual output of Site C which will be fully operational in 2025.
 - Advice/Recommendations; Cabinet Confidences
-
- To further facilitate the successful navigation of government policy, legislation and regulation, the Clean Energy and Major Projects Office (CEMPO) acts as a strategic advisor and accelerator for clean energy and major projects in B.C..

- CEMPO is actively supporting priority projects, such as the ten successful renewable electricity projects, and other clean energy projects.
- This is the first time in BC's history that there is a dedicated projects office for the energy sector, which demonstrates BC's commitment to the clean and low-carbon energy sectors.
- Outside of providing clean energy to power BC's economy, B.C. is also supporting competitiveness to support industrial decarbonization for hard to abate emissions through its output-based pricing system (OBPS) and the CleanBC Industry Fund.
- On April 1, 2024, a newly designed BC Output-Based Pricing System (BC OBPS) replaced the CleanBC Industrial Incentive Program and is mandatory for large industry. The BC OBPS ensures there is a price incentive for industrial emitters to reduce greenhouse gas (GHG) emissions while promoting innovation and protecting competitiveness.
- The BC OBPS is designed to ensure industrial emissions are reduced while continuing to provide flexible options, such as offset units, to meet compliance obligations.
- As a complement to the B.C. OBPS, the CleanBC Industry Fund enables industrial operators to deploy and de-risk innovative emission reduction solutions at B.C. facilities, advancing economic development while reducing costs to operators. CIF also supports industrial electrification, through the CleanBC and BC Hydro Industrial Electrification Program, a streamlined funding process for large industrial electrification projects that require a new or upgraded connection to the BC Hydro Integrated Grid.

ADDITIONAL INFORMATION:

- In 2024 the Province amended BC's Energy Objectives (*Clean Energy Act*) with an addition to ensure that changes to BC Hydro's rates are reasonably predictable and consistent from year to year, and to ensure that increases to the authority's rates do not exceed cumulative inflation between 2017 and 2031.
- The energy objectives were also expanded to ensure BC Hydro holds rights to a sufficient amount of clean or renewable electricity to enable B.C. to reduce greenhouse gas emissions by 80% below 2007 levels by 2050, 60% by 2040 and 40% by 2030.
- Clean and renewable energy includes biomass, biogas, geothermal heat, hydro, solar, ocean, wind, and other resources included in the Clean or Renewable Resource Regulation.
- According to the latest Provincial Inventory report, which uses data co-developed with the federal government, B.C. is on track to meet its 2025 oil and gas sector methane target and has established a clear pathway forward to meeting its 2030 (75%reduction) and 2035 (near-elimination) targets.

FINANCIAL SUMMARY:

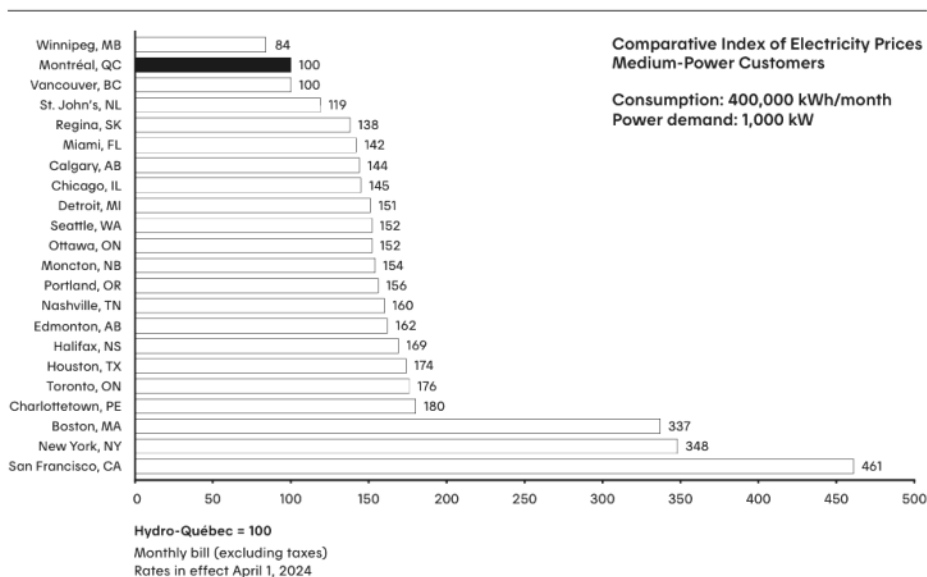
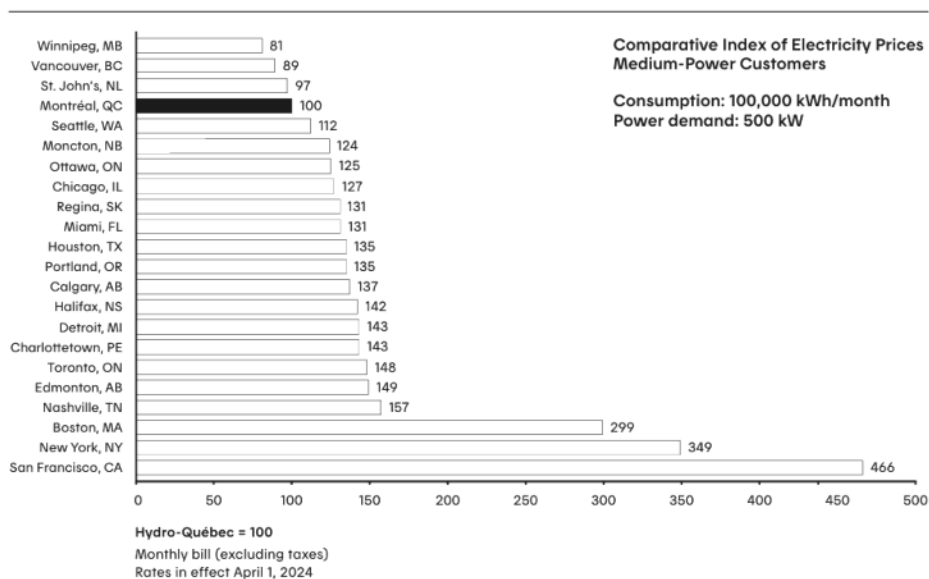
- Not applicable

ATTACHMENTS:

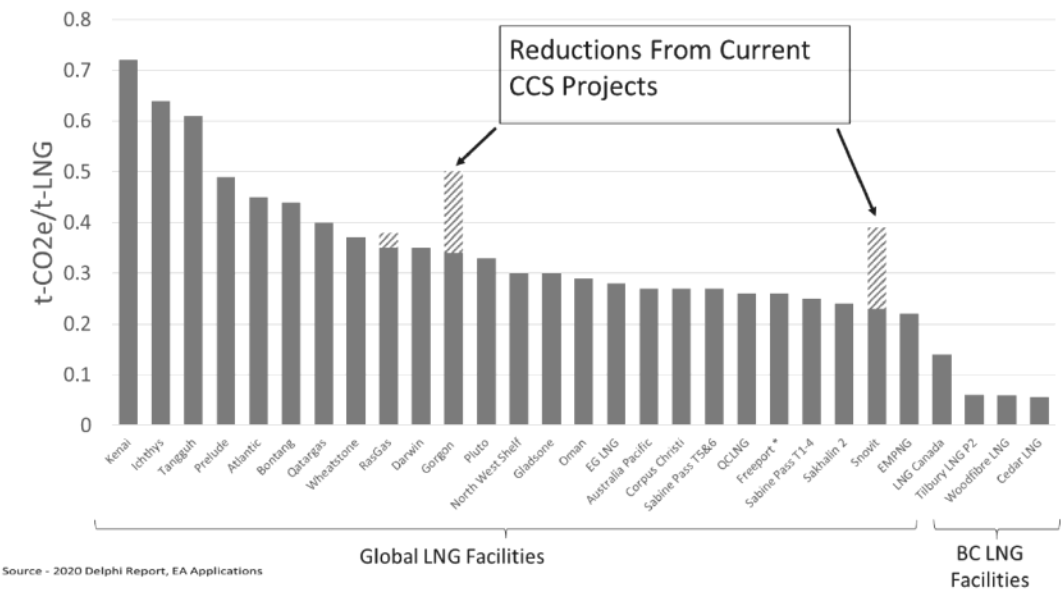
- Appendix 1 – Comparison of Business Rates for 22 Electric Utilities (Hydro Québec Annual Survey)
- Appendix 2 – Estimated Emission Intensity of BC LNG
- Appendix 3 – Percentage Electricity Rate Increases in Canada and Pacific Coast (source: BC Hydro)

