Ministry of Energy, Mines and Petroleum Resources

February 2020

2020/21 Estimates

Confidential

EMPR 2020 Estimates Table of Contents

Electricity and Alternative Energy Division

Clean Transportation

CleanBC Go Electric Program and Zero Emission Vehicles 1
Zero Emission Vehicle Act 2
Renewable and Low Carbon Fuel Requirements Regulations 3
Increasing Renewable Fuel Production in BC 4
Vehicle Charging and Hydrogen Fueling Funding 5

Energy Efficiency

Clean Buildings Strategy 6
Clean BC – Better Homes and Better Buildings Program 7

BC Hydro

BC Hydro Review – Phase 1 (including RSRA Write Down and Revenue Requirements application, Enhancing BCUC Oversight and Energy Cost Reduction Initiatives) 8
BC Hydro Review Phase 2 9
Site C Update 10
Energy Purchase Agreements and Renewals 11
Auditor General Report on Rate Regulated Accounting 12
Upstream Electrification and BC-Canada MOU 13
Geothermal Energy 14

BC Utilities Commission

First Nations Utility Inquiry 15
Municipal Utility Inquiry 16
Tiered Residential Rates and Income Impacts 17

Communities

Remote Community Energy Strategy..... 18
BC Indigenous Clean Energy Initiative..... 19

s.12; s.13

Climate Leadership

CleanBC..... 22
Clean Portfolio Standard for Gas Distribution Utilities..... 23
BC Hydro Forced Majeure Implications for Indigenous Nations 24

Mines, Competitiveness and Authorizations Division

Mining Regulatory Excellence..... 1
Permitting Regional Mines - Mines Standardization and Service Improvement Project..... 2

Exploration

Exploration highlights in BC 3
British Columbia Geological Survey..... 4
Geoscience BC 5
Mining Exploration Tax Incentive Programs..... 6
Golden Triangle..... 7
Thor Project: Taranis Resources 8

Mine Development Projects

Table: Mine Development Projects in B.C. 9

- CertainTeed Gypsum – Kootenay West
- Sukunka Project
- Premier
- Red Mountain

- Wolverine Hermann Expansion
- Tenas Coal
- Teck Coal – Water Treatment Project/Elk Valley Water Quality Plan – Implementation Adjustment
- Murray River
- Blackwater
- Kerr- Suphurets- Mitchell (KSM)
- Giscome Quarry and Lime Project
- Kutcho
- Crown Mountain
- Michel Coal
- Caribou Gold
- Elk Gold Restart

Blackwater Gold Project 10

New Prosperity Stand Down Agreement 11

Giant Copper Proposed Mineral Exploration 12

OK Industries Proposed Quarry – Millstream Road 13

Operating Mines

Operating Coal Mines in B.C. 14

Operating Metal Mines in B.C. 15

Map – Operating Mines & Selected Major Exploration Projects in BC 16

Mineral Tax Revenue Forecast / Revenue Sharing with First Nations 17

Financial Securities for Mines 18

South Island Aggregates 19

Deasan Gravel Pit 20

Major Amendments

Table: Major Amendments 21

- Mt. Milligan
- Myra Falls
- Silvertip

- Bonanza Ledge
- Highland Valley Copper
- New Afton
- Teck Turnbull West
- Teck Castle Mountain
- Kemess Underground
- Brule

Closed Care and Maintenance Mines

Tulsequah Chief Mine 22

Policy

Fraser Institute Annual Survey of Mining Companies 23
BC's Transboundary Relations with Alaska, Montana and Washington . 24
Mining Jobs Task Force 25
Jade Policy 26
- Placer
COVID-19 Impacts on Mining in British Columbia……27
COVID-19 Guidance, Inspections and Industry Support……28
Willow Creek Mine Curtailment of Operations……29

Mines Health, Safety and Enforcement Division

Mining Oversight 1
Code Review 2
Health and Safety of BC Mines 3
Orphaned and Abandoned Mines 4
Mine Audits and Effectiveness Unit 5
Mines Investigations 6
Quinsam Coal Receivership 7

Oil and Gas Division

Tenuring and Geoscience

Petroleum and Natural Gas Tenuring and Disposition 1
Petroleum and Natural Gas Tenure Revenue 2
First Nations Engagement and Consultation 3
Caribou Recovery Planning 4
Treaty Land Entitlement 5
Regional Strategic Environmental Assessment (RSEA) 6
Farmers' Information Service 7
Agricultural Land Reserve and Agricultural Land Commission 8

Economics and Market Development

Royalty Programs 9
Deep-Well Royalty Credit 10
Royalty Revenues - Confidentiality of Royalty Information (Joint with Finance) 11
Gasoline Prices 12
Global Oil Prices 13
Government's Four Conditions for LNG 14
Government Action on LNG Competitiveness 15
Opportunities for LNG Development to Support Climate Change Objectives 16
Upstream Investment and Competitiveness 17
Questions on Subsidies 18
COVID-19 19

Regulatory and Infrastructure

Methane Regulations and Federal Equivalency Agreement 20
Canada Energy Regulator 21
Scientific Review of Hydraulic Fracturing and Response Action Plan 22

Clean Growth Infrastructure Royalty Program (CGIRP) 23
Federally Funded Programs for Dormant and Orphan Well Clean-up 24
Sierra Yoyo Desan Road 25

Oil Infrastructure Group

Trans Mountain Expansion Project Overview and Permitting 26
Trans Mountain Expansion Project - Construction, Work Camps and COVID-19 27
Trans Mountain Expansion Project Indigenous Consultation..... 28

LNG Canada Implementation Secretariat

LNG Canada Project Profile..... 1
LNG Canada Operating Performance Payment Agreement 2
Coastal GasLink Project Profile 3
Coastal GasLink and the Morice River area 4
LNG Canada and Coastal GasLink Workforce 5
LNGC/CGL Local Support and Social and Economic Effects 6
Indigenous Nations Agreements 7
LNGC/CGL Workforce Accommodations and Related Issues 8
LNGC/CGL COVID Response.....9

Woodfibre Implementation Group

Status Update on Woodfibre LNG Project 1

Strategic & Indigenous Affairs Division

UNDRIP Implementation..... 1
SIAD Overview..... 2
ESI/CSF General Overview 3
Site C Continuation Measures (PRLF)..... 4

Questions Deferred from other Ministries

2020 Deferred Estimates Questions .....*

CSNR Financials and Service Plan

Budget and Ministry Key Documents (Prepared by CSNR)

Budget Highlights..... 1

PowerPoint Summary

Service Plan & Estimates Blue Book 2

Ministry Top Issues 3

Budget Questions & Answers 4

i. FTE staffing details

Statistical Analysis - Operating Budget Summaries 5

ii. Operating Budget by Core Business
iii. Operating Budget by Group Accounting Classification
iv. Operating Budget by Group Accounting Classification and Vote
v. Operating Budget Changes by STOB

Capital..... 6

Revenue..... 7

Minister Mandate Letter 8

Other 9

i. Ministry of Finance – Clean BC
ii. Information, Innovation & Technology Division moving from FLNRO to EAO
iii. Contracts and Transfers
   a. Direct Awards
   b. Statistics
   c. Schedule A (Top 4 Direct Awards)

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: CleanBC Go Electric Program and Zero Emission Vehicles

Revised: June 16, 2020

Issue: The Province's rebates and investments to support increased uptake of zero-emission vehicles (ZEV), and economic development in the ZEV sector in British Columbia.

Response:

- British Columbia (BC) is a leader in clean transportation, with the highest electric vehicle adoption rate in North America in 2019 (8.6% of new light-duty vehicle sales), one of the largest public charging networks in Canada, and a world-leading hydrogen and fuel cell industry.
- The CleanBC Go Electric Program (formerly the Clean Energy Vehicle Program) has been highly successful in: reducing market barriers; encouraging the adoption of ZEVs by British Columbians; leveraging private, municipal and federal investment in ZEVs and infrastructure in BC; and supporting new economic opportunities in the ZEV sector.
- The CleanBC Go Electric Program provides rebates for zero-emission light-duty vehicles, trucks, buses, ferries, and airport and port ground equipment, and makes investments in infrastructure, training, public outreach, and economic development.
- Budget 2020 includes over $32 million for the CleanBC Go Electric Program, including $20 million for vehicle rebates, $5 million for home and workplace charger rebates, $2 million for investments in public charging, and $5 million for rebates and infrastructure to switch bigger trucks, ferries, and other medium-and-heavy-duty vehicles to zero-emission technology.
- In May 2019, the Province passed the *Zero-Emission Vehicles Act* (ZEV Act) which requires automakers to meet ZEV sales targets reaching 10% of new light duty vehicle sales by 2025, 30% by 2030, and 100% by 2040. The purpose of the ZEV Act is to ensure increased ZEV availability and choice at more affordable prices in BC.
- In December 2015, BC joined 13 jurisdictions from around the world and signed the International ZEV Alliance. Members of the Alliance will work to increase the adoption of ZEVs and strive to make all new passenger vehicles purchased within each jurisdiction ZEVs by 2050.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- In 2011, BC introduced zero-emission vehicle programming, now called the CleanBC Go Electric Program (the Program), and has since committed more than $227 million to make ZEVs more affordable and reduce greenhouse gas emissions.
- To date the Program has led to:
    - over 42,000 new light-duty vehicle ZEVs on the road;
    - over 425 ZEVs in commercial applications, such as forklifts, buses, fleet motorcycles, and port and airport ground equipment;
    - over 2,000 public Level 2 charging stations, and approximately 190 public fast charging sites;
    - three new public hydrogen fueling stations, with three more planned to be operational by 2021, the majority of which are in partnership with existing gas stations;
    - 10 research, electrician training and new academic curriculum projects;
    - an economic development program for BC's ZEV sector; and
    - a multi-faceted outreach and awareness program called Emotive.
- There are multiple Program streams:
    - The point-of-sale vehicle rebate which provides up to $3,000 off the after-tax sale price on vehicles priced below $55,000, for electric, hydrogen fuel cell, and plug-in hybrids. The rebate may be combined with federal and Scrap-It rebates, allowing a total rebate of up to $14,000 per ZEV;
    - Home and workplace charger rebates, which provide up to $350 for charging stations in single family homes, and up to $2,000 for charging stations and free EV advisor services in apartments, condos and workplaces;
    - Public infrastructure funding, which provides up to 50% funding for public fast charging stations in communities and along highways, and up to 33% funding for public hydrogen fueling stations;
    - Commercial vehicle program, which provides up to 33% funding for vehicles, infrastructure, and data analysis to support the deployment of zero-emission technologies for motorcycles, medium/heavy-duty trucks, airport and port ground equipment, buses, and marine vessels. This includes funding to support a pilot program with the Vancouver Fraser Port Authority that will pilot zero-emission drayage trucks.

  - Fleets program, including school bus fleets, which provides funding for ZEV and infrastructure assessments and installations of charging stations;
  - Emotive, the ZEV public outreach program that offers ZEV test drives and connects interested customers with existing ZEV owners, developed and delivered around the province under partnerships with local governments and community organizations;
  - Funding to upgrade electrician and automotive technician training to incorporate charging infrastructure and ZEVs; and
  - The Advanced Research and Commercialization program which supports projects that create jobs and lead to economic growth in the ZEV industry sector in BC.

- The Program has supported the growth of the ZEV sector in BC, which in 2015 had 198 companies employing over 3,850 FTEs, producing $702 million in total economic output and contributing $373 million to the provincial GDP.
- In March 2016, BC began offering high-occupancy vehicle lane exemption decals for all clean energy vehicles. To date over 11,000 decals have been granted.
- The Federal government offers a point-of-sale ZEV purchase incentive of up to $5,000, which can be combined with the CleanBC Go Electric rebate.
- A "Part 3 Agreement" under the Renewable and Low Carbon Fuel Requirements Regulation was signed to allow a fuel supplier to receive compliance credits in exchange for investing in a new Scrap-It incentive. Scrap-It provides $3,000 to customers who scrap an old vehicle and purchase a used electric vehicle, and $6,000 for customers who purchase a new electric vehicle.
- In October 2013, the Province signed a Pacific Coast Action Plan on Climate and Energy under the Pacific Coast Collaborative. Under that Plan, the West Coast Electric Fleets Pledge encourages private and public fleets to adopt zero emission vehicle targets.
- To date, 68 fleets in BC have signed the West Coast Electric Fleets Pledge, including the provincial fleet, City of Vancouver, City of Surrey and BC Transit. The provincial fleet is at the "Express" level of the Pledge, committing to make 10 per cent of its light-duty vehicle purchases ZEVs.
- s.13; s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Cross Reference:

Zero Emission Vehicle Act

Vehicle Charging and Hydrogen Fuelling Funding

Renewable and Low Carbon Fuel Requirements Regulation

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Zero-Emission Vehicles Act

Revised: June 16, 2020

Issue: **The *Zero-Emission Vehicles Act* requires automakers to increase their supply of zero emission vehicles (ZEV)s to British Columbia to meet the CleanBC targets of 10% ZEV sales by 2025, 30% by 2030 and 100% by 2040.**

Response:

- British Columbia (BC)'s recently introduced *Zero-Emission Vehicles (ZEV) Act* (ZEV Act) delivers on the Province's CleanBC plan commitment to make ZEVs more affordable and accessible to British Columbians.
- The ZEV Act requires automakers to meet an escalating annual percentage of new light-duty ZEV sales, reaching 10% by 2025, 30% by 2030, and 100% by 2040; and will ensure greater supply and availability of ZEVs.
- The ZEV Act provides flexible pathways (through sales, trading of units, initiative agreements for sales of used and medium/heavy duty ZEVs, or purchase agreements), for suppliers to meet compliance while ensuring that the Province meets its ZEV and GHG targets.
- To aid in tracking and enforcement, the ZEV Act includes provisions for annual reporting and verification, penalties, appeals, the handling of confidential information, and information-sharing.
- BC joins Quebec and 10 other US states in having a ZEV standard, as well as 16 countries worldwide who have either announced a future ban on the sale of new gasoline and diesel cars or targeted 100% of vehicle sales to be ZEVs.
- The ZEV Act is part of a coordinated, and expanding, program of activities under the Province's highly successful CleanBC Go Electric Program that aims to: reduce market barriers; encourage the adoption of clean energy vehicles (CEV) by British Columbians; leverage private, municipal and federal investment in CEVs and infrastructure in BC; and support new economic opportunities in the CEV sector.
- The 2019 Budget included $3.471 million over three years (2019-2022) to support the development and implementation of the ZEV standard through five new FTEs, and funding for both studies and an online reporting tool. Budget 2020 continues that funding commitment.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- The Province passed the ZEV Act on May 30, 2019. While the ZEV Act provides the overarching framework for the ZEV requirements in the province, some of the more technical components are to be prescribed by regulation. The Ministry is currently developing the ZEV Act Regulations which are anticipated to be in force in spring of 2020.
- As part of the development of the ZEV Act Regulations, the Ministry has been engaging with technical stakeholders, including industry, local governments and environmental non-governmental organizations (ENGOs) since October 2019.
- In response to the consultations on the ZEV Regulations, the Ministry received 40 individual technical submissions from industry, environmental organizations and local governments, and approximately 150 emails from elected local government officials and members of the public as part of a coordinated campaign.
- The ZEV Regulations currently focus on the light-duty vehicle sector, cars and light-trucks, but the ZEV Act also allows Government to set targets for other vehicle classes, such as buses and heavy-duty trucks.
- BC had the highest ZEV sales rates in North America in 2019, with ZEVs making up 8.6% of all light-duty vehicle sales. As a result of this, local governments are asking the Province to increase the ZEV Act targets. In contrast, automakers, except Tesla, are asking the Province to delay implementation of the ZEV Act.
- The ZEV Act provides the supply-side action needed to ensure that affordable ZEV vehicles are available for purchase.
- The ZEV Act is based on legislation already in place in Quebec, California, and nine U.S. states, with adjustments for BC. BC's ZEV Act is currently the only one in the world to include a 100% ZEV target. It is anticipated that Quebec will follow suit in 2020.
- s.13

- Under the Pan-Canadian Framework on Clean Growth and Climate Change, BC has been working with the other provincial and territorial governments and the federal government, industry and other stakeholders to inform a Canada-wide Zero-Emission Vehicle (ZEV) Strategy.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The 2019 federal budget confirmed $5 million over five years for Transport Canada to work with auto manufacturers to secure voluntary ZEV sales targets to ensure that vehicle supply meets increased demand.

Cross Reference:
Clean Energy Vehicle Program / Zero Emission Vehicles
Vehicle Charging and Hydrogen Fueling Funding

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: ***Greenhouse Gas Reduction (Renewable & Low Carbon Fuel Requirements) Act*** **and the Renewable & Low Carbon Fuel Requirements Regulation, known collectively as British Columbia's Low Carbon Fuel Standard (BC-LCFS).**

Revised: **June 16, 2020**

Issue: **CleanBC commits to extend the BC-LCFS beyond 2020 to require a 20% reduction in fuel carbon intensity, below 2010 levels, by 2030**

Response:

- British Columbia (BC) has demonstrated climate-action leadership with the implementation of leading-edge legislation, policies and programs to ensure BC thrives in the low-carbon economy of the future.
- Regulations will soon prescribe the new carbon intensity reduction schedule that will implement the CleanBC commitment.
- The targets are intended to be challenging, but the fuel suppliers' ability to comply is made even more difficult by the current decline in crude oil price, the demand destruction caused by COVID-19, potential supply disruptions in renewable fuel logistics, and shortages in low-carbon feedstocks which will likely lead to shortages in the low carbon fuel that suppliers need for compliance.
- The compliance schedule will provide some immediate regulatory easing of the targets while setting a schedule to reach a 20% reduction in carbon intensity in 2030.
- The British Columbia Utilities Commission inquiry into fuel pricing identified the cost of the LCFS at 4 cents/litre in 2018. s.12; s.13
  s.12; s.13
- The Ministry of Energy, Mines and Petroleum Resource (EMPR) has been reviewing actions to improve the LCFS Act and will continue to do so, however, due to the impacts of the COVID-19 pandemic, legislative action has been deferred.

Background/Status:

- The BC-LCFS was introduced in 2008 to reduce BC's reliance on non-renewable fuels, reduce the environmental impact of transportation fuels and spur growth in the clean fuels industry in BC.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The BC-LCFS is a market transformation mechanism which creates a financial incentive to reward low-carbon fuels in proportion to the amount of real, quantifiable emissions reductions they yield when substituted for conventional fuels.
- The BC-LCFS has been one of the Province's most successful emission reductions policies.
- Between 2010 and 2018, the global release of over 9.17 million tonnes of greenhouse gas emissions were avoided under the Regulation.
- The proposed carbon intensity target schedule provides immediate easing of the 2020 carbon intensity target to a 9.1% reduction (from 10%) to provide fuel suppliers time to recover from the negative impacts of the pandemic. The schedule then increases the stringency by 1.09% per year beginning in 2021, to achieve the CleanBC goal of a 20 percent reduction in carbon intensity in 2030.
- The proposed amendment maintains the current 75 million litres per year exemption limit in 2020, reduces it to 25 million litres in 2021, and 200,000 litres in 2022 and thereafter.

Pricing

- s.12; s.13; s.17

- EMPR is recommending reducing the 75 million litre compliance exemption threshold in order to:
    - strengthen the overall effectiveness of the BC-LCFS;
    - advance market transformation; and
    - address an unfair competitive advantage (i.e., removing the exemption will result in price balancing between previously exempt suppliers and those complying with the BC-LCFS)

General

- The BC-LCFS requires a minimum renewable content in gasoline and diesel fuel and sets annual carbon intensity targets using a lifecycle analysis encompassing all of the stages of a fuel product's life from raw material to final use.
- A fuel supplier's annual compliance with the LCFS is calculated in terms of credits for low carbon fuels and debits for high carbon fuels.
- Debit-generating suppliers have three pathways to address their debits:
    - supply low carbon fuels to generate credits;
    - purchase credits from other credit generators;
    - undertake initiatives through the Part 3 Agreements program

- At the end of each compliance period, suppliers must have a balance of zero or more credits to avoid non-compliance penalties.
- Credits and debits are proportional to the emissions a fuel generates over its full life cycle. Fuels with slightly lower-carbon intensity than the annual target receive fewer credits than advanced, very clean fuels.
- The BC-LCFS credit market has been functioning since 2015. To date, over one million credits have been traded. In 2019, the average credit price was $269/credit.
- EMPR recently launched the Transportation Fuel Reporting System (TFRS) to enable electronic credit tracking and exchange, as well as full compliance reporting. TFRS was developed with funding from the Innovative Clean Energy (ICE) Fund.
- The carbon intensity values of over 275 low carbon fuels have been approved for use in BC.
- Part 3 Agreements (which award compliance credits to overcome obstacles and accelerate the adoption of low carbon fuels) currently support development of co-processing capacity, development of hydrogen fueling stations, funding for the Scrap-It program, and installation of electric vehicle chargers.
- The BC-LCFS auditing program is conducted through a partnership with the Ministry of Finance to minimize costs by conducting combined inspections for the Act, the Motor Fuel Tax and the Carbon Tax. This program is supported by ongoing funding from the ICE Fund.

Other Jurisdictions:

- BC is the only province in Canada with a LCFS.
- BC, California, Oregon, and Washington signed the Pacific Coast Action Plan on Climate and Energy, which includes a commitment to maintain a LCFS. BC, California, Oregon have a LCFS in place.
- BC is working with the Government of Canada to develop the national Clean Fuel Standard (CFS) announced in the December 2016 Pan-Canadian Framework on Clean Growth and Climate Change.
- The Government of Canada, BC, Alberta, Saskatchewan, Manitoba, Quebec and Ontario have renewable fuel requirements.

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Increasing Renewable Fuel Production in British Columbia

Revised: June 12, 2020

Issue: Increasing Renewable Fuel Production in British Columbia

Response:

- Transportation is a major source of greenhouse gas (GHG) emissions in BC and increasing clean fuel production in the Province is critical to reaching British Columbia (BC)'s legislated climate targets.
- Supporting clean fuel production not only stimulates investment in the Province, but using clean fuels in BC also extends the life of transportation assets such as trucks, buses, marine vessels, locomotives, aircraft, and mining vehicles.
- The Ministry of Energy, Mines and Petroleum Resources (the Ministry) is currently considering how to realistically meet the CleanBC renewable fuel targets by leveraging BC's industry and research expertise and the use of BC-sourced feedstocks, such as forestry waste fibre.
- BC's Low Carbon Fuel Standard is a regulatory enabler that is necessary to incent fuel suppliers to invest in cleaner fuel technologies and production pathways.
- The Ministry is working closely with the fuel industry, BC universities, and the BC Bioenergy Network on several initiatives:
    - Renewing the Provincial Bioenergy Strategy that will outline BC's plan for using bioenergy to reduce emissions and provide opportunities for economic development in resource-dependent and Indigenous communities;
    - Creating a Centre of Excellence for Biofuels that will focus on research and coordination for the development of renewable fuels in BC; and,
    - Decarbonize long-distance transportation with cleaner fuel by supporting the BC Sustainable Marine, Aviation, Rail, and Trucking Fuel Consortium (BC-SMART Fuel Consortium).

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- Under CleanBC, the Government of BC has committed to:
  - Increase the supply of cleaner fuels by ramping up new production in BC of 650 million litres of renewable gasoline and diesel by 2030;
  - Make fuel produced and supplied into BC cleaner by increasing the Low Carbon Fuel Standard (LCFS) to 20% by 2030;
- Currently, BC imports virtually all of its renewable fuels. Making these fuels in the province will lead to job growth and regional economic development.
- The production of 650 million litres of renewable fuels per year by 2030 in BC would account for 8% of total annual fuel use today and help BC fuel suppliers meet increasing requirements under the LCFS.
- Transportation accounts for 39% of BC's GHG emissions with more than half being emitted from medium- and heavy-duty transportation vehicles.
- BC-SMART is a joint academia, government and industry initiative that seeks to address the full spectrum of GHG reduction opportunities under CleanBC's transportation initiatives, particularly in the hard-to-decarbonize sectors of marine, aviation, rail, and trucking. The BC-SMART Fuel Consortium is providing a pragmatic and coordinated approach to the development of BC renewable fuels feedstocks, supply chain, and infrastructure.
- Established in 2008 with a $25 million grant from the Province, the BC Bioenergy Network (BCBN) is an industry-focused organization that helps deploy bioenergy technologies and supports research towards building increased capacity for bioenergy in BC.
- BCBN and thee Ministry entered into a Trusted Partnership Agreement in 2018 that defined terms for cooperation to advance the mandate of BCBN as a solutions hub for bioenergy development in alignment with the Province's energy and environmental priorities.

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Vehicle Charging and Hydrogen Fueling Funding

Revised: June 16, 2020

Issue: The Province's investments to support charging and fueling infrastructure for zero-emission vehicles.