ADM(s) Responsible	Contact number
Adria Fradley, CAS	250-893-4329
Chris Gilmore, EURD	250-217-7163

Appendix 1 – Comparison of Business Rates for 22 Electric Utilities (Hydro Québec Annual Survey)



Appendix 2 – Estimated Emission Intensity of BC LNG



**Appendix 3 – Percentage Electricity Rate Increases in Canada and Pacific Coast
(source: BC Hydro)**

Canadian Utilities	2023/24	2024/25
BC Hydro	2.20%	2.30%
FortisBC Energy Inc. (Gas)	8%	17.5%
FortisBC Inc. (Electricity)	6.70%	5.7%
Hydro Quebec	3% Residential (capped); 5.1% Business; 3.3% Industrial	<i>Proposed: 3% Residential (capped); 3.9% Business; 3.3% Industrial</i>
Hydro One	Distribution 5.1%	<i>Proposed Distribution 4.5%</i>
New Brunswick Power	5.7%	Interim basis: 9.3%
Nova Scotia Power	6.90%	not available
Western US Utilities	2023/24	2024/25
PG&E (California)	12.8%	2%
Seattle City Light	9.80%	<i>Proposed 5.4%</i>
PacifiCorp (Oregon)	12.90%	<i>Proposed: 21.6%</i>

Position on Nuclear Energy

KEY FACTS:

- The *Clean Energy Act* currently prohibits the use of nuclear energy in B.C., by stating that the Province is “to achieve British Columbia’s energy objectives without the use of nuclear power.”
- Nuclear power is not included in BC Hydro’s resource options and planning processes, and no studies have been done to look at site locations.
- Ideal locations for nuclear power would require seismic stability, reliable water supply (for cooling purposes), and economically viable grid access. This may prove difficult as significant parts of B.C. are at risk of earthquakes.
- Advice/Recommendations
- In its Integrated Resource Plan, BC Hydro proposes a mix of near-term actions and potential resources that will allow it to meet expected growth in electricity using a mix of energy efficiency, renewals of existing clean energy projects, refurbishment of BC Hydro facilities, and new generation resources acquired through calls for power.

ADDITIONAL INFORMATION:

- Nuclear fission technology is a process that involves splitting the nucleus of an atom into two smaller nuclei, releasing a large amount of energy in the form of heat, which can be used to generate electricity.
- Power generated from nuclear fission is a low-carbon alternative to fossil fuel electricity generation and is found in traditional large-scale reactors (~1000 megawatt [MW]) or newer small modular reactors (SMRs) (>300MW).
- Due to the limited construction of SMRs globally, there is still uncertainty with respect to the cost of SMR development. This uncertainty is particularly pronounced for new entrants.
- Advice/Recommendations
- The Government of Canada and some other provinces (Saskatchewan, Ontario, New Brunswick and Alberta) are currently pursuing the deployment of SMRs and have developed a Small Modular Reactor Strategic Plan, which outlines actions in support of planning and deployment of SMRs.

- Ontario has announced plans to construct four SMRs at the Darlington nuclear site with the first projected to becoming operational by 2030, which would be the first SMR constructed in a G7 nation.
- The Canadian Nuclear Safety Commission regulates the use of nuclear energy in Canada, including design requirements associated with seismic risk.
- In general, it is possible to locate nuclear power in seismically active areas (e.g., Japan), but it is likely to cost more to ensure safety standards are met.
- Advice/Recommendations
- BC Hydro continues to monitor the development of nuclear technology to remain aware of how this technology might perform relative to other B.C. renewables.

FINANCIAL SUMMARY:

- Not applicable

ATTACHMENTS:

- Not applicable

ADM(s) Responsible	Contact number
Chris Gilmore, EURD	250-217-7163



MINISTRY OF ENERGY and CLIMATE SOLUTIONS

ESTIMATES SPRING 2025

SECTION H: FINANCIALS AND SERVICE PLAN

Section H Contents:

- Budget Highlights
- Minister Briefing Slides
- Estimates Summary
- Estimates Blue Book
- Service Plan and Minister Mandate Letter

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MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

2025 Budget Highlights

ECS's 2025/26 budget is \$112.095M. **This represents a \$2.228M or 2.0% net increase from the restated previous year.** This net budget increase is comprised of:

Budget 2025 Decisions:

\$1.984M increase in First Nation Clean Energy Business Fund spending plan

\$0.579M increase for the Shared Recovery Wage Mandate

\$0.593M to fund Deputy Minister's Office resources

\$0.100M to support corporate resources for the new ministry; off set by:

(\$0.863M) decrease in ICE Fund spending plan

(\$0.165M) adjustment to Minister's Office to reflect updated structure

\$000	2024/25 Estimates	Change	Restated 2024/25	2025/26	\$ Change	% Change
Ministry Operations	89,724	-	89,724	90,831	1,107	
Innovative Clean Energy Fund Special Account	11,768	-	11,768	10,905	(863)	
First Nations Clean Energy Business Fund	8,375	-	8,375	10,359	1,984	
Total	109,867	-	109,867	112,095	2,228	2.0%

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Budget 2025

Ministry of Energy and Climate Solutions

Minister Briefing

Ministry Budget 2024/25- 2027/28

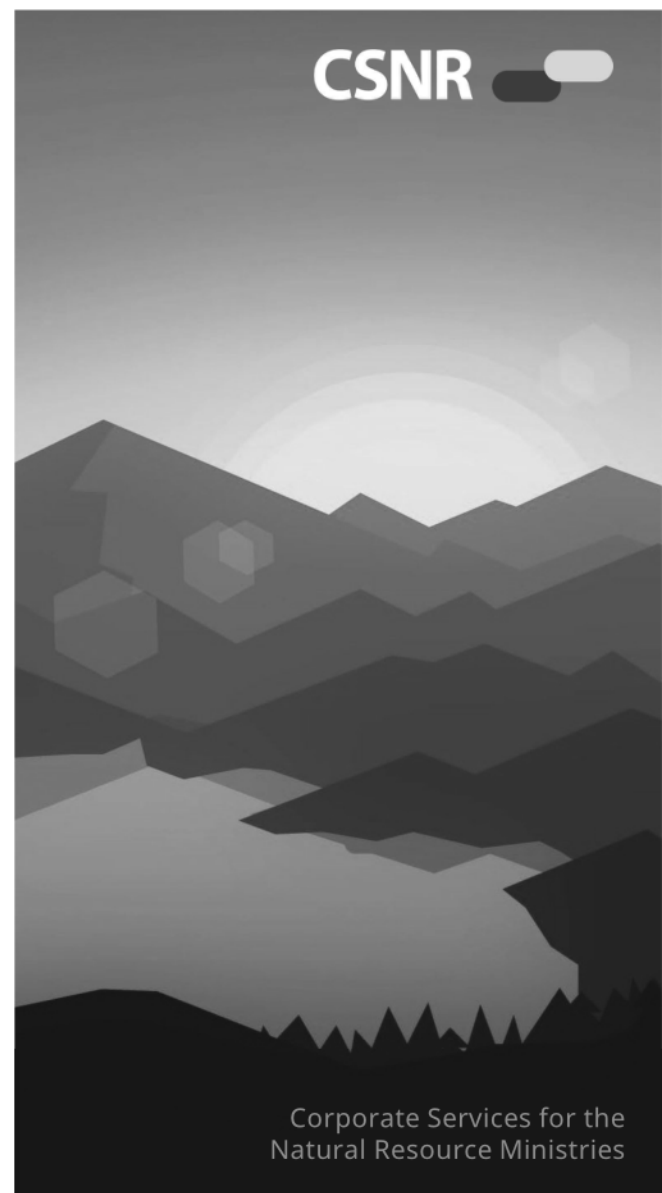
Corporate Services for the
Natural Resource Ministries



	2024/25 Restated	2025/26	2026/27	2027/28
Ministry Operations				
Climate Action	19,064	19,273	19,273	19,273
CleanBC Program for Industry and BC Output Based Pricing System	5,661	5,661	5,661	5,661
Energy Decarbonization	37,651	37,784	37,784	37,784
Electricity and Utility Regulation	3,206	3,287	3,287	3,287
Energy Resources	18,821	18,941	18,941	18,941
Executive and Support Services	5,321	5,885	5,885	5,885
Total Ministry Operations	\$89,724	\$90,831	\$90,831	\$90,831
<i>Changes from Budget 2024</i>		<i>\$1,107</i>	<i>\$1,107</i>	<i>\$1,107</i>
<i>Changes Year over Year</i>		<i>\$1,107</i>	<i>\$0</i>	<i>\$0</i>
Innovative Clean Energy Fund Special Account	11,768	10,905	8,735	8,735
First Nation Clean Energy Business Fund	8,375	10,359	9,714	9,919
Total Ministry Budget	109,867	112,095	109,280	109,485
<u>Operations Budget Changes from Budget 2024</u>				
Shared Recovery Wage Mandate		\$579	\$579	\$579
Deputy Minister's Office Resources		\$593	\$593	\$593
Corporate Services Resources		\$100	\$100	\$100
Minister's Office Adjustment		(\$165)	(\$165)	(\$165)
Total Changes		\$1,107	\$1,107	\$1,107
Percent Change to Operations from Budget 2024		1%	1%	1%

Budget 2025 Highlights

- \$1.779M over the fiscal plan to fund shared resources (up to 7 FTEs) to support both Deputy Minister Offices in the Ministry of Energy and Climate Solutions and Ministry of Mining and Critical Minerals.
- \$1.737M over the fiscal plan for the shared recovery wage mandate.
- \$0.300M over the fiscal plan to support corporate services (1FTE).
- \$(0.495M) decrease over the fiscal plan for the Minister's Office to reflect updated structure as approved by the Premier's Office.



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Clean BC and Contingency 2025/26 -2027/28

Corporate Services for the
Natural Resource Ministries



Project	2025/26		2026/27		2027/28		Three Year Total		Advice/Recommendations; Government Financial Information
	Base	Advice/Recommendations; Government Financial Information	Base	Advice/Recommendations; Government Financial Information	Base	Advice/Recommendations; Government Financial Information	Base	Advice/Recommendations; Government Financial Information	
Advancing Industrial Decarbonization/CO2 Storage	1,169		1,169		1,169		3,507		
Building Energy Codes	140		140		140		420		
CleanBC Envelope							-		
Clean Energy Vehicle Supply Standard	948		948		948		2,844		
CleanBC for Industry and BC Output Based Pricing System	5,661		5,661		5,661		16,983		
Climate Action Secretariat	19,273		19,273		19,273		57,819		
Efficiency BC Expansion/BetterHomes Better Buildings/Clean Building/Building Pathway	26,998		26,998		26,998		80,994		
Go Electric/CEV Program Expansion / Clean Transportation	4,212		4,212		4,212		12,636		
Low Carbon Fuels/Hydrogen Office	5,281		5,281		5,281		15,843		
Reduce Emissions from Natural Gas	317		317		317		951		
Remote Communities	165		165		165		495		
Sub total Clean BC	64,164		64,164		64,164		192,492		
Fuel Price Transparency Act - BC Utilities Commission administration	-		-		-		-		
Healing the Land and Emission Reduction	-		-		-		-		
Major Energy Projects Office	-		-		-		-		
Sub total Other	-		-		-		-		
ECS TOTAL	64,164		64,164		64,164		192,492		

Note: All contingency information to be confirmed in the Ministry Budget Letter

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MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

Budget 2025 Estimates Summary

By Core Business												
\$000s												
Budget 2025 Decisions								Budget 2025 & Prior Year Decisions for Out Years				
	Estimates 2024/25	Restated Estimates 2024/25	(1) Wage Mandate	(2) Minister's Office Adjustment	(3) DMO & Corporate Resources	(4) Spending Plan	Fiscal Neutral (Budget 2024)	Estimates 2025/26	Spending Plan	2026/27 Estimates	Spending Plan	2027/28 Estimates
Ministry Operations												
Climate Action	19,064	19,064	209					19,273		19,273		19,273
CleanBC for Industry and BC Output Based Pricing System	5,661	5,661	-					5,661		5,661		5,661
Energy Decarbonization	37,651	37,651	128				5	37,784		37,784		37,784
Electricity & Utility Regulation	3,206	3,206	86				(5)	3,287		3,287		3,287
Energy Resources	18,821	18,821	120					18,941		18,941		18,941
Minister's Office	998	998		(165)				833		833		833
Executive and Support Services	4,323	4,323	36		693			5,052		5,052		5,052
Sub-Total	89,724	89,724	579	(165)	693	-	-	90,831	-	90,831		90,831
First Nations Clean Energy Business Fund	8,375	8,375				1,984		10,359	(645)	9,714	205	9,919
Innovative Clean Energy Fund	11,768	11,768				(863)		10,905	(2,170)	8,735	-	8,735
TOTAL MINISTRY	109,867	109,867	579	(165)		1,121	-	112,095	(2,815)	109,280	205	109,485

Budget 2025 Decisions:

- (1), (2) The ministry received a budget lift to support the negotiated **Wage Mandate** and salary adjustment to the **Minister's Office**
- (3) budget increase to fund FTEs to support the new **Deputy Minister's Office and Corporate** services
- (4) 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
- (4) Updated Innovative Clean Energy (ICE) fund **spending plan**
- (5) **Fiscal Neutral** adjustment as a result of Budget 2024 internal EMLI reorganization

Budget 2025 and Prior Year Decisions for Out Years

Out year adjustments Special Account **spending plans**

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MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

The mission of the Ministry of Energy and Climate Solutions is to align energy and climate policies and programs to facilitate a clean, competitive and sustainable economy for the benefit of all peoples in British Columbia, now and in the future.

MINISTRY SUMMARY

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	Estimates 2024/25 ¹	Estimates 2025/26
VOTED APPROPRIATION		
Vote 23 — Ministry Operations.....	89,724	90,831
STATUTORY APPROPRIATIONS		
First Nations Clean Energy Business Fund Special Account.....	8,375	10,359
Innovative Clean Energy Fund Special Account.....	11,768	10,905
OPERATING EXPENSES	<u>109,867</u>	<u>112,095</u>
CAPITAL EXPENDITURES ²	<u>1</u>	<u>3</u>
LOANS, INVESTMENTS AND OTHER REQUIREMENTS ³	<u>10,000</u>	<u>10,000</u>
REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES ⁴	<u>—</u>	<u>—</u>

NOTES

¹ For comparative purposes, figures shown for the 2024/25 operating expenses; capital expenditures; loans, investments and other requirements; and revenue collected for, and transferred to, other entities are restated to be consistent with the presentation of the 2025/26 *Estimates*. A reconciliation of restated operating expenses and capital expenditures is presented in Schedule A.

² A listing of estimated capital expenditures by ministry is presented in Schedule C.

³ A summary of loans, investments and other requirements by ministry is presented in Schedule D.

⁴ A summary of revenue collected for, and transferred to, other entities by ministry is presented in Schedule E.