Response:

- British Columbia (BC) is a leader in clean transportation, with the highest electric vehicle adoption rate in North America in 2019 (8.6% of new light-duty vehicle sales), one of the largest public charging networks in Canada, and a world-leading hydrogen and fuel cell industry.
- EV charging and hydrogen fueling funding will help make ZEVs affordable and practical for all BC residents.
- A significant expansion of electric vehicle (EV) charging infrastructure within BC will be necessary in order to meet CleanBC zero-emission vehicle (ZEV) targets. The Province believes this expansion will require investments from governments, public utilities (such as BC Hydro and Fortis BC), and private entities.
- The Province welcomes and supports the efforts of the BCUC to investigate regulatory issues in the EV charging services market, through its Electric Vehicle Inquiry.
- There are currently three public hydrogen fuelling stations, over 2,000 public Level 2 charging stations, and 190 public fast charging sites across BC.
- Budget 2019 included $25 million for home and workplace charging station rebates, public fast charging stations, and public hydrogen fuelling stations. Budget 2020 adds an additional $7 million to these programs.
- Funding for public fast charging stations will focus on connecting northern and rural areas of BC to allow ZEV travel throughout the province, as well as densification in communities that have had high ZEV uptake or are currently under-represented (e.g. Indigenous communities).
- Funding for hydrogen fueling will focus on continuing to build out a hydrogen network with the end goal of enabling fuel cell electric vehicles to reliably travel throughout BC.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- In 2011, BC introduced ZEV programming, now called the CleanBC Go Electric Program (the Program and has since committed more than $227 million to make ZEVs more affordable and reduce greenhouse gas emissions.
- Access to ZEV charging or fueling infrastructure at home, work and in the public space is one of the top barriers to ZEV adoption (behind ZEV supply and ZEV pricing).

Public fast charging

- Of the approximately 190 public DC fast charging (DCFC) sites around the province, 107 were funded by the Program, 16 were funded by Tesla, 14 were funded by the Ministry of Transportation and Infrastructure as part of their fast charging at highway rest stops policy, and the remainder were funded by car dealerships and other private entities.
- To-date, the Program has provided funding towards 130 public fast charging sites, 107 of which are complete. The remaining sites are set to be available for public use by 2021.
- The Ministry estimates that approximately 100 more public fast charging sites are needed for geographic coverage across all primary and secondary highways and major roads in BC.
- Since 2018, the Ministry has partnered with Natural Resources Canada (NRCan) to offer funding for public DCFC installations in BC through the Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative. The CleanBC Go Electric Program added $7 million (from Budget 2018 and Budget 2019) in funding to NRCan's Initiative which gives BC applicants access to funding for 25% of the total project costs up to a maximum of $25,000 per DCFC from CleanBC Go electric, and 50% of the total project costs up to a maximum of $50,000 per DCFC from NRCan's Initiative.
- The Ministry is working with a third-party delivery partner, the Fraser Basin Council, to launch a separate funding program by the fall of 2020, with funds to support public charging stations in network gaps that are not covered by the NRCan program.

Home and Workplace Charging

- The CleanBC Go Electric Home and Workplace Charger Program provides up to $350 for charging stations in single family homes, and up to $2,000 for charging stations and free EV advisor services in apartments, condos and workplaces. The rebates are administered by BC Hydro and Fortis Electric in their respective utility territories. Fraser Basin Council delivers the EV advisor services.

- Outcomes from the Province's home and workplace programs since 2011 are:
    - 2,550 home EV charging stations installed (up from approximately 748 at the end of December 2018);
    - 368 MURB EV charging stations installed (up from approximately 247 at the end of December 2018);
    - 319 workplace EV charging stations installed (up from approximately 199 at the end of December 2018); and
    - 266 site visits completed by an EV Advisor to workplaces and multi-unit residential buildings (up from 105 at the end of December 2018).

Public Hydrogen Fuelling Stations

- There are three public hydrogen fueling stations in the Metro Vancouver area. The first one, completed in Spring 2018, is located as part of a Shell gas station in South Vancouver. The second one, completed in Fall 2019, is located as part of a Shell gas station in Burnaby. The third one, completed Winter 2020, is located as part of an Esso gas station in North Vancouver. s.16; s.21
s.16; s.21

- Funding for the first seven hydrogen fueling stations has come from a combination of CleanBC GoElectric funding (from Budget 2018), Hydrogen Technology and Energy Corporation's (the station developer) revenues from Part 3 Agreement compliance credits under the Low Carbon Fuel Requirements Regulation, and industry investment.
- Further hydrogen fueling station deployments will follow the "network cluster" strategy, align with automaker deployment plans, and eventually build out to connect clusters through travel corridors across the province.

BCUC EV Inquiry

- A person that owns or operates equipment for EV charging for compensation is considered a public utility and subject to regulation by the BC Utilities Commission (BCUC) under the *Utilities Commission Act*.
- The BCUC announced in January 2018 that it would be undertaking a general inquiry to explore the potential regulatory issues in the EV charging services market that may have broader stakeholder impacts. The Province has actively participated in the Inquiry as an intervener and submitted written evidence and arguments to inform the BCUC's deliberations.
- The BCUC completed Phase 1 of the Inquiry and publicly released a report of its findings on November 26, 2018.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- As an outcome of Phase 1, on February 19, 2019, the BCUC requested Ministerial approval of a draft order that would exempt persons who are not otherwise public utilities, including landlords and strata corporations, from many of the current regulatory requirements imposed under the *Utilities Commission Act* on persons providing EV charging services. The Minister of Energy, Mines and Petroleum Resources approved this order on March 18, 2019.
- The BCUC completed Phase 2 of the Inquiry and released a report of its findings on June 24, 2019 that addresses the role of "traditional" public utilities, such as BC Hydro and FortisBC, in the delivery of EV charging services. The BCUC's findings and recommendations will inform Government as it takes the next steps to define a legislative and/or regulatory framework that will support the expansion and improvement of charging services. This includes a proposed amendment, under the Greenhouse Gas Reduction (Clean Energy) Regulation, to allow public utilities to invest in direct current fast-charging stations installed prior to the end of 2025 as a prescribed undertaking, subject to certain criteria.

Cross Reference:

Zero-Emission Vehicles Act

Clean Energy Vehicle Program and Zero-Emission Vehicles

Renewable and Low Carbon Fuel Requirements Regulation

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Clean Buildings Strategy

Revised: June 16, 2020

Issue: Efforts to decarbonize buildings through efficiency and fuel switching

Response:

- The Ministry of Energy, Mines and Petroleum Resources (the Ministry) plays a leading role in developing policies, programs and standards that improve energy efficiency and reduce greenhouse gas (GHG) emissions in the built environment (i.e., buildings and communities).
- CleanBC committed to a 40% reduction in GHG emissions from buildings by 2030. These reductions can be achieved through incentive programs for fuel-switching to electric heat pumps, continued improvements in minimum energy performance standards for gas equipment and building envelopes, and renewable natural gas requirements.
- Making British Columbia (BC)'s built environment more energy efficient helps achieve government priorities such as advancing innovative technologies, promoting clean jobs, and ensuring affordability by reducing energy costs, all while stimulating province-wide economic activity.
- The Ministry's built environment initiatives are based on a market transformation strategy that consists of five pillars of action, which are supported through CleanBC commitments:
    - supporting research, development and demonstration;
    - fostering energy literacy;
    - supporting industry training;
    - providing financial incentives; and
    - advancing energy efficiency codes and standards.

Background/Status:

- The built environment accounts for 10% of BC's GHG emissions (not including emissions from waste).
- Achieving the Province's legislated 2030 and 2050 GHG reduction targets will require a shift towards low-carbon heating options and the highest performing buildings. It will also depend on minimum energy performance standards for gas

equipment as set out in CleanBC and the Pan-Canadian Framework, and on increasing renewable gas content in fossil natural gas.

- In addition to reducing emissions, making BC's buildings more efficient will help achieve government priorities such as advancing innovative technology development, promoting clean jobs, and ensuring affordability of housing by reducing energy costs, all while stimulating province-wide economic activity. Every $1 million invested in energy efficiency is estimated to create between 30 and 57 job years and $4-8 million of gross domestic product.
- Since 2008, the Province has worked to decarbonize the built environment through a combination of energy efficiency programs, increasing energy efficiency requirements in the Building Code, and *Energy Efficiency Act* standards. Together, these measures have contributed to significant emissions reductions, but not at the scale or trajectory necessary to meet the Province's GHG reduction targets.
- The Pan-Canadian Framework on Clean Growth and Climate Change includes a commitment to develop and adopt increasingly stringent model building codes with the goal that all provinces and territories adopt a "net-zero energy ready" model building code.
- CleanBC commits to adopting a "net-zero energy ready" base code for new buildings by 2032, with incremental improvements in 2022 and 2027. These improvements to the base BC Building Code will build on the success of the BC Energy Step Code.
- The BC Energy Step Code regulation, introduced in April 2017, has helped to create a feasible pathway to achieve the net-zero energy ready commitment by creating a set of energy performance levels that can be voluntarily adopted as code by municipalities. These performance levels have now been adopted by municipalities that account for 68% of residential construction in the Province. To complete this market transformation, the Province will need to support research and development, provide financial incentives and capacity building resources to enable adoption of successively higher Step Code performance tiers over time.
- Net-zero energy ready new construction has a significant impact on emissions in the long term; however, the majority of emission reductions required to meet the Province's legislated GHG targets will need to come from fuel-switching and energy efficiency improvements in existing buildings.
- CleanBC's plans for the built environment are grounded in a comprehensive market transformation strategy that covers both existing buildings and new construction.

- The strategy consists of five pillars of action, listed below along with examples of current initiatives:
  - **Research, development and demonstration**
    The CleanBC Building Innovation Fund provides support for research, commercialization and demonstration of advanced building designs and construction methods, and ultra-efficient building components in order to increase the availability, acceptance and affordability of low-carbon buildings solutions made in BC. In 2019/20, the program provided $1.65 million in support to 13 projects across the province.
  - **Energy efficiency information**
    The Ministry is exploring options for introducing a cost-effective and streamlined energy rating requirement for homes and buildings at the point of sale or lease, to make it easier for buyers and renters to factor energy costs and GHG emissions into their decisions. Ministry staff are conducting technical and policy analysis of options.
  - **Industry training**
    The Ministry has worked with FortisBC, BC Hydro, and the Home Performance Stakeholder Council to develop heating system best practice installation guidelines and training curriculum. This helps foster quality workmanship and maximizes energy efficiency and emission reductions. A COVID-19 proposal is in progress to subsidize online skills training for contractors in the residential retrofit sector, while there is a slow-down in work opportunities due to the pandemic.
  - **Financial incentives**
    The CleanBC Better Homes and Better Buildings program provides financial incentives to help households and businesses save energy and reduce GHG emissions through heating equipment replacement and building envelope improvements. The $88 million program is funded through CleanBC and the federal Low Carbon Economy Leadership Fund through 2022/23.

    The Province continues to provide a supportive framework for energy utilities to offer energy efficiency programs under the Demand-Side Measures Regulation. Last year, BC Hydro, FortisBC Gas and FortisBC Electric spent $178.7 million on energy efficiency programs ($104.19 million, $64.49 million and $10.07 million, respectively) which will result in 3.93 million gigajoules of energy savings per year[1].
  - **Regulated codes and standards**
    In 2019, BC consulted on amendments to the Energy Efficiency Standards

[1] Based on BC Hydro results from 2018/2019 and FortisBC results for 2019

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Regulation to support CleanBC including new and updated energy efficiency standards for gas boilers, residential fenestration (windows and doors), and computers and monitors. This package has been delayed until fall 2020 as a regulatory relief measure during COVID-19. If adopted in the fall, the standards will result in nearly $45 million of energy bill savings, 1.72 million gigajoules per year of energy savings, and 52,600 tonnes of GHG reductions by 2030. The Ministry is now considering adding demand-response standards for water heaters to the amendments to support BC Hydro Comprehensive Review Phase 2 'behind the meter' goals.

Cross Reference: CleanBC Better Homes and Better Buildings Program

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: CleanBC – Better Homes and Better Buildings Program

Revised: June 16, 2020

Issue: CleanBC Better Homes and Better Buildings Program Overview

Response:

- The CleanBC - Better Homes and Better Buildings program provides financial incentives to help households, businesses and the public sector save energy and reduce greenhouse gas emissions (GHG) through heating equipment replacement and building envelope improvements.
- The program launched in September 2018 as EfficiencyBC, a two-year, $24 million retrofit program co-funded by the Province and the federal government through the Low Carbon Economy Leadership Fund.
- Under CleanBC, the program was rebranded “Better Homes” and “Better Buildings” and has been provided additional funding through fiscal 2023, including $64 million in base funding.
- The program was expanded in fiscal 2020 to include:
    - Commercial new construction incentives;
    - Specialized support for small businesses, Indigenous communities and non-Indigenous communities; and
    - Low-income offers.
- The program has and will be further expanded in fiscal 2021 to include:
    - Low interest financing;
    - Residential new construction incentives; and,
    - Additional low-income offers.
- As of the end of fiscal 2020, the program has provided 8,383 residential retrofit rebates and approved 154 energy studies and capital incentives for commercial, institutional and multi-unit residential building energy efficiency and fuel-switching projects.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- The Ministry of Energy, Mines and Petroleum Resources (Ministry) launched a $24 million retrofit program in September 2018, co-funded through the federal Low Carbon Economy Leadership Fund, under the name EfficiencyBC.
- The program, rebranded as CleanBC Better Homes and Better Buildings, includes:
    - **Better Homes:**
        - Residential retrofit rebates for fuel-switching to heat pumps, high efficiency windows, doors and insulation in fossil-fuel heated homes; and highest efficiency furnace top-ups to complement existing utility offers;
        - A single application for Provincial, BC Hydro, FortisBC, and local government incentives; and,
        - Free energy coaching services.
    - **Better Buildings**:
        - Energy study and capital incentives for commercial, institutional, and multi-unit residential buildings, and social housing, to support fuel-switching and energy efficiency projects that result in GHG reductions in both retrofits and new construction.
    - **Online hubs**:
        - Online web hubs for homeowners and businesses to access information, incentives (provincial, utility and local government) and supports to reduce energy use and GHG emissions in homes (www.betterhomesbc.ca) and buildings (www.betterbuildingsbc.ca).
- Budget 2019 allocated $40.64 million in base funding over three years. Budget 2020 added $23.49 million in additional base funds for 2022/23.
- Additional funding through CleanBC has allowed the program to expand to include:
    - Increased incentives for heat pumps and windows/doors (launched April 2019);
    - High-value rebates for low income-households (launched April 2019);
    - Commercial new construction incentives (launched April 2019);
    - Specialized support for small businesses (launched October 2019);
    - Specialized support and incentives for Indigenous communities and civic communities (launched January 2020);

- Low-interest financing (launched May 2020);
- Residential new construction (launching fall 2020); and,
- Additional low-income incentives (launching fall 2020).

- The program's first marketing campaign launched in spring 2019 and included web advertisements and the distribution of brochures to program partners (including municipalities), participating contractors, and retail locations. Subsequent marketing campaigns occurred in fall 2019 and January 2020.
- As of the end of fiscal 2020, the program has provided 8,383 residential retrofit rebates and approved 154 energy studies and capital incentives for commercial, institutional and multi-unit residential building projects.
- COVID-19 is expected to reduce forecasted program uptake in the near-term, particularly in the residential retrofit sector. Proposals are in progress to re-orient programs in response to COVID-19, including a temporary increase in rebate levels, and launching a new income-qualified program that would reduce upfront cost barriers for energy retrofits in households that are COVID-impacted or low-income.

Cross Reference: Clean Buildings Strategy

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: BC Hydro Review – Phase 1

Revised: June 16, 2020

Issue: **Phase 1 of Review resulted in measures that mitigated planned BC Hydro rate increases and enhanced oversight of BC Hydro by the BC Utilities Commission**

Response:

- Affordability is one of this Government's top priorities. That's why we implemented a Comprehensive Review of BC Hydro.
- Phase 1, completed in February 2019, resulted in a forecast of 6.2% in cumulative rate increases between April 2019 and March 2024; approximately 55% lower than the 13.7% cumulative increase under the previous Government, and more than 40% lower than the 10.2% forecast rate of B.C. inflation over the same period.
- On April 1, 2020, the BC Utilities Commission (BCUC) approved, on an interim basis, a 1% rate decrease—the first rate decrease in more than 50 years.
- Phase 1 also enhanced oversight of BC Hydro by the BCUC by removing or changing legislation or regulations put in place by the previous Government to restrict some of the authorities of the independent regulator
- Phase 2 of the BC Hydro Review was launched in July 2019 and continues this positive momentum.
- Phase 2 will develop recommendations to strategically position BC Hydro for long-term success, while meeting the province's climate goals, keeping rates affordable, furthering reconciliation with Indigenous Nations, and supporting quality economic development.

Background/Status:

- BC Hydro rate increases have been a significant issue. Between 2008 and 2018 rate increases have averaged 5-6% per year, outpacing increases in other jurisdictions.
- During this time, previous Auditor Generals (AGs) also expressed concerns about legislative and regulatory measures put in place by the previous Government to limit the BCUC's oversight of BC Hydro in certain matters. The

former AG qualified the Province's F2016/17 and F2017/18 Public Accounts based on these concerns.

- The former Minister of Energy, Mines and Petroleum Resources (EMPR)'s July 2017 Mandate Letter included a commitment to carry out a comprehensive review of BC Hydro.
- Phase 1, an internal review carried out by EMPR, BC Hydro and the Ministry of Finance, was subsequently implemented with the goal of reducing BC Hydro costs, growing its revenue opportunities, and ensuring sound financial and regulatory oversight of the utility.
- Phase 1 was completed in February 2019. The key outcomes were:
  1. A new five-year (April 1, 2019 – March 31, 2024) rates forecast that reflects cost and revenue strategies to keep rates affordable; and
  2. A regulatory framework that enhances the BCUC oversight of BC Hydro.
- The rates forecast, revised on August 23, 2019 when BC Hydro filed an evidentiary update to its F2020-F2021 Revenue Requirements with the BCUC, resulted in increases that were substantively lower than those projected under the previous government's 10-Year Rates Plan. This includes a projected 0.99% rate *decrease* in F2022 (subject to BCUC approval)

	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024	Cumulative Five Years
Feb 2019 Rates Forecast*	1.8%	0.7%	2.2%	0.0%	3.2%	8.1%
Aug 2019 Rates Forecast*	1.8%	(0.99%)	2.7%	0.3%	3.0%	6.2%
March 2020 Service Plan Forecast	1.8%	(1.0%)	0.5 %	1.9%	3.6%	6.3%
Previous Govt's 10 Year Rates Plan*	2.6%	2.6%	2.6%	2.6%	2.6%	13.7%
Forecast BC Inflation**	2.2%	2.0%	2.0%	2.0%	2.0%	10.2%

**Annual bill impact, excluding reduction in the Deferral Account Rate Rider*
***Budget 2020*

- The single biggest factor contributing to rate decreases was the decision to write down the $1.1 billion balance of BC Hydro's Rate Smoothing Regulatory Account, eliminating the need to collect this amount from BC Hydro's customers in future years.

- Critical to managing BC Hydro costs were decisions to curtail the purchase of power, at relatively high prices, from independent power producers during a period when BC Hydro is in surplus and does not need additional supply:
    - BC Hydro implemented a Biomass Energy Program that balanced ratepayer interests with the economic and environmental value of bioenergy producers, most of which are large forest companies. BC Hydro intends to renew seven biomass electricity purchase agreements expiring before December 2021 for a ten-year term; purchasing on average 80% of historical energy production at about 80% of the original prices.
    - In addition, BC Hydro's Standing Offer Program has been indefinitely suspended. As per Government's February 14, 2019 public commitment, EMPR has completed an engagement with Indigenous Nations to discuss the potential impact of the suspension on the interests of Individual Nations, and options to mitigate those impacts.
- The enhanced regulatory framework increased BCUC oversight of BC Hydro, while ensuring BC Hydro can continue to play a key role in implementation of Government policy, including in the areas of affordability, climate action, and a strong, sustainable economy.
- Phase 1 recommendations implemented by Government included:
    - Amending the *Clean Energy Act* and *Utilities Commission Act* to restore BCUC's authority to review and approval BC Hydro's Integrated Resource Plan (long-term forecast).
    - Repealing Direction 7 under the *Utilities Commission Act,* which implemented the previous government's 10-Year Rates Plan by establishing set rate increases and caps; determining BC Hydro's allowed net income for rate-setting purposes; and required the BCUC to approve the creation of the Rate Smoothing Regulatory Account, and deferral of expenditures into it.
- It may still be necessary for Government to direct the BCUC from time to time to advance priority social, economic and environmental policy priorities. Following Phase 1, Government committed to be judicious in its use of these directives.
- Also, as a result of the Phase 1, the AG removed qualifications on the Province's F2019 Public Accounts made in each of the prior two years. The AG stated, "Government has made a number of changes to the regulatory framework, giving the regulator the ability to influence costs and rates. I believe the changes made to the regulatory framework are sufficient to allow me to remove my qualification on the use of rate-regulated accounting for the year ending March 31, 2019".

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Cross Reference: BC Hydro Review Phase 2

OAG Report on Rate-Regulated Accounting

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: BC Hydro Review Phase 2

Revised: June 16, 2020

Issue: Completion of the BC Hydro Review - Phase 2.

Response:

- The second phase of Government's comprehensive, two-phase review of BC Hydro was initiated in July 2019.
- The first phase of the review focused on reducing the increase in electricity rates and ensuring sound financial and regulatory oversight of BC Hydro. The Phase 1 final report was published in February 2019.
- The second phase is taking a longer-term view and will position BC Hydro to the benefit of all British Columbians.
- The interim report from Phase 2 of the BC Hydro Review was released on March 6, 2020 and focusses on leveraging British Columbia's clean hydroelectricity to meet the province's climate goals, support economic development, and make life more affordable.
- The report describes the scope, context and work-to-date for Phase 2 of the Review and presents several ideas for discussion, including:
  - optional rate designs to encourage the shift from fossil fuels to electricity in our vehicles, homes and businesses and achieve the emissions reduction targets in CleanBC (e.g., a rate for heat pumps);
  - measures to expand the electrification of our growing economy and attract new, clean businesses to B.C. - creating jobs and opportunities for British Columbians;
  - elimination of the self-sufficiency requirement to give BC Hydro more flexibility to meet future demand for clean electricity at the least cost to keep rates affordable;
  - a 100% clean electricity standard, which would be the first provincial standard of its kind in Canada; and
  - key issues and themes related to enhancing Indigenous Nations' participation in the energy sector and furthering reconciliation.
  - Recommendations from Phase 2 of the Review will be included by BC Hydro in the development of its Integrated Resource Plan (IRP) that is expected to be filed with the B.C. Utilities Commission (BCUC) in Fall 2021.
  - After the Final Report is released, the Ministry will continue engagement with Indigenous nations and organizations on the implementation of recommendations.
  -

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The Ministry of Energy, Mines and Petroleum Resources has received feedback from Indigenous nations and organizations, stakeholders and customer groups in response to the interim report. Feedback from all groups is supporting the development of recommendations for a final report to be completed later this summer.

Background/Status:

- The Phase 2 Review is a broad, transformational review that is considering some of the significant changes and shifts taking place in British Columbia (B.C.) and continental energy sectors, in addition to evolving technologies and the changing needs of current and future BC Hydro customers. Phase 2 will leverage BC Hydro's strengths and is focusing on:
  - BC Hydro's role in supporting CleanBC and meeting the Province's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;
  - Future opportunities or new roles for Indigenous Nations and for communities in the energy sector;
  - Integrating new technologies and electricity market trends into BC Hydro's structure, services and assets while keeping rates affordable; and
  - New opportunities for BC Hydro to expand its business in markets outside B.C. to the benefit of ratepayers.
- Phase 2 was initiated in July 2019.
- An interim report from Phase 2 of the BC Hydro Review was released on March 6, 2020.
- The ideas presented for discussion in the Interim Report were developed by staff and executives from the EMPR, the Climate Action Secretariat, BC Hydro and Powerex, and informed by input from:
  - Nine expert advisors with a range of expertise covering energy and climate policy, energy regulation, Indigenous engagement, project labour and management, electricity market development, and technological innovation;
  - Stakeholders from industry, municipalities, labour and non-governmental organizations; and Indigenous nations and organizations.
  - The province's Climate Solutions and Clean Growth Advisory Council, including representatives from Indigenous Nations, non-governmental organizations and industry.

- EMPR received 18 submissions from stakeholders and customer groups responding to the interim report, which will support the development of recommendations for a final report to be completed this summer. These submissions are available on the Phase 2 Review website.
- EMPR also received input from Indigenous nations and organizations which is described in greater detail below. Phase 2 of the Review will support the development of BC Hydro's Integrated Resource Plan (IRP) to be filed with the BCUC in Fall 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs now and into the future.