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

SUMMARY BY CORE BUSINESS

(\$000)

	2024/25	2025/26 ESTIMATES		
OPERATING EXPENSES	Net	Gross	External Recoveries	Net
Core Business				
Climate Action.....	19,064	19,356	(83)	19,273
CleanBC Program for Industry and BC-Output Based Pricing System.....	5,661	5,663	(2)	5,661
Energy Decarbonization.....	37,651	37,786	(2)	37,784
Electricity and Utility Regulation.....	3,206	8,962	(5,675)	3,287
Energy Resources.....	18,821	18,943	(2)	18,941
Executive and Support Services.....	5,321	5,889	(4)	5,885
First Nations Clean Energy Business Fund Special Account.....	8,375	10,361	(2)	10,359
Innovative Clean Energy Fund Special Account.....	11,768	10,907	(2)	10,905
TOTAL OPERATING EXPENSES	109,867	117,867	(5,772)	112,095
CAPITAL EXPENDITURES	Capital Expenditures	Capital Expenditures	Receipts and P3 Liabilities	Net
Core Business				
Executive and Support Services.....	1	3	—	3
TOTAL	1	3	—	3
LOANS, INVESTMENTS AND OTHER REQUIREMENTS	Net	Disbursements	Receipts	Net
Core Business				
Climate Action.....	10,000	10,000	—	10,000
TOTAL LOANS, INVESTMENTS AND OTHER REQUIREMENTS	10,000	10,000	—	10,000
REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES	Net	Disbursements	Receipts	Net
Core Business				
Energy Resources.....	—	54,510	(54,510)	—
TOTAL REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES	—	54,510	(54,510)	—

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

VOTE DESCRIPTIONS

(\$000)

Estimates
2024/25Estimates
2025/26

VOTE 23 — MINISTRY OPERATIONS

This vote provides for the programs, operations, and other activities described in the voted appropriations under the following core businesses: Climate Action, CleanBC Program for Industry and BC-Output Based Pricing System, Energy Decarbonization, Electricity and Utility Regulation, Energy Resources, and Executive and Support Services.

CLIMATE ACTION

Voted Appropriation

Climate Action.....	19,064	19,273
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Voted Appropriation Description: This sub-vote provides for support for the activities required to meet the province's climate action targets under the *Climate Change Accountability Act*, along with British Columbia's climate policies, the requirements under the *Greenhouse Gas Industrial Reporting and Control Act*, and for adapting to the impacts of climate change. This includes leading engagement processes across ministries, other governments, a diverse range of stakeholders, and the general public. Activities include developing and leading the Province's climate action strategy; research and policy development on climate action measures; education and communication on impacts of climate change; advising and supporting Executive Council and its committees on matters of climate action and clean energy; the evaluation, management, and delivery of cross-government initiatives; and developing greenhouse gas requirements for industry, standardized offsets program, Carbon Neutral Government, and all related legislation and regulations. This sub-vote also provides for policy, planning, coordination and operational support, consultations, outreach, partnerships, education, research, and the procurement of carbon offsets. Costs may be recovered from special accounts, ministries, other entities within government, other levels of government, organizations, and individuals for activities described within this sub-vote.

CLEANBC PROGRAM FOR INDUSTRY AND BC-OUTPUT BASED PRICING SYSTEM

Voted Appropriation

CleanBC Program for Industry and BC-Output Based Pricing System.....	5,661	5,661
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Voted Appropriation Description: This sub-vote provides for the administration and implementation of carbon pricing programs that improve the competitiveness of large industrial emitters operating within British Columbia, supports projects that identify or reduce greenhouse gas emissions from large industrial emitters, and incentivizes large industrial emitters to identify or reduce emissions. Costs may be recovered from ministries, other entities within government, other levels of government, organizations, and individuals for activities described within this sub-vote.

ENERGY DECARBONIZATION

Voted Appropriation

Energy Decarbonization.....	37,651	37,784
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Voted Appropriation Description: This sub-vote provides for the development of policies and programs to support province-wide energy efficiency and clean fuel-switching measures and programs, alternative energy resource development, and the advancement of leading-edge energy technologies. This sub-vote also provides for legislative and regulatory initiatives to increase the adoption of zero emission vehicles; reduce the carbon intensity of transportation fuels; expand the production and use of renewable fuels; and set minimum energy efficiency standards. This sub-vote supports the provision of policy advice or direction to electrical and gas utilities, the private sector, Indigenous communities, and local governments regarding investment in new clean energy resources and demand-side measures. This sub-vote also provides support for strategic and operational management of funding to support reconciliation initiatives and negotiations for the First Nations Clean Energy Business Fund special account. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this sub-vote.

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

VOTE DESCRIPTIONS

(\$000)

	Estimates 2024/25	Estimates 2025/26
ELECTRICITY AND UTILITY REGULATION		
Voted Appropriation		
Electricity and Utility Regulation.....	3,206	3,287
Voted Appropriation Description: This sub-vote provides for development of legislation, policies, and programs to support all forms of electrical power generation, transmission, distribution, and marketing; regional electricity trading and electricity system reliability and coordination, including the Columbia River Treaty; alternative energy resource development; and the advancement of leading-edge energy technologies. This sub-vote supports the provision of policy and energy policy frameworks and planning advice or direction to electrical and gas utilities and the regulator, the British Columbia Utilities Commission; ministers' governance roles in respect of Crown corporations; private sector and Indigenous investment in new electricity and alternative energy resources; and strategic policy development for clean, renewable energy producers. Costs may be recovered from the proceeds of the sale of downstream power benefits under the Columbia River Treaty, and revenues arising from activities related to the Columbia Basin Trust and Columbia Power Corporation. Costs may also be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this sub-vote.		
ENERGY RESOURCES		
Voted Appropriation		
Energy Resources.....	18,821	18,941
Voted Appropriation Description: This sub-vote provides for the management and responsible development of the province's energy resources, including petroleum, natural gas, hydrogen, methanol, and ammonia; management of geothermal resources; issuing and administering Crown petroleum and natural gas subsurface tenures, and storage reservoir tenures, as well as the revenues associated with those tenures; working with Indigenous Nations and industry to heal the land, and reduce emissions; undertaking analysis to develop and implement policies and programs, including the province's royalty regime; identifying, stimulating, and facilitating development and market opportunities that add value to British Columbia's energy resources; developing provincial statutes and regulations that apply to the energy sector; representing the province's interests before energy regulatory tribunals; facilitating and leading the development and implementation of major energy projects and related infrastructure; developing and maintaining petroleum geology databases; assessing and collaborating cross-government on environmental monitoring and research, as well as on managing cumulative effects and land planning; providing for the restoration and remediation of oil and gas and related sites; and engaging and collaborating with Indigenous communities, stakeholders, local and federal governments, and the public. This sub-vote also provides for the receipt of funds to support Surface Rights Board orders relating to private land by oil and gas companies. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this sub-vote.		
EXECUTIVE AND SUPPORT SERVICES		
Voted Appropriations		
Minister's Office.....	998	833
Corporate Services.....	4,323	5,052
	5,321	5,885
Voted Appropriations Description: This sub-vote provides for the office of the Minister of Energy and Climate Solutions and executive support, including the deputy minister's office, and coordination of legislation. This sub-vote also provides for corporate services, correspondence, records management, and information and privacy. This sub-vote also provides for executive direction to the ministry; finance, administrative, and strategic human resources; information management services and systems; revenue collection; and trust fund management for ministry operations, programs, and clients. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this sub-vote.		
VOTE 23 — MINISTRY OPERATIONS	89,724	90,831

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

STATUTORY DESCRIPTIONS

(\$000)

Estimates
2024/25Estimates
2025/26

STATUTORY APPROPRIATIONS

These statutory appropriations provide for the programs, operations, and other activities of the following special accounts: First Nations Clean Energy Business Fund and Innovative Clean Energy Fund.

FIRST NATIONS CLEAN ENERGY BUSINESS FUND

Statutory Appropriation

First Nations Clean Energy Business Fund special account.....	8,375	10,359
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Statutory Appropriation Description: This statutory appropriation provides for the First Nations Clean Energy Business Fund special account which is governed under the *Clean Energy Act*.