Indigenous Engagement:

- EMPR has been engaging with Indigenous nations and organizations on Phase 2 regarding how BC Hydro can change its business to create greater alignment with Indigenous interests and integrate Indigenous nations and organizations into BC Hydro business.
- Since September 2019, EMPR has been engaged with over 170 participants, representing 80 Indigenous nations and organizations at various sessions including:
  - September 2019 - Invitation to Indigenous Leadership to review the terms of reference;
  - January 2020 - Presentation and breakout session at the CleanBC Provincial Forum;
  - March 2020 - Presentation at the First Nations Major Projects Coalition Industry Event;
  - 26 meetings with Individual First Nations;
  - 2 province-wide webinars; and
  - 6 regional meetings.
- EMPR is discussing an engagement approach on the Final Report with the B.C. First Nations Leadership Council.

Expert Advisors:

- The individuals selected for the panel are highly specialized, highly respected energy industry experts with extensive, collective knowledge of North American utility management and regulation, electricity markets, emerging trends and technology, and experience with businesses that benefit Indigenous peoples.
- Due to the unique experience and subject matter expertise required to support the review, and consistent with the Province's core policy on direct awards, the Ministry approached individuals directly rather than using a competitive bid process.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Experts are receiving payments in alignment with current market rates for consulting services. Payment and expenses for each expert advisor is not expected to exceed $25,000.

Attachments: Appendix 1 – BC Hydro Review Phase 2 - Expert Advisor Biographies

Cross Reference: 8 – BC Hydro Review Phase 1

17 – Tiered Residential Rates and Income Impacts

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity and Alternative Energy Division	(778) 698-7183

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Appendix 1: BC Hydro Review Phase 2 - Expert Advisor Biographies

- David Bibby, North Vancouver, B.C. - David Bibby has over 25 years of experience in strategic technology leadership within growth-oriented global organizations. He has been the head of Global Digital Services at Finning International since January 2016. Prior to this, he held positions as the vice-president, Information Technology, at Vancity Savings and the senior vice-president of technology at Canaccord Genuity Corporation.
- Gwenne Farrell, White Rock, B.C. - Gwenne Farrell worked as a vice-president of MoveUp from May 2005 until November 2018. Prior to that she worked as a financial analyst with BC Hydro. In the spring of 2007, Gwenne was also elected to the office of secretary-treasurer of Canadian Office and Professional Employees Union (COPE), Local 378's national union.
- Mark Jaccard, Vancouver, B.C. - Mark Jaccard has been a professor since 1986 in the School of Resource and Environmental Management at Vancouver's Simon Fraser University. From 1992 to 1997 he served as chair and chief executive officer of the B.C. Utilities Commission. He has published over 100 academic papers, most of these related to his principal research focus: the design and application of energy-economy models that assess the effectiveness of sustainable energy and climate policies.
- Stephen Koch, Ottawa, Ontario - Stephen Koch is the director of emerging issues at the Canadian Electricity Association (CEA), the national voice of electricity in Canada. As director of the National Emerging Issues Committee, Stephen works with senior CEA members and industry experts to identify, predict, and prepare for technological innovations and potentially disruptive market changes across the energy sector. Stephen was previously president of the Oil Heat Association, executive director of NAIMA Canada, and held other leadership roles which included chairperson of Envirocentre.
- Caitlin Liotiris, Salt Lake City, Utah - Caitlin Liotiris has expertise in electricity market development, regional transmission planning and policy, and energy procurement arenas. Her work includes advocacy at regional forums, performing market and regulatory evaluations, and facilitating the incorporation of new policies and market structures into modelling tools. She is a principal at Energy Strategies.
- Annita McPhee, North Vancouver, B.C. - Annita McPhee is from the Tahltan/Tlingit Nations in B.C. An expert in Aboriginal engagement and communications, Annita is the principal of Annita McPhee Strategies and provides strategic advice to industry and numerous First Nations communities. As the former three-term president of the Tahltan Central Government, she was instrumental in negotiating more than $2 billion worth of agreements on behalf of the Nation for BC Hydro's northwest transmission line and associated run of river projects. Annita's academic

background includes having a degree in law, a Bachelor of Social Work, and public relations.

- Liisa O'Hara, West Vancouver, B.C. - After a lengthy career as an executive in the energy transportation business, Liisa O'Hara served as commissioner to the BCUC for 10 years. As BCUC commissioner, Liisa participated in oversight of the province's natural gas and electricity utilities, the regulation of rates, and the development of new facilities. As commissioner, she also developed a strong interest in clean energy solutions.
- Blake Shaffer, Calgary, Alberta - Blake Shaffer has extensive experience in the energy sector, with a specific focus on electricity markets. Blake's 15-year career has taken him from the trading arm of BC Hydro, to Lehman Brothers and Barclays Capital in New York as a senior energy trader, and director of energy trading at Transalta Corporation in Calgary, Alberta. He is currently an adjunct assistant professor at the University of Calgary, department of economics.
- Dan Woynillowicz, Victoria, B.C. - Dan Woynillowicz is an accomplished non-profit leader working to identify and implement climate solutions. An experienced analyst, strategist and advocate, he has significant knowledge and experience in the fields of energy and environmental policy. He joined Clean Energy Canada in December 2012 as policy director.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Site C Update

Revised: June 16, 2020

Issue: Update on construction of the Site C Project and Related Issues

Response:

- The Site C project remains on time and on track for river diversion in September 2020; a key project milestone.
- As of March 31, 2020, the project had spent approximately $5.1 billion and had further financial commitments totalling approximately $2.8 billion[1].
- Significant project milestones that occurred during the past year include:
    - In July 2019 the Peace Canyon 500 kW gas-insulated switchgear expansion to enable connection of Site C to the BC Hydro electrical system was completed, the first Site C asset placed into service.
    - On May 25, 2020, despite scaling back the workforce to protect workers and the public during COVID pandemic, the two Peace River diversion tunnels and four gate structures, located at the upstream and downstream entrances of both tunnels, were completed.
- Between March 18, 2020 and May 14, 2020, BC Hydro reduced the numbers of workers residing at the Site C camp to protect workers and the public during the COVID-19 pandemic.
    - I am pleased to say that BC Hydro, with its contractors, is now able to start ramping construction activities back up safely, in a phased approach based on the provincial health guidelines for industrial camps.
- Our government continues to ensure the implementation of project oversight measures, including:
    - The Site C Project Assurance Board (PAB) meets monthly and provides recommendations and advice to the BC Hydro Board and Management, as well as to government;
    - Ernst and Young (EY) provides independent oversight for the project; including for budget, schedule evaluation, and risk assessment analysis;

[1] Excluding BC Hydro labour costs and Interest During Construction (IDC) charges. Further financial commitments, including BC Hydro labour costs and IDC, were $4.15 B

- An Independent Construction Advisor was retained to provided advice and opinions on the construction activities and planning; and
- BC Hydro provides regular reporting to Treasury Board.

- The Province is committed to Site C legacy initiatives that will advance benefits for communities, Indigenous Nations and provincial agricultural stakeholders particularly in the Peace region.

Background/Status:

Overview:

- Site C will be the third dam and hydroelectric generating station on the Peace River in northeastern British Columbia (BC) and will generate reliable and clean electricity for more than 100 years. Site C is designed to provide 5,100 gigawatt hours of electricity each year and 1,100 megawatts of capacity; which is enough power for 450,000 homes.
- Construction began on July 27, 2015 and is ongoing. Completion was scheduled for 2024.

COVID-19:

- COVID-19 has posed a heightened risk to Site C due to:
  - large workforce at site, and
  - many workers reside in the worker camp and were travelling frequently to the region from other locations (BC, Canada, international).
- To reduce risk of transmission, BC Hydro worked with Northern Health, unions, and contractors to implement measures including:
  - limiting travel to the region (reduced workforce, longer shift rotations),
  - social distancing in camp and on-site, consistent the Public Health Officer advice/directives,
  - enhanced cleaning procedures and physical distancing,
  - safety screening at site access points and for workers prior to travel to site.
- On March 18, in response to the increasing escalation of the global COVID-19 pandemic, BC Hydro announced need to reduce on-site workforce.
  - Construction progress on-site is focused on critical river diversion activities and essential services (e.g. construction required for river diversion, keeping the site secure, meeting environmental and regulatory commitments).

- Progress on the construction activities related to the powerhouse, spillway and earthfill dam stopped.
- Work on the realignment of Highway 29, transmission lines, and reservoir clearing are impacted but continuing as most of these workers do not reside in the camp

- On May 25, 2020, BC Hydro announced it will safely begin increasing construction activities.
  - BC Hydro is working with project contractors and unions to ramp up construction activities, with an initial focus on restarting some of the main civil works on the earthfill dam and roller-compacted concrete dam buttress.
- The pandemic has placed pressure on the project budget and timelines. BC Hydro is currently assessing the impacts and developing strategies to mitigate risks.

Construction:

- Work on the earthfill dam began in October 2018; excavation and placement of material has been ongoing.
- In July 2019, the transmission sub-project reached a significant milestone by energizing the new gas-insulated switchgear at the indoor substation at Peace Canyon, making it the first official Site C asset placed into service. The switchgear is required to enable connection of the two new 500 kV transmission lines from Site C into BC Hydro's 500 kV transmission network.
- Despite extensive geotechnical investigations that were conducted prior to construction, geological mapping and monitoring of instrumentation have confirmed movement in the foundation bedrock, a greater distribution of jointing and shear features, and water penetration in the foundation of the powerhouse and spillways.
- Additional measures are required to enhance the stability of the foundation for these structures.
- Some of these additional measures are required to advance the planned 2020 construction activities; others are required in advance of reservoir filling.
- BC Hydro anticipates confirming mitigation strategies in summer 2020, following discussions with the project's Technical Advisory Board.

River Diversion Tunnels

- The two large diversion tunnels, located on the north bank of the river were completed in May 2020. One of the projects most critical milestones, the tunnels will be used to reroute a short section of the Peace River to allow for the construction of the earthfill dam.

- Diversion is on track to take place as scheduled over a period of several weeks in September 2020.
- Excavation of the diversion tunnels began in 2018, initial breakthrough of the tunnels occurred in June and July 2019. Tunnel excavations were substantially completed in December 2019.
- The tunnels are lined with concrete using a custom-built slip form to create a smooth circular tunnel.
- Construction of the structures that will house the inlet and outlet gates have been completed.
- After all pre-diversion construction work is complete it will take several weeks to safely reroute the river. Once water is flowing through the tunnels, construction will begin on two temporary cofferdams across the river, creating a dry construction area to build the central portion of the earthfill dam.

Amendment to Main Civil Works Contract

- The contract with the Peace River Hydro Partners (PRHP) for the main civil works is a unit price contract, and as such, variations in quantities and design are expected over the term of the contract.

s.17; s.21

Highway 29 realignment

- Six segments of Highway 29 must be realigned to accommodate the Site C reservoir.
- BC Hydro is partnering with the Ministry of Transportation and Infrastructure on the design and building of 32 kilometres of highway and the building of new bridges at Cache Creek, Dry Creek, Halfway River, Lynx Creek and Farrell Creek.
- As of early 2020, construction is underway in three segments; Cache Creek East/Cache Creek West, Halfway River and Lynx Creek.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Project Governance and Oversight:

- The Site C Project Assurance Board (PAB) meets monthly, providing recommendations and advice to the BC Hydro Board and BC Hydro management to help ensure the Project is delivered on time and on budget. The PAB also provides its advice to government. The PAB is a sub-committee of the BC Hydro Board but is authorized to act independently of the BC Hydro Board in its functions.
- Ernst and Young (EY) continues to provide independent oversight for project budget, schedule evaluation and risk assessment analysis.

Community Benefits:

- Employment on the project peaked at a record high of 4,896 workers during March 2020. Following implementation of the COVID workforce/public safety measures on March 18, employment fell to 3,029 workers in April 2020, including 158 Indigenous people, 306 women, and 61 apprentices. Employment impacts for Peace River Regional District residents were lower than impacts for the project overall, with 531 workers employed in April, compared with 750 in February and March 2020, a reduction of about 30%.
- In December 2019, BC Hydro announced a further $46,600 in grant awards under Site C project's Generate Opportunities (GO) Fund. These most recent grants support Métis cultural heritage, enhance community outreach and accessibility, improve literacy, help families provide healthy meals for themselves, and provide free computer lessons.
    - This is the 12th time grants have been awarded from the $800,000 fund, established in 2016. So far, $437,691 has been distributed to 49 projects. Applications for funding are accepted on an ongoing basis and funds are distributed quarterly over an eight-year period.
- In August 2019, the Northern Development Initiative Trust started accepting applications for the first round of funding from the $20 million Peace Agricultural Compensation Fund launched by BC Hydro in 2018. Seven Peace Region agricultural projects received a total of $209,086 in funding.
- A second intake was held between December 1, 2019 and January 30, 2020. Nine Peace regional projects received about $190,000 in funding.

Litigation:

- In January 2018, West Moberly First Nations and Prophet River First Nations each filed a Notice of Civil Claim against BC Hydro and the federal and provincial government alleging treaty infringement.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- In February 2019, the Province of British Columbia, BC Hydro, West Moberly First Nations and Prophet River First Nation agreed to enter confidential discussions to seek alternatives to litigation related to the Site C Project.
- West Moberly First Nations withdrew from the discussions in August 2019 and filed an amended Notice of Civil Claim in September 2019.
- Discussions with the Prophet River First Nation remain open.
- To date, Impact Benefits Agreements with Doig River First Nation, Halfway River First Nation, Saulteau First Nations and McLeod Lake Indian Band, and a Project Agreement with Dene Tha' First Nation have been publicly announced, while a Project Agreement with Duncan's First Nation in northwest Alberta has also been reached.
- Consultation and engagement with Indigenous groups is ongoing through the Cultural and Heritage Resources Committee, Environment Forum and Permitting Forum. Engagement through these forums and directly with Indigenous groups to prepare them for river diversion and reservoir inundation is ongoing and includes numerous boat, highway and site tours.

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Energy Purchase Agreements and Renewals

Revised: June 16, 2020

Issue: BC Hydro is managing electricity purchase agreement costs, where possible, to limit costs to ratepayers

Response:

- Along with debt servicing and finance expenses, energy acquisition from Independent Power Producers (IPPs) is a major driver of BC Hydro's costs and rates.
- As of April 2020, BC Hydro had over 120 electricity purchase agreements (EPAs) with IPPs, of which 124 are in service, which represent over $51 billion in future energy purchase commitments. These IPPs provide about 25% of BC Hydro's electricity supply on the integrated system, and account for about 28% of BC Hydro's total planned costs.
- The "Zapped" report by independent consultant Ken Davidson, concluded that as a result of provincial policy, BC Hydro has purchased too much energy that is delivered at the wrong time at too high a price.
- As an outcome of Phase 1 of the Comprehensive Review of BC Hydro, the Standing Offer and Micro Standing Offer Programs (SOP) were suspended indefinitely in February 2019. Government has been engaging with Indigenous Nations whose economic interests may have been impacted by the indefinite suspension of the SOP.
- Phase 1 of the Comprehensive Review also identified two components for a biomass energy strategy, one of which is the Biomass Energy Program to be managed by BC Hydro that will reduce the volume and price with respect to seven expiring biomass EPAs to be renewed.

Background/Status:

- BC Hydro is currently buying energy from 124 EPAs, and has signed an additional eight EPAs for power from IPPs in development. Most of these EPAs are at prices well above what BC Hydro is typically able to sell its surplus power for on export markets.
- As a major cost driver for BC Hydro, the acquisition of energy from IPPs was a key focus of Phase 1 of the Comprehensive Review of BC Hydro. In addition, the Minister commissioned a review of BC Hydro's purchase of power from IPPs to be conducted by an independent consultant, Ken Davidson (the "Zapped" report).

- Ken Davidson's report, released on February 12, 2019, concluded that policy direction by the previous government led BC Hydro to procure too much lower-value intermittent energy from IPPs. When comparing EPA prices with current export market prices, Mr. Davidson determined that the previous government's policies cost BC Hydro's rate payers at least $16 billion over 20 years, equivalent to roughly $4,000 per residential ratepayer over the same period.
- Phase 1 of the Comprehensive Review of BC Hydro found that there is little flexibility to make significant changes to the structure of existing EPAs. However, to reduce BC Hydro's future energy costs, it was recommended that:
    1. BC Hydro's SOP, a continuous intake program for small clean energy projects of 0.1 to 15 MW in size, be indefinitely suspended; and,
    2. Seven biomass EPAs, set to expire prior to January 2022, be renewed at lower prices and volumes relative to current contracts but higher than the forecast assumptions used in BC Hydro's 2013 Integrated Resource Plan.
- BC Hydro has also been managing its IPP energy costs by, among other things, reducing the volume of IPP energy where there are cost savings to BC Hydro and pursuing the renewal of some existing IPP contracts at lower prices to meet future long-term energy needs.

SOP Indefinite Suspension:

- On February 14, 2019, BC Hydro's SOP was indefinitely suspended, the exception being EPAs announced in March 2018 for five First Nations-related projects which are part of Impact Benefit Agreements with BC Hydro and/or mature projects that had significant Indigenous Nations involvement. As of September 1, 2019, agreements with three of those five projects have been signed, and agreements for the remaining two projects are pending.
- The decision to indefinitely suspend the programs does not impact existing electricity purchase agreements.
- However, this means:
    1. applications will not be advanced or maintained by BC Hydro;
    2. BC Hydro will not be undertaking any further Standing Offer and Micro Standing Offer Program negotiations; and,
    3. any allocated volumes for projects are recalled and the queue is no longer maintained by BC Hydro.
- Over 2019, the Ministry of Energy, Mines and Petroleum Resources (EMPR) engaged with more than 40 Indigenous Nations and organizations who provided comments and information to discuss the extent to which the indefinite suspension of the SOP may have affected their economic interests, and to explore options for mitigating significant impacts where they existed.
- Comments and information received as part of this engagement informed further engagement between EMPR and individual Indigenous Nations and

organizations, as well as work under the Indigenous Opportunities stream of Phase 2 of the BC Hydro Review.

Biomass Energy Program:

- BC Hydro holds 20 biomass EPAs, mainly with forest sector companies, of which seven were slated to expire before the end of 2021.
- Many biomass EPA holders are important economic anchors, and/or are large customers for BC Hydro. In addition, biomass EPAs play an important role in regional fibre balances.
- Expiry in the short term could lead to waste fibre disposal issues for sawmills, with associated job impacts and environmental issues.
- For the seven biomass generating facilities with agreements that, as of the release of Phase 1 of the Comprehensive Review, were due to expire prior to January 1, 2022, BC Hydro has been offering contracts generally based on the parameters set out for the program.
    - The Biomass Energy Program is intended to be transition measure to allow time for the forestry sector to develop and implement new products that align with the sector's diversification and competitiveness goals, as well as certain environmental and socio-economic priorities of government.
    - Under the program, the prices and volumes of the biomass energy to be acquired by BC Hydro will be lower relative to current contracts but higher than the forecast assumptions used in BC Hydro's 2013 Integrated Resource Plan.
- BC Hydro has signed agreements under the Biomass Energy Program for four of the seven EPAs and is pursuing new contracts with the remainder as they approach expiry.

EPA Renewals on the Integrated System:

- BC Hydro does not have any active programs for the procurement of new energy resources from IPPs. Other than electricity purchase agreement renewals, the only expected new agreements are for a small number of new First Nations energy projects.
- For the integrated system, BC Hydro is renewing existing hydroelectric EPAs at lower prices than those paid under the original contracts. These agreements are being filed with the BC Utilities Commission (BCUC) for review and acceptance.
- Since Fiscal 2016, BC Hydro has renewed, on a long-term basis, four run-of-river hydroelectricity purchase agreements which were accepted by the BCUC as being in the public interest.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- In November 2019, the BCUC issued a decision on the three other EPA renewals, and while it did not accept the 40-year terms of the renewals, it did indicate it is reasonable to accept EPA renewals (including their current pricing) until November 2022, the expected timing for the conclusion of the proceeding for BC Hydro's updated Integrated Resource Plan (IRP).
- The BCUC indicated in its decision that the determination of cost-effectiveness for long term EPAs requires an updated and approved IRP.
- Subsequent to the November 2019 BCUC decision, BC Hydro filed amendments for two of the EPA renewals to shorten the term of the agreements, as suggested by the BCUC, and terminated the remaining third EPA renewal. The two amended EPA renewals were ultimately accepted by the BCUC.
- Three other EPAs have expired without renewal over the last two years. In these cases, BC Hydro purchased the energy under the terms of the EPA for the full life of the contract. In some cases, the EPAs were extended beyond their original life through evergreening provisions.
- Most recently, BC Hydro has executed a short-term three-year EPA renewal, based on market pricing, which was filed with the BCUC for acceptance in April 2020. The BCUC is currently reviewing this request.

Phase 2 of the Comprehensive Review of BC Hydro

- As part of Phase 2 of the Comprehensive Review of BC Hydro, Government and BC Hydro have been looking at options to meet BC Hydro's future clean energy needs at lowest cost.
- Two options identified in the Phase 2 Interim Report are:
    1. To repeal self-sufficiency provisions in the *Clean Energy Act* and allow BC Hydro to import power from clean or renewable energy resources outside the province when it makes sense to do so.
    2. To reinstate the ability of public entities (i.e. BC Hydro) to develop small-scale generation to give the Crown entity more choice and flexibility for determining least-cost solutions.
- BC Hydro will look at its future need for clean energy, including the role of EPAs, in its next Integrated Resource Plan, which it will file with the BCUC in 2021.

Cross Reference: 8 – BC Hydro Review Phase 1

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Office of the Auditor General Report on Rate-Regulated Accounting

Revised: June 16, 2020

Issue: As part of Phase 1 of the Comprehensive Review of BC Hydro (Phase 1), Government and BC Hydro have addressed the Office of the Auditor General's concerns regarding oversight of BC Hydro regulatory accounts, and account balances

Response:

- I would like to thank the former Auditor General for her work on this issue, which will help the public understand the common practice of rate regulated accounting.
- Our government agrees with and has implemented the Auditor General's recommendations. BC Hydro has prepared its financial statements in accordance with Generally Accepted Accounting Principles.
- The British Columbia Utilities Commission (BCUC)'s oversight of BC Hydro has been enhanced in a manner that also recognizes BC Hydro's role in implementing public policy.
- BC Hydro's regulatory account balances will continue to be paid down in the coming years.

Background/Status:

- Past Auditors General (AGs) repeatedly raised the view that the Province's rate-regulated accounting policies, and practices do not comply with accepted standards for rate-regulated accounting because the Province has, in the AG's opinion, fettered the BC Utilities Commission's (BCUC's) oversight as BC Hydro's third-party regulator. Independent oversight is a key requirement of the accounting standards.
- The former AG qualified the Province's F2016/17 and F2017/18 Public Accounts based on these concerns.
- On February 6, 2019, as a follow-up to this qualification, the Office of the Auditor General (OAG) released its report, "Rate-Regulated Accounting at BC Hydro."
- General findings from the report concluded that:
  - rate regulated accounting is common practice for utilities;
  - the role of regulators, such as the BCUC, is critical in rate-regulated accounting;

- past government directions to the BCUC have inappropriately constrained the BCUC; and
- BC Hydro's net regulatory balance ($5.5 billion at March 31, 2018) is large compared to other utilities.

- The report recommended that "BC Hydro prepare its financial statements in accordance with Canadian Generally Accepted Accounting Principles, without modification."
- Concurrent with the preparation of the OAG's report, Government completed the first phase of a Comprehensive Review of BC Hydro (Phase 1), as per direction in the former Minister of Energy, Mines and Petroleum Resources' July 2017 Mandate Letter.
- The purpose of Phase 1 was to examine ways of keeping BC Hydro rates affordable and enhance regulatory oversight of BC Hydro by the BCUC.
- The outcomes of Phase 1 included actions that addressed OAG concerns:
  - On November 7, 2018, Part 3 of Regulation 257/2010 under the *Budget Transparency and Accountability Ac*t was repealed.
  - This regulation set out "prescribed standards" which did not require an independent regulator for BC Hydro's ongoing use of rate regulated accounting.
  - Once the regulation was repealed, the Comptroller General directed BC Hydro to fully adopt International Financial Reporting Standards (IFRS) for the fiscal year ended March 31, 2019, which is the appropriate basis of accounting for BC Hydro under Canadian Generally Accepted Accounting Principles.
  - BC Hydro subsequently prepared its 2018/19 financial statements accordingly, and its then-auditor, KPMG, confirmed these statements comply with IFRS.