INNOVATIVE CLEAN ENERGY FUND

Statutory Appropriation

Innovative Clean Energy Fund special account.....	11,768	10,905
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Statutory Appropriation Description: This statutory appropriation provides for the Innovative Clean Energy Fund special account which is governed under the *Special Accounts Appropriation and Control Act*.

MINISTRY GROUP ACCOUNT CLASSIFICATION SUMMARY

GROUP ACCOUNT CLASSIFICATION

Salaries and Benefits	41,024	40,527
Operating Costs	31,711	29,986
Government Transfers	49,166	48,787
Other Expenses	1,780	1,880
Internal Recoveries	(8,042)	(3,313)
External Recoveries	(5,772)	(5,772)
TOTAL OPERATING EXPENSES.....	109,867	112,095

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

SPECIAL ACCOUNTS¹

(\$000)

	Estimates 2024/25	Estimates 2025/26
FIRST NATIONS CLEAN ENERGY BUSINESS FUND SPECIAL ACCOUNT		
This account was created as a fund under the <i>Clean Energy Act</i> in 2010. It provides for increased First Nations participation in the clean energy sector through sharing of revenue government receives from clean power projects and supporting First Nation capacity and equity in clean energy projects. The account also provides for administration costs of the account. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this account.		
SPENDING AUTHORITY AVAILABLE AT THE BEGINNING OF THE FISCAL YEAR ²	16,770	16,266
OPERATING TRANSACTIONS		
Revenue.....	8,375	10,359
Expense.....	(8,378)	(10,362)
Internal and External Recoveries.....	3	3
Net Revenue (Expense).....	—	—
Difference Between 2024/25 Estimates and Projected Actual Net Revenue (Expense).....	(504)	
FINANCING TRANSACTIONS		
Receipts.....	—	—
Disbursements.....	—	—
Capital Expenditures.....	—	—
Net Cash Source (Requirement).....	—	—
PROJECTED SPENDING AUTHORITY AVAILABLE AT THE END OF THE FISCAL YEAR ²	16,266	16,266

NOTES

¹ A Special Account is an account in the General Fund where the authorization to spend money from the account is located in an Act other than the *Supply Act*.

² The Spending Authority Available at the Beginning of the Fiscal Year 2024/25 is based on the 2023/24 *Public Accounts*. The Projected Spending Authority Available at the End of the Fiscal Year represents the cash and temporary investments projected to be available at the end of each fiscal year.

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

SPECIAL ACCOUNTS¹

(\$000)

	Estimates 2024/25	Estimates 2025/26
INNOVATIVE CLEAN ENERGY FUND SPECIAL ACCOUNT		
This account was created by the <i>Finance Statutes (Innovative Clean Energy Fund) Amendment Act</i> in 2007 and is continued under the <i>Special Accounts Appropriation and Control Act</i> . The purpose of the account is to support government's energy and environmental priorities through programs, projects, and initiatives that promote the expanded use of clean energy resources and technologies, energy efficiency and conservation initiatives, and the accelerated commercialization of emerging clean energy technologies. Revenues credited to the account come from a levy applied to all final purchases of specified 'energy products' in British Columbia administered under the <i>Provincial Sales Tax Act</i> or any amount received for payment into the special account. Program expenses are recovered from the special account and are limited to those permitted within the scope of the <i>Special Accounts Appropriation and Control Act</i> , including administration of the account. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this account.		
SPENDING AUTHORITY AVAILABLE AT THE BEGINNING OF THE FISCAL YEAR ².....	10,498	7,730
OPERATING TRANSACTIONS		
Revenue.....	9,000	8,000
Expense.....	(11,771)	(10,908)
Internal and External Recoveries.....	3	3
Net Revenue (Expense).....	(2,768)	(2,905)
FINANCING TRANSACTIONS		
Receipts.....	—	—
Disbursements.....	—	—
Capital Expenditures.....	—	—
Net Cash Source (Requirement).....	—	—
PROJECTED SPENDING AUTHORITY AVAILABLE AT THE END OF THE FISCAL YEAR ².....	7,730	4,825

NOTES

¹ A Special Account is an account in the General Fund where the authorization to spend money from the account is located in an Act other than the *Supply Act*.

² The Spending Authority Available at the Beginning of the Fiscal Year 2024/25 is based on the 2023/24 *Public Accounts*. The Projected Spending Authority Available at the End of the Fiscal Year represents the cash and temporary investments projected to be available at the end of each fiscal year.

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

LOANS, INVESTMENTS AND OTHER REQUIREMENTS BY CORE BUSINESS
(\$000)

	Estimates 2024/25	Estimates 2025/26
CLIMATE ACTION		
GREENHOUSE GAS EMISSIONS OFFSET — Disbursements represent the purchase of greenhouse gas emissions offsets for extinguishment in accordance with government's carbon neutral initiative. Administration costs are funded through the ministry's voted appropriations.		
Disbursements.....	10,000	10,000
Receipts.....	—	—
Net Cash Requirement (Source).....	10,000	10,000

MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES BY CORE BUSINESS
(\$000)

	Estimates 2024/25	Estimates 2025/26
ENERGY RESOURCES		
BRITISH COLUMBIA ENERGY REGULATOR — Disbursements are provided by the Province to the British Columbia Energy Regulator with respect to energy resource industry fees, levies, and taxes assessed and collected on behalf of the British Columbia Energy Regulator under the <i>Energy Resource Activities Act</i> , and the Fee, Levy and Security Regulation. Administration costs are funded through the ministry's voted appropriations.		
Disbursements.....	53,600	54,510
Receipts.....	<u>(53,600)</u>	<u>(54,510)</u>
Net Cash Requirement (Source).....	<u>—</u>	<u>—</u>

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MINISTRY OF ENERGY AND CLIMATE SOLUTIONS

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VOTE 23 Ministry Operations

Description	Total 2024/25 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
Climate Action	19,064	8,569	—	2,176	—	10,745	—	138	—	2,435	553	7,095	—	—	9
CleanBC Program for Industry and BC-Output Based Pricing System	5,661	2,310	—	586	—	2,896	—	31	—	1,200	1,510	27	—	—	—
Energy Decarbonization	37,651	7,784	—	1,977	—	9,761	—	87	—	1,826	806	89	354	—	—
Electricity and Utility Regulation	3,206	3,693	—	937	—	4,630	—	437	1,500	554	118	141	75	—	—
Energy Resources	18,821	7,346	—	1,866	—	9,212	—	354	—	2,490	317	350	—	—	69
Executive and Support Services	5,321	2,052	17	547	60	2,676	—	144	359	56	350	201	—	—	22
Minister's Office	998	518	—	156	60	734	—	66	—	—	12	24	—	—	—
Corporate Services	4,323	1,534	17	391	—	1,942	—	78	359	56	338	177	—	—	22
Total	89,724	31,754	17	8,089	60	39,920	—	1,191	1,859	8,561	3,654	7,903	429	—	100

Statutory Appropriations

Description	Total 2024/25 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	8,375	159	—	41	—	200	—	—	—	—	—	—	—	—	—
Innovative Clean Energy Fund special account	11,768	325	—	82	—	407	—	5	—	16	—	5	—	—	—
Total	20,143	484	—	123	—	607	—	5	—	16	—	5	—	—	—

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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 2025/26 Operating Expenses
—	—	10	—	10,240	570	—	1,100	1,670	—	—	6	6	(1,305)	(2,000)	(3,305)	(1)	(82)	(83)	19,273
—	—	—	—	2,768	—	—	—	—	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	5,661
—	—	—	—	3,162	—	—	24,863	24,863	—	—	1	1	—	(1)	(1)	(1)	(1)	(2)	37,784
—	—	—	—	2,825	—	—	1,505	1,505	—	—	3	3	—	(1)	(1)	(1)	(5,674)	(5,675)	3,287
63	—	5,934	—	9,577	—	—	100	100	—	—	55	55	—	(1)	(1)	(1)	(1)	(2)	18,941
1	—	45	210	1,388	12	—	—	12	—	—	1,815	1,815	—	(2)	(2)	(2)	(2)	(4)	5,885
—	—	—	—	102	—	—	—	—	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	833
1	—	45	210	1,286	12	—	—	12	—	—	1,815	1,815	—	(1)	(1)	(1)	(1)	(2)	5,052
64	—	5,989	210	29,960	582	—	27,568	28,150	—	—	1,880	1,880	(1,305)	(2,006)	(3,311)	(7)	(5,761)	(5,768)	90,831