- Phase 1 included several other actions that addressed OAG's concerns, including:
  - <u>Enhanced oversight of BC Hydro by the BCUC</u>: Several previous directions were repealed. The BCUC is being re-empowered to review BC Hydro's long-term Integrated Resource Plan, and will oversee BC Hydro's rates, projects and regulatory accounts on a go-forward basis.
    - Government will continue to judiciously direct BCUC on policy matters, for example, its April 1, 2019 direction to guide renewal of biomass energy purchase agreements, most of which are held by forest companies.
  - <u>Reducing BC Hydro's regulatory account balances</u>: the $1.1 billion balance of BC Hydro's former Rate Smoothing Regulatory Account was written off. Along with other mechanisms already in place to pay down regulatory accounts, the net

balance of regulatory accounts decreased from $5.2 billion on March 2018 to $4.2 billion by March 31, 2019.

- Additionally, BC Hydro filed an application for its 2018/19 and 2019/20 rates with the BCUC on February 25, 2019. BCUC review is ongoing and expected to conclude by late summer/early fall 2020. In this application, BC Hydro has proposed closing out two regulatory accounts, with up to six more forecast to be paid off and closed by 2024.
- The regulatory accounts are expected to be further paid down in coming years, with 25 of the remaining accounts to be paid down using mechanisms that are already included in rates.
- The exceptions are the Site C Development Costs (BC Hydro will apply to the BCUC to recover this account when Site C comes into service); the Mining Customer Payment Plan Account (which could grow in the short term if this program is extended); and the Customer Emergency Fund (which the BCUC approved in 2018).

Cross Reference: BC Hydro Phase 1 Review

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: British Columbia - Canada Memorandum of Understanding and Upstream Electrification

Revised: June 16, 2020

Issue: Reliable and affordable access to electricity for natural gas proponents is a key factor in achieving climate change goals

Response:

- Electrification of upstream natural gas production is critical to meeting British Columbia's (B.C.'s) greenhouse gas (GHG) emission targets.
- The CleanBC plan sets a goal to make B.C. industries the cleanest in the world by using clean electricity to displace fossil fuel use in the production of natural gas.
- The Province and BC Hydro have been working with the federal government to advance infrastructure projects that will facilitate electrification of industry.
- In August 2019, B.C. and Canada signed a Memorandum of Understanding (MOU) in support of electrifying B.C.'s natural gas and liquefied natural gas sectors.
- The MOU identifies three electrification projects for advancement: CleanBC Facilities Electrification Fund, Bear Mountain to Dawson Creek Voltage Conversion Project, and the North Montney Power Supply Project.
- These projects will build on the $83.6 million federal contribution to BC Hydro's Peace Region Electricity Supply (PRES) project, which was announced in 2018. PRES is expected to be in service in fall 2021 and could result in up to 2.6 mega tonnes of avoided GHG emissions.

Background/Status:

- New natural gas processing facilities (gas plants) are being constructed by multiple operators in northeast B.C. Additional gas plants that will be located in the North Montney are in the planning phase and, if developed, will be used to partially supply LNG Canada.
- Electrification of upstream natural gas extraction and processing avoids the significant GHG emissions associated with these activities.
- In December 2016, First Ministers announced the Pan-Canadian Framework on Clean Growth and Climate Change, which recognized the opportunity for

B.C.-Canada collaboration to bring clean grid electricity to natural gas operations in northeast BC.

- In 2017, the Government of Canada announced the $180 billion Investing in Canada Infrastructure Program (ICIP). To support evidence-based decision making with respect to the ICIP, NRCAN led the Western Regional Electricity Cooperation and Strategic Infrastructure Initiative (RECSI) to compare the most promising electricity infrastructure projects in the western provinces. The study showed that electrifying BC's upstream natural gas and downstream LNG sectors by adding new transmission infrastructure would be both cost effective and avoid significant GHG emissions.
- ICIP funds were distributed to provinces under an Integrated Bilateral Agreement (IBA) with the federal government. $265 million of federal Green Infrastructure funding has been allocated toward an Electricity Program for BC Hydro capital projects that reduce or avoid GHG emissions.
- The MOU continues the collaboration between the federal and provincial government on responsible resource development. Under the MOU, a Clean Power Planning Committee (CPPC), with senior representation from both B.C., BC Hydro and the federal government is working to advance investment in electricity infrastructure needed for upstream electrification.
- Membership of the CPPC is comprised of the following representatives:

FEDERAL	**PROVINCE/BC HYDRO**
Deputy Minister, Natural Resources Canada	Deputy Minister, Energy, Mines and Petroleum Resources
Deputy Minister, Intergovernmental Affairs and Youth, Privy Council Office	Deputy Minister, Intergovernmental Relations Secretariat
Deputy Minister, Environment and Climate Change Canada	Deputy Minister, Environment and Climate Change Strategy
Deputy Minister, Infrastructure Canada	Deputy Minister, Jobs, Economic Development and Competitiveness
CEO, Canada Infrastructure Bank	President and Chief Executive Officer, BC Hydro
Senior Advisor to Deputy Minister, Finance Canada	

- The CPPC will complete an interim report analyzing the three projects identified in the MOU by fall 2020 and will identify pathways to potential funding sources.
    - CleanBC Facilities Electrification Fund: Provides a contribution towards the customer's costs to connect to BC Hydro's grid and electrify their

operations where distance from transmission and cost would otherwise deter such investments.

- Bear Mountain-Dawson Creek Voltage Conversion Project: Enables additional natural gas producers in the Montney to connect to the BC Hydro grid.
- North Montney Power Supply Project: Enables electrification of natural gas production in the north Montney by bringing transmission infrastructure to an area in the province that currently has none.

s.12; s.13

- CPPC is enabled to explore other electrification and transmission expansion opportunities beyond the projects named in the MOU, such as electrification of large haul trucks at mines. The committee is also enabled to consider new and/or alternative financing models that can advance priority transmission projects, including ownership by Indigenous groups or the private sector.

Cross Reference: N/A

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Geothermal Energy

Revised: June 16, 2020

Issue: Geothermal Energy potential and issues.

Response:

- British Columbia (BC) has several promising geothermal energy prospects.
- The financial risk, high cost and long development time required has made geothermal development less attractive than other clean energy sources. To encourage geothermal development, the Ministry has issued or extended a number of geothermal tenures within the past year, including one for the Fort Nelson First Nation at Clarke Lake, and is working on a competitive royalty regime that recognizes the risks taken on by developers.
- BC Hydro is currently, and is forecast, to have a surplus of electricity into the 2030's. Electricity generated from geothermal resources could provide a significant source of both renewable energy and firm capacity for BC in the future.
- Direct-use projects, where heat is used directly for commercial or industrial purposes, can provide an alternative to natural gas combustion localized near geothermal prospects.

Background/Status:

- Under the *Geothermal Resources Act* (GRA) of 1982, geothermal resources are defined as water or steam that is greater than 80°C when produced at surface.
- The GRA and regulation:
    - vest ownership of all geothermal resources in BC with the Crown;
    - regulate exploration for, and the development and use of, these resources through permits and leases;
    - set out a framework for the disposition of geothermal resources based on a bid system similar to petroleum resources; and
    - allow geothermal resources to be issued through an agreement approved by the Lieutenant Governor in Council (LGIC).
- Geothermal permits confer the subsurface rights to the tenure holder for the purposes of exploration. Geothermal permits are one year in length and may be renewed up to seven times through an administrative process. If a permit holder

discovers a geothermal resource through the drilling of a well, they may apply for a geothermal lease which allows development and production of the resource.

Active Tenure:

- There are four active geothermal permits and a single geothermal lease in BC.

1. Clarke Lake - Fort Nelson

- This exploration permit was awarded through an agreement approved by the LGIC to the Deh Tai GP, a development corporation of the Fort Nelson First Nation, in January 2020.
- The proposal is to utilize the geothermal resource underlying the Clarke Lake Gas field to generate up to 5 to 15 MW of electricity. Fort Nelson First Nation have partnered with the Saulteau First Nations who have an opportunity for an energy purchase agreement with BC Hydro related to an Impact Benefits Agreement.
- Fort Nelson is not integrated into the provincial electricity transmission system, any renewable generation in the area offsets electricity generated by natural gas or imported from Alberta.
- Unlike most geothermal prospects in BC, the geothermal resource at Clarke Lake has been confirmed by data collected from past petroleum exploration and development wells.

2. Canoe Reach – Valemount

- Borealis Geopower has two geothermal permits at Canoe Reach on the Kinbasket Reservoir.
- The original permit was acquired at auction in October 2010. The former Minister of Energy, Mines and Petroleum Resources approved the renewal for a further year in December 2019.
- Borealis' second permit was issued in November 2017, after approval of an agreement by the LGIC.
- Borealis drilled a single exploration well on the permit in the summer of 2019 with the activity overseen by the BC Oil and Gas Commission.
- This area is still considered an exploration prospect, no geothermal resource has been confirmed at this time.

3. Lakelse - Terrace

- Borealis Geopower in partnership with the Kitselas First Nation acquired a geothermal permit at auction in January 2014.

- The developer has proposed to serve heat and power to the neighboring Skeena Industrial Development Park.
- No wells have been drilled or are authorized at this time; the area is considered an exploration prospect.

4. Lillooet Valley – Mount Meager

- Tecto Energy acquired at auction the geothermal permit on the north side of Mount Meager near Pemberton in July 2011.
- The site is highly prospective, first explored by BC Hydro in the 1980's.
- A heat and power project serving a greenhouse has been proposed by the proponent.

Lease at Mount Meager

- The only geothermal lease in BC was first issued in 1987 to BC Hydro on the south side of Mount Meager.
- Several wells have been drilled at Mount Meager; the most recent in 2004. The wells have confirmed a heat resource but have not encountered a commercially viable reservoir.
- The lease, currently held by Polaris Infrastructure, was renewed in December 2017 under the terms of the lease for an additional 20-year term.

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: BC Utilities Commission Indigenous Utility Inquiry

Revised: June 16, 2020

Issue: Government has asked the BC Utilities Commission (BCUC) to provide recommendations on if and/or how Indigenous utilities should be regulated as public utilities

Response:

- Indigenous communities have expressed interest in setting up public utilities to provide the types of energy products and related services that are typically regulated by the BCUC under the *Utilities Commission Act (UCA)*.
- Some of these communities have raised concern that Indigenous utilities would be regulated by the BCUC, whereas municipal public utilities are exempt from BCUC oversight.
- To resolve this discrepancy and support Indigenous Nations in advancing their economic development goals, Government requested advice from the BCUC.
- In response, the BCUC initiated a province-wide process in March 2019 to seek the views of Indigenous people, existing public utilities and others.
- We received the BCUC's final report and recommendations on April 30, 2020.
- The BCUC's recommendations are complex, and the BCUC has intended them to be a starting point for further discussion. Government will need time to assess the recommendations and next steps. Our next steps will include further discussion with Indigenous Nations, existing public utilities, and stakeholders.

Background/Status:

- There has been a growing interest from Indigenous communities in forming utilities to provide energy services on their land, and to create new sources of revenue.
- At the same time, there is uncertainty on how these Indigenous utilities should be regulated, if at all. Under the *UCA*, local governments are exempt from BCUC oversight.
- On March 11, 2019, Cabinet directed the BCUC to initiate an inquiry into the regulation of Indigenous public utilities in BC.

- The Order in Council laid out a Terms of Reference requiring the BCUC to provide recommendations on the following questions:
  1. What defines an Indigenous utility?
  2. Should Indigenous utilities be regulated under the *UCA*?
  3. If the answer to 2 is yes, what kind of framework should be applied?
  4. If the answer to 2 is no, what does the BCUC recommend for ensuring that ratepayers are protected?
- The BCUC subsequently initiated a proceeding to explore these issues with Indigenous people and others. The BCUC has carried out 11 Community Input Sessions and 8 Draft Report Workshops throughout BC, and included participation from 21 Registered Interveners, 18 Interested Parties, 12 Letters of Comment, and feedback from representatives of more than 50 different First Nations groups.
- The BCUC delivered a Draft Report in November to the public and provided an additional summary to the former Minister of EMPR in December 2019.
- Government extended the Final Report deadline, from January 31 to April 30, 2020, to enable BCUC to workshop the Draft Report further with Indigenous people. The Final Report and recommendations were delivered to the Minister on April 30, 2020.
- The Final Report includes 35 recommendations, including:
  - Utilities that are majority owned/controlled by Indigenous Nations should be considered Indigenous utilities; and
  - Indigenous utilities should be regulated by any competent utility regulator (doesn't have to be BCUC) that is at arms-length from the utility following best practices of ratepayer protection and complaints/appeals.
- EMPR will engage with colleagues in other Ministries (including staff within the Ministry of Indigneous Relations and Reconcilation the Ministry of Attorney General's tribunal transformation group, and legal counsel), BC Hydro and other utilities, and Indigenous people to:
  - Review the feasibility of each recommendation and alignment with government policy before making final recommendations on which of the BCUC's recommendations could be adopted by the Province.
  - Develop a proposed framework for regulation of Indigenous utilities that is consistent with the Province's reconciliation priorities, and legal obligations under the Declaration of the Rights of Indigenous Peoples Act, as well as public utility regulation best practices; and

- Develop implementation strategies, which may include proposed legislative or regulatory changes.