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 2025/26 Operating Expenses
—	—	—	—	—	6,835	—	3,327	10,162	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	10,359
—	—	—	—	26	—	—	10,475	10,475	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	10,905
—	—	—	—	26	6,835	—	13,802	20,637	—	—	—	—	—	(2)	(2)	(2)	(2)	(4)	21,264

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Ministry of Energy and Climate Solutions

2025/26 – 2027/28 Service Plan

March 2025



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www.gov.bc.ca/ECS

Published by the Ministry of Energy and Climate Solutions

Minister's Accountability Statement



The Ministry of Energy and Climate Solutions 2025/26 – 2027/28 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 'A. Dix', written over a light gray rectangular background.

Honourable Adrian Dix
Minister of Energy and Climate Solutions
March 4, 2025

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Strategic Direction

In 2025/26, the Government of British Columbia will continue to prioritize delivering the services and infrastructure needed for people to build good lives in strong communities.

To support this objective, Government will focus on growing the economy, responding to the threat of tariffs, creating good paying jobs, improving affordability, strengthening health care and education, and making communities safer.

Government will also continue deepening relationships with Indigenous Peoples while advancing implementation of the [Declaration on the Rights of Indigenous Peoples Act Action Plan](#).

This 2025/26 service plan outlines how the [Ministry of Energy and Climate Solutions](#) will support the government's priorities and selected action items identified in the [Minister's January 2025 Mandate Letter](#).

Purpose of the Ministry

The [Ministry of Energy and Climate Solutions](#) (Ministry) is responsible for British Columbia's (B.C.'s) energy resources, including electricity, alternative energy, hydrogen, oil, and natural gas sectors and related infrastructure. 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 produce natural gas. The Ministry's actions support access to low-carbon energy that is affordable, while ensuring British Columbians receive a fair return on B.C.'s natural resources by administering subsurface rights and collecting royalties.

The Ministry also mitigates and manages the risks and consequences from climate change, including developing plans to meet greenhouse gas emissions reduction targets and responding to the impacts of climate change.

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, oil and gas, and clean energy sectors which are globally competitive, demonstrates leading environmental practices, and advances 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 Province's climate goals, as well as commitments to Indigenous reconciliation including advancing the implementation of 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 peoples, 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](#), the [Columbia Basin Trust](#) and the [Columbia Power Corporation](#).

Operating Environment

The new [Ministry of Energy and Climate Solutions](#) has been established in a period of economic and political transition. The Ministry has welcomed the Climate Action Secretariat and assumed leadership of climate policy across government, while the two mining divisions have now moved to a new, stand-alone [Ministry of Mining and Critical Minerals](#).

The rapidly evolving geo-political context has significant implications for North American climate and energy policy direction. The combination of US subsidies on domestic energy production combined with the threat of widespread US tariffs on Canadian energy exports could have profound negative consequences on B.C.'s electricity, clean energy, oil and gas, and biofuel sectors.

In Canada, the leadership transition at the federal level is already underway, which could result in substantive changes to federal climate policies and programs in the coming months. If confirmed, these changes would materially impact B.C.'s climate change policies and programs going forward.

While dealing with these external challenges, the Ministry is also directed to participate in the internal review of all existing ministry programs initiatives, led by the Minister of Finance, to ensure programs remain relevant, are efficient, grow the economy and help keep costs low for British Columbians.

The Ministry will play a major role in working with industry, First Nations and communities to dramatically accelerate permit approvals for major job and revenue-creating projects, while maintaining world-leading environmental and labour standards.

The Province has also announced its intention to work with ministry partners, First Nations, local and federal governments, project proponents, and key stakeholders to accelerate permit approval for clean and low-carbon energy infrastructure across the province while preserving our world-leading environmental standards. To advance this priority, government will introduce legislation to enable the [BC Energy Regulator \(BCER\)](#) to act as a one-window regulator for permits necessary to support the North Coast Transmission Line (NCTL), other high-voltage electricity transmission projects, and renewable energy projects, such as wind and solar. Government is also proposing legislative and regulatory changes to remove environmental assessment requirements for current and future land-based wind energy projects and [NCTL](#).

Economic Statement

B.C.'s economy experienced moderate growth last year amid relatively high interest rates, persistent price pressures and ongoing global economic uncertainty. The labour market ended the year on a positive note, supported by high immigration and strong population growth. Inflation in B.C. continued to moderate as the price growth of goods eased, while inflation for services remained elevated. Consumer spending and home sales activity were weaker for most of 2024 in the wake of still elevated interest rates and high prices. Subdued global demand and lower prices for key commodities led to a decline in the value of the province's merchandise exports in 2024. Meanwhile, B.C. homebuilding activity remained relatively strong following record high housing starts in 2023.

The Economic Forecast Council (EFC) estimates that B.C. real GDP rose by 1.2 per cent in 2024. In the near-term, the EFC expects B.C.'s economy to grow by 1.8 per cent in 2025 and 1.9 per cent in 2026, in line with the national average. For Canada, the EFC estimates growth of 1.4 per cent in 2024 and projects national real GDP growth of 1.8 per cent in 2025 and 1.9 per cent in 2026. These projections do not fully include the impact of the evolving U.S. tariff situation.

Restrictive global trade policies, particularly potential U.S. tariffs, pose a risk to the outlook and there is uncertainty over the degree and timing of impacts on B.C.'s economy, and among the province's trading partners. Other risks include lower population growth due to changes to federal immigration policy, as well as the potential for renewed price pressures leading to interest rates remaining elevated for longer, weaker global demand, and commodity market volatility.

Performance Planning

Goal 1: An innovative, low carbon energy portfolio that advances climate goals and economic opportunities across all sectors.

The Ministry supports 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, as set out in [Powering Our Future: BC's Clean Energy Strategy](#), released in June 2024.

Objective 1.1: Accelerate efforts to electrify B.C.'s economy to support provincial climate goals.

Electrification of the B.C. economy supports provincial greenhouse gas (GHG) reduction targets set out in the [Climate Change Accountability Act](#).

Key Strategies

- Continue implementing legislation, policies, programs, and operations to meet provincial energy, economic and climate goals.
- Continue implementing the [B.C. Output-Based Pricing System](#) which aligns with federal carbon pricing rules and promotes a competitive business environment.
- Develop policy and measures to require new large industrial facilities to have credible plans to be [net-zero GHG emissions](#) by 2050 (or 2030 for new, large liquefied natural gas facilities that are already in or are entering into the environmental assessment process), and address government's 2030 and 2040 legislated targets.
- Work with [BC Hydro](#), First Nations, and the renewable power industry through frequent competitive calls for power to increase and diversify B.C.'s generation of electricity as the economy continues to grow.
- 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.
- Ensure BC Hydro is responsive to changing market conditions and demands for large load capacity from potential local and international investors to grow our economy and reduce our emissions while protecting residential ratepayers.
- Work with the [BC Utilities Commission](#) to advance B.C.'s clean energy transition to support the Province's climate goals and affordability objectives.

- Continue the development and implementation of the Remote Community Energy Strategy in collaboration with First Nations, BC Hydro and the federal government to reduce the use of diesel fuel for electricity generation and advance energy resilience.

Discussion

The strategies under Objective 1.1 focus on electrification, industrial decarbonisation, and energy efficiency, all of which support the transition to a low carbon energy system. The Ministry will work with First Nations and communities, to provide partnership opportunities in the green economy.

The Ministry will continue to work with the federal government, First Nations 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 policies and programs that support British Columbians to save energy and decarbonize their energy usage, by choosing greener homes, buildings and transportation.

The Ministry supports households and business to manage energy costs and switch to low carbon transportation and heating fuels in support of the province's climate goals.

Key Strategies

- Increase affordability and accessibility of clean transportation options through public awareness, skills training, research and commercialization, home and workplace charging, public charging and hydrogen fuelling infrastructure and fleets.
- Work with utility, private and public partners to install 10,000 public zero-emission vehicle chargers by 2030.
- Ensure costs for energy remain low for people through supports for home energy retrofits, including heat pumps, and innovative technology solutions.
- Continue to implement policies and initiatives to advance energy efficiency and conservation in the built environment, including equipment standards and the Home Energy Planner tool to provide energy performance and retrofit guidance to homeowners, home buyers and renters.
- Continue to reduce the carbon intensity of transportation fuels through the Low Carbon fuel Standard, while supporting B.C. based biofuel producers.

Performance Measures

Performance Measure	24/25 Forecast	25/26 Target	26/27 Target	27/28 Target
[1a] Clean, renewable and low carbon energy as a share of total utility and transportation energy sales ¹	34%	35%	36%	37%

Data source: Compiled by the Ministry of Energy and Climate Change Strategy and includes data from BC Hydro and FortisBC.

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

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.

Performance Measures

Performance Measure	2024 Forecast ¹	2025 Target	2026 Target	2027 Target
[1b] Zero-Emission Vehicle sales per cent of new light-duty vehicle sales.	23%	23%	26%	40%

Data Source: Compiled by Ministry of Energy and Climate Solutions 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

Performance measure 1b measures progress towards Government's target of increasing the number of light duty ZEVs in B.C

Goal 2: 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 2.1: 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 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 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 the federal government to cap emissions from the oil and gas sector while attracting investment from producers that use best-in-class emissions reduction technology, create jobs for local workers, and build meaningful partnerships with First Nations.

Discussion

This objective and its 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 Province is committed 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 75 percent reduction in methane emission from 2014 levels by 2030 and near elimination of methane emissions by 2035. Through its work with BCER, ECS 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. This work will continue in partnership with the United Nations Environment Programme and Carleton University.

Ensuring an enabling environment for carbon capture and storage helps advance a provincial approach to carbon capture, utilization and storage and negative emissions technologies. This work will be further 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 to develop a regulatory emissions cap on oil and gas sector emissions to help meet sectoral emission reduction targets.

Objective 2.2: 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

- Help grow the profitability and success of our clean and low-carbon energy sectors by ensuring engagement and collaboration between business stakeholders and government policy makers, with particular focus on:
 - advocating against proposed tariffs from the United States and ensuring continued expansion of our energy export programs for the mutual success of British Columbians and our trading partners;
 - expanding global markets for our products to diversify and reduce trade risk; and,
 - preparing contingency plans for direct and indirect support of energy exporters, including BC Hydro, in the event the tariffs are imposed.
- Work with relevant ministries, First Nations, other governments, project proponents, and key stakeholders to dramatically accelerate permit approval for clean and low-carbon energy infrastructure across the province while preserving our world-leading environmental standards.
- 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 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 and BC Hydro, to ensure oil and gas development and related infrastructure supports 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.

Performance Measures

Performance Measure	24/25 Forecast	25/26 Target	26/27 Target	27/28 Target
[3a] Annual GHG reductions from infrastructure improvements under royalty programs	407,000 tonnes	500,000 tonnes	620,000 tonnes	700,000 tonnes

Data source: Ministry of Energy and Climate Solutions

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.

Goal 3: A sustainable, clean economy

The ministry works to reduce greenhouse gas pollution, support clean and diverse economic development, and assist British Columbians to prepare for a changing climate.

Objective 3.1: Provide a pathway for B.C. to prosper economically while significantly reducing our greenhouse gas pollution.

Timely implementation of provincial climate policies and programs are expected to achieve significant progress towards our greenhouse gas (GHG) emissions reduction targets while supporting affordability and business competitiveness.

The Ministry will continue to monitor progress on its climate and clean energy policies and programs.

Key Strategies

- Identify innovative ways to help us meet our carbon emission goals in a manner that reduces cost burdens for B.C. families and businesses, grows our economy, and positions us for trade diversification and expansion in light of growing global economic and political instability and supply chain cost inflation.
- Continue making progress towards the GHG emissions reduction targets legislated under the Climate Change Accountability Act by:
 - working with the Climate Solutions Council to obtain strategic advice on climate action and clean economic growth establishing a new net-zero GHG emissions target for 2050; and
 - publishing annual accountability reports as required under the [Climate Change Accountability Act](#).
- Continue implementing the [B.C. Output-Based Pricing System](#) to replace the [Industrial Incentive Program](#), which encourages emissions reductions and promotes a competitive business environment.
- Develop policy and measures to require new large industrial facilities to have credible plans to be [net-zero GHG emissions](#) by 2050 (or 2030 for new, large liquefied natural gas facilities that are in or are entering into the environmental assessment process), and address government's 2030 and 2040 legislated targets.
- Establish policies that will reduce methane emissions from the oil and gas sector by 75% by 2030 (as compared to 2014 levels) and achieve near elimination of industrial methane by 2035.
- Work with the federal government to cap emissions from the oil and gas sector while attracting investment from producers that use best-in-class emissions reduction technology, create jobs for local workers, and build partnerships with First Nations; and

- Continue collaboration with proponents and First Nations to further development of new projects under the [Forest Carbon Offset Protocol](#) and finalize the [Carbon Capture and Sequestration Protocol](#) to accelerate climate action policy in B.C.

Objective 3.2: Effective management of the risks and consequences associated with a changing climate.

Climate change is already causing significant impacts to British Columbia's environment, communities, and economy. Adapting to a changing climate and managing climate risks effectively is key to maintaining a robust economy, healthy ecosystems, and safe communities.

Key Strategies

- Coordinate implementation of provincial climate adaptation strategies that support a thriving and healthy province that is resilient to a changing climate.
- In partnership with [Ministry of Emergency Management and Climate Readiness](#), complete a provincial disaster and climate risk and resilience assessment that is co-developed with Indigenous Peoples, applies an equity lens, and builds on local and regional input.
- In partnership with Ministry of Emergency Management and Climate Readiness, assess climate resilience priorities and options in light of evidence emerging from risk assessments and other sources.
- Build community and government adaptation capacity and resilience, including partnerships with First Nations.
- Further develop a climate risk reporting program that meets the requirements of the [Climate Change Accountability Act](#).

Performance Measures

Performance Measure	24/25 Forecast	25/26 Target	26/27 Target	27/28 Target
3.2 Develop provincial and regional risk assessments	1. In partnership with Ministry of Emergency Management and Climate Resilience (EMCR), continue development of the provincial scale DCRRA and 2, Initiate regional scale DCRRA in partnership with EMCR and in collaboration with First Nations Partners	1. Complete and publish the provincial scale DCRRA in partnership with EMCR 2. Continue Development of regional scale DCRRA in partnership with EMCR	1. Continue development of regional scale DCRRA	1. Continue development of regional scale DCRRA

Data source: Ministry of Emergency Management and Climate Readiness and Ministry of Environment and Climate Change Strategy, manually compiled.

¹ Targets for 2026/27 will be determined in future service plans and is dependent on continued funding beyond 2025/26.

Performance Measure 3.2 tracks progress toward completing provincial and regional Disaster and Climate Risk and Resilience Assessments (DCRRA). The Ministry of Energy and Climate Solutions will support the [Ministry of Emergency Management and Climate Readiness](#) in this work.

The [Climate Change Accountability Act](#) requires the Province to assess and report on climate risk every five years. A preliminary climate risk assessment was released in 2019. The first legislated climate risk assessment is required by 2025. The Provincial Disaster and Climate Risk and Resilience Assessment (DCRRA) will include an assessment of climate risk and will fulfill this initial requirement. Subsequent regional disaster and climate risk assessments will add further detail and region-specific climate risk assessment to the information provided through the Provincial DCRRA.

Financial Summary

(\$000s)	2024/25 Restated Estimates ¹	2025/26 Estimates	2026/27 Plan	2027/28 Plan
Operating Expenses				
Climate Action	19,064	19,273	19,273	19,273
CleanBC Program for Industry and BC- Output Based Pricing System	5,661	5,661	5,661	5,661
Energy Decarbonization	37,651	37,784	37,784	37,784
Electricity and Utility Regulation	3,206	3,287	3,287	3,287
Energy Resources	18,821	18,941	18,941	18,941
Executive and Support Services	5,321	5,885	5,885	5,885
First Nations Clean Energy Fund	8,375	10,359	9,714	9,919
Innovative Clean Energy Fund	11,768	10,905	8,735	8,735
Total	109,867	112,095	109,280	109,485
Capital Expenditures				
Executive and Support Services	1	3	3	3
Total	1	3	3	3
Other Financing Transactions				
Climate Action Greenhouse Gas Emissions Offsets				
Disbursements	10,000	10,000	10,000	10,000
Receipts	(0,000)	(0,000)	(0,000)	(0,000)
Net Cash Requirements (Source)	10,000	10,000	10,000	10,000
British Columbia Energy Regulator				
Disbursements	53,600	54,510	55,580	58,100
Receipts	(53,600)	(54,510)	(55,580)	(58,100)
Net Cash Requirements (Source)	0,000	0,000	0,000	0,000
Total Disbursements	63,600	64,510	65,580	68,100
Total Receipts	(53,600)	(54,510)	(55,580)	(58,100)
Total Net Cash Requirements (Source)	10,000	10,000	10,000	10,000

¹ For comparative purposes, amounts shown for 2024/25 have been restated to be consistent with the presentation of the 2025/26 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 20, 2025, the Minister of Energy and Climate Solutions 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, natural gas, hydrogen, methanol, ammonia, carbon dioxide storage 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.

Columbia Basin Trust

The Trust is mandated under the *Columbia Basin Trust Act* to manage its assets for the ongoing economic, environmental and social benefit of the region. It is also mandated under the Columbia Basin Management Plan to include the people of the Basin in planning for the management of the assets and to work with others to coordinate activities related to the purpose of the Trust.

Columbia Power Corporation

Columbia Power Corporation (Columbia Power) is a Crown corporation wholly owned and controlled by the Province of British Columbia, existing under the *Business Corporations Act* and reporting to the Minister of Energy and Climate Solutions.

Columbia Power is located in Castlegar, near the mountains and valleys that characterize the Columbia Basin. The company owns and operates hydro power projects in the Basin.

Appendix B: Minister Mandate Letter



January 16, 2025

Honourable Adrian Dix
Minister of Energy and Climate Solutions and
Minister responsible for Francophone Affairs
Parliament Buildings
Victoria, BC V8V 1X4

Dear Minister Dix:

Congratulations on your appointment as Minister of Energy and Climate Solutions and Minister responsible for Francophone Affairs at a critical time for our province. Serving as a member of the executive council is a privilege and responsibility which I am confident you will fulfill with integrity and a commitment to the people of our province.

British Columbians have trusted us with a mandate to deliver for them in ways that make a tangible difference in their daily lives. They expect us to listen and learn from people of different perspectives – and work together to make things better for everyone.

Specifically, we will tackle the challenges people worry about at the kitchen table:

- **Grow the economy by creating good jobs across British Columbia.** We will collaborate with businesses, workers, and communities to attract investments in both new and traditional sectors as well as emerging sectors of the economy. This approach will bring certainty for business, security for workers, and generate the wealth needed to support the essential services British Columbians rely on.
- **Reduce costs for families** including by helping people access homes they can afford through support for first-time homebuyers, increasing the supply of rental housing stock, and stronger measures to crack down on housing speculation.

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**Office of the
Premier**

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- **Strengthen health care** by expanding access to family doctors and recruiting and training more health professionals, ensuring that every British Columbian can access the care they need, no matter where they live. We will also increase access to addictions treatment and provide help for people whose struggles require intensive supports.
- **Make our neighbourhoods and communities safer** by working with law enforcement and social agencies to address street disorder, crack down on organized crime, and do all we can to ensure repeat offenders stay behind bars.

Our commitment to take action on climate change remains foundational and will be key to a healthy and prosperous BC for future generations.

Underlying all this work is our partnership with Indigenous peoples. Advancing reconciliation, implementing the *Declaration on the Rights of Indigenous Peoples Act* and working in partnership with First Nations rights-holders to advance shared interests is the responsibility of every Minister.

Over this mandate I expect you to prioritize making progress on the following:

- In order to protect key services that British Columbians rely on, work with the Minister of Finance to review all existing Ministry of Energy and Climate Solutions programs and initiatives to ensure programs remain relevant, are efficient, grow the economy, and help keep costs low for British Columbians. This is important in the context of current Provincial budget constraints, our climate targets, and the threat of American tariffs.
- Develop ways to ensure costs for energy remain low for people, including through access to home energy retrofits and innovative technology solutions.
- Work with BC Hydro, First Nations, and the renewable power industry through frequent competitive calls for power to increase and diversify BC's generation of electricity as the economy continues to grow.
- Help grow the profitability and success of our clean and low-carbon energy sectors by ensuring engagement and collaboration between business stakeholders and government policy makers, with particular focus on:
 - advocating against proposed tariffs from the United States and ensuring continued expansion of our energy export programs for the mutual success of British Columbians and our trading partners;
 - expanding global markets for our products to diversify and reduce trade risk; and,
 - preparing contingency plans for direct and indirect support of energy exporters, including BC Hydro, in the event the tariffs are imposed.

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- Work with relevant ministries, First Nations, other governments, project proponents, and key stakeholders to dramatically accelerate permit approval for clean and low-carbon energy infrastructure across the province while preserving our world-leading environmental standards.
- Work with the federal government to cap emissions from the oil and gas sector while attracting investment from producers that use best-in-class emissions reduction technology, create jobs for local workers, and build partnerships with First Nations.
- Ensure BC Hydro is responsive to changing market conditions and demands for large load capacity from potential local and international investors to grow our economy and reduce our emissions while protecting residential ratepayers.
- Identify innovative ways to help us meet our carbon emission goals in a manner that reduces cost burdens for BC families and businesses, grows our economy, and positions us for trade diversification and expansion in light of growing global economic and political instability and supply chain cost inflation.

As you are aware, we have established an accord with the BC Green Caucus that supports our shared commitment to ensuring stable governance focused on delivering progress and tangible outcomes for British Columbians. The commitments in that accord complement the direction in these mandate letters.

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 work we have ahead takes place in a profoundly challenging geopolitical environment. Close friends and neighbours to our south are contemplating imposing draconian tariffs on our products that would hurt both Americans and Canadians. Our allies internationally face governmental instability. Hate and racism are on the rise around the world. Artificial intelligence breakthroughs with unclear implications and astonishing potential are announced daily. Global inflation, snarled supply chains, and war are threatening global economic growth and prosperity as well as the transition to a low-carbon economy.

We have an obligation to protect and defend British Columbians, as well as seize opportunities, in these uncertain times.

The good news is that we have everything we need to succeed, and we will succeed. British Columbia's people – our workers, entrepreneurs, business leaders, artists, and innovators – are among the most talented in the world. We are home to world-class educational institutions and public services. Our natural beauty is unmatched, we have internationally envied resources, and we are one of the most diverse places on the planet. Your job is to help us leverage these advantages in perilous times.

Use this mandate letter to guide your work, and do not be afraid to challenge assumptions, or be innovative, bold and aggressive in achieving the goals set out for you and your Ministry by the people of this province.

Thank you for joining me in the work ahead.

Sincerely,



David Eby, KC
Premier