Next Steps:

- Both the BCUC and EMPR staff agree that the Final Report from the Inquiry is only a starting point for the development of government policy respecting the regulation of Indigenous utilities. A significant amount of work is required to analyse the recommendations outlined in the Final Report and develop final recommendations to government.
- A summary-level analysis will be brought to the Cabinet Committee on Reconciliation in Summer 2020.
- Because of the linkages with other government priorities and policies, EMPR staff are conducting further analysis regarding the challenges underlying some of the BCUC's recommendations, and laying out a strategy for engaging with Indigenous Nations, public utilities, and potentially others, to inform advice re: the adoption and implementation of any outstanding BCUC recommendations (as appropriate).
- EMPR staff plan to present those recommendations to Government in Spring 2021. This framework may include recommendations for legislative changes to the *UCA* and/or *Clean Energy Act,* as well as steps Government could take to support capacity building among Nations interested in developing public utilities.

Contact:

Les MacLaren	Assistant Deputy Minister	Alternative Energy and Electricity Division	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Municipal Utility Inquiry

Revised: June 16, 2020

Issue: British Columbia Utilities Commission Inquiry into the Regulation of Municipal Energy Utilities

Response:

- Local governments will play a critical role in the achievement of government's CleanBC plan in areas such as developing new clean energy sources, supporting active and cleaner transportation options and helping British Columbia (BC) transition to zero waste.
- Municipalities and regional districts that directly deliver energy services to their residents are not subject to British Columbia Utilities Commission (BCUC) oversight under the *Utilities Commission Act* (UCA).
- Local governments are exploring opportunities to partner or otherwise affiliate with third parties in the delivery of energy services. Depending upon the nature of the arrangement and any ratepayer protections that exist under the arrangement, it may be appropriate for these arrangements to be exempt from some or all aspects of BCUC oversight.
- In response to local government inquiries and several recent proceedings, the BCUC has commenced an inquiry to examine oversight issues related to ownership structures and operational arrangements of utilities affiliated with municipalities and regional districts.
- I support the BCUC in its examination of these issues and will be pleased to consider any requests or recommendations to government resulting from the inquiry.
- On March 17, 2020, the BCUC adjourned the inquiry due to COVID-19 and suspended any additional process until further notice.

Background/Status:

- Section 1 of the UCA states that a "public utility" does not include "a municipality or regional district in respect of services provided by the municipality or regional district within its own boundaries." This "municipal exclusion" means that BCUC

oversight, and other requirements of the UCA, do not apply to these entities when they deliver energy services within their boundaries.

- Some local governments are looking to expand the energy services they offer to their residents to achieve environmental and economic benefits.
- Local governments often wish to partner or contract with a third party to deliver energy services. Depending upon the ownership and operating structure that is developed, these arrangements may or may not fall within the current municipal exclusion. If an arrangement falls outside of the municipal exclusion, the delivery of energy services will be subject to oversight by the BCUC.
- The BCUC routinely receives questions from local governments as to whether a proposed arrangement is within the municipal exclusion. The BCUC has also considered the extent of the municipal exclusion in several recent proceedings.
- On August 1, 2019, the BCUC established an inquiry to examine the regulation of energy utilities affiliated with municipalities and regional districts (the Inquiry).
- The Inquiry will explore issues related to ownership structures and operational arrangements of utilities affiliated with municipalities and regional districts, including the appropriate regulatory status of such organizations under the UCA.
- Upon the completion of the Inquiry, the BCUC will consider whether to:
    - seek advance approval from the Government of BC to offer a class of cases exemption to municipalities and regional district energy systems in certain circumstances; and/or
    - make a recommendation to the Government of BC to review the definition of a “public utility” within the UCA as it relates to such entities.
- Following an opportunity for initial intervener written submissions and letters of comment, on January 28, 2020 the BCUC established a regulatory timetable for further phases of the Inquiry. Originally, the timetable which included an opportunity for intervener evidence submissions (ending April 1, 2020) and information requests (ending August 20, 2020), with further process to be established.
- In its January 28, 2020 order, the BCUC provided additional guidance to interveners regarding the evidence that the BCUC might find useful. The list includes evidence regarding the benefits or risks of removal of the municipal exclusion. This has raised concerns among some local government interveners who currently deliver energy services to their residents. BCUC staff advise that the intention of the additional guidance is to ensure a fulsome evidentiary record for the Inquiry. It does not mean that the BCUC is considering making recommendations to government to remove the current municipal exclusion.
- On March 17, 2020, the BCUC adjourned the inquiry due to COVID-19 and suspended any additional process until further notice.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Tiered Residential Rates and Income Impacts

Revised: June 16, 2020

Issue: Tiered residential electricity rates modestly lower most customers' bills but can significantly increase bills for customers with higher than average use

Response:

- Tiered electricity rates in British Columbia (B.C.) are designed to encourage electricity conservation.
- Some consumers feel that these rates are unfair to customers with electric heat and discourage adoption of electric vehicles.
- Any change to rate structures to benefit some customers will increase rates for others.
- Changes to rate structures are made through public processes before the British Columbia Utilities Commission (BCUC), to ensure that all ratepayers' interests are considered.
- The BCUC approved FortisBC's proposal to phase out its Residential Conservation Rate over five years resulting in a single flat rate in 2023.
- BC Hydro will examine alternatives to its tiered Residential Inclining Block rate in its next Rate Design Application.
- As part of Phase 2 of the Comprehensive Review of BC Hydro, BC Hydro will be applying to the BCUC for alternative rate designs.

Background/Status:

- Both BC Hydro and FortisBC currently have two-tiered rates for residential customers based on electricity consumption.
- Customers are charged one rate for electricity up to a certain threshold in each billing period, and a higher rate for all electricity use beyond that threshold. This "tiered" rate is designed to reflect approximate long-term costs of new supply to encourage conservation.
- Charges for FortisBC's Residential Conservation Rate (RCR) residential rates are as follows:
  - Customer Charge $34.56 based on 60-day billing period;
  - First 1,600 kWh are billed at 10.799¢ per kWh; and
  - Additional kWh are billed at 14.320¢ per kWh.

- This is similar in design and intent to BC Hydro's Residential Inclining Block (RIB) rate. BC Hydro's RIB rate is lower and is currently:
  - Customer basic charge of 20.69¢ per day;
  - Step 1 is 9.35¢ per kWh for the first 1,350 kWh in an average two-month billing period (22 kWh per day); and
  - Step 2 is 14.03¢ per kWh over the 1,350 kWh Step 1 threshold.
- BC Hydro's rate is an interim rate, based on a net increase of 1.8% in April 2019 and a 1% decrease in April 2020. The BCUC has approved these rate changes on an interim basis and is expected to make a final determination in summer/fall 2020.
- Single-family homes, those heated with electricity, and those with pools, hot tubs, electric vehicle service equipment, poor insulation, and secondary suites are among the types of residences that are likely to use more power and experience higher electricity bills under FortisBC's RCR and BC Hydro's RIB rates.
- Some customers believe that if they have consumption in the higher second tier they are being penalized. Customers can have considerable annual consumption at the higher Tier 2 rate (about 40%) and still be better off than under the former flat rate. Customers with a Tier 2 consumption greater than 40% are worse off.
- In its decision on FortisBC's 2017 Rate Design Application, and with the support of most of FortisBC's customer groups, the BCUC approved FortisBC's plan to phase out the RCR over five years resulting in a single flat rate in 2023.

Alternative Rate Designs:

s.13

- As part of the second phase of the Comprehensive Review of BC Hydro, the Ministry of Energy, Mines and Petroleum Resources, Ministry of Environment and Climate Change Strategy, BC Hydro, and energy industry experts have been looking at rate designs that could support CleanBC.
- The Phase 2 Interim Report notes that the two-tier rate structure made sense when BC Hydro was in deficit and cost of additional electricity supply was much higher than it is today.
- It also notes that optional rates, such as an optional time of use rate, an interruptible rate allowing BC Hydro to manage hot water heating, or a discounted rate for heat pumps, could provide customers with more choice, make electricity more affordable, and reduce emissions.
- BC Hydro is conducting preliminary analysis on alternative rate designs as part of the Phase 2 Review. Based on feedback from the Review, further analysis, and engagement with stakeholders and customers, BC Hydro will determine which optional rates to pursue in a BCUC rate design application process.
- It is ultimately a BCUC decision whether to approve BC Hydro's rate design proposals.

Impacts of Tiered Rates at Different Incomes:

- While energy use is not strongly associated with income in B.C., customers with higher energy use pay more under inclining block rates.
- The BCUC's 2017 Residential Inclining Block Rate report (RIB Report) found that most FortisBC customers paid lower rates under the RCR in every income bracket, although a somewhat higher proportion of households with at least $80,000 in household income paid higher bills under tiered rates.
- The same report found some correlation between income and electricity consumption across most income groups for BC Hydro.
- BC Hydro customers with household income of less than $20,000 were likely to have lower than average consumption and households with income of $120,000 or more were likely to have higher than average consumption; however, some customers in each income bracket consumed in the highest use bands.
- Overall, BC Hydro's input to the RIB Report found that nearly 90% of its low-income customers paid lower bills under the RIB rate, 7% paid higher bills, and 1% had bills more than 10% higher as a result of the RIB rate.
- The smaller group of BC Hydro customers with low incomes and high energy consumption may be particularly impacted by the RIB rate. In its evaluation report for the first year of the Customer Crisis Fund (CCF), submitted to the BCUC in 2019, it noted that the average CCF applicant used over 15,000 kWh

per year. For BC Hydro's customers, the average consumption was under 10,000 kWh per year.

- The majority of CCF applicants were among the highest-consumption quarter of BC Hydro customers while only 4% of applicants were among the lowest-quarter.
- When FortisBC applied to the BCUC flatten its tiered rate structure in 2017, the BC Old Age Pensioners Association and other anti-poverty groups supported the proposal.
- In its decision to phase out FortisBC's tiered rate, the BCUC found that the bill impacts of moving to a flat rate were adequately addressed by FortisBC's proposed five-year transition to a flat rate.
- BC Hydro and FortisBC each have energy efficiency programs to help with low-income affordability.
- Both utilities offer free energy savings kits to help low-income homes reduce their energy use, as well as an Energy Conservation Assistance Program to provide advice on saving energy and free installation of energy-saving products.
- BC Hydro's Customer Crisis Fund provides grants to qualifying customers experiencing a temporary financial crisis, such as loss of employment or benefit income, unanticipated medical expenses, or a death in the family and who have fallen behind on their BC Hydro bills.

Cross Reference: 09 BC Hydro Phase 2 Review

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: CleanBC Remote Community Energy Strategy

Revised: June 16, 2020

Issue: Supporting remote communities to reduce diesel consumption

Response:

- CleanBC includes the goal of reducing diesel consumption for electricity generation in remote communities by 80% by 2030.
- The Remote Community Energy Strategy (RCES) includes three streams of action to pursue this goal:
    - Build community capacity to champion and lead energy efficiency and clean energy projects;
    - Support community efforts to improve energy performance and minimize emissions in new and existing buildings; and
    - Implement renewable energy projects to offset diesel generation.
- Budget 2019 included $15 million for RCES, focused on renewable energy projects. The Ministry used these funds to launch the Renewable Energy for Remote Communities (RERC) program to help communities offset the capital costs of renewable electricity projects that displace diesel generation.
- RERC is delivered by Coast Funds to First Nations located in the Great Bear Rainforest and Haida Gwaii regions. The Fraser Basin Council is responsible for delivering the RERC program with all other remote communities in British Columbia.
- The first intake concluded in December 2019, receiving a total of $19.7 million in funding requests. In March 2020, $13.8 million was awarded to four projects in remote, Indigenous communities, setting aside $2.5M for a second intake in Fall 2020. All fully-funded projects are moving ahead with construction this summer despite delays due to COVID 19.
- Ministry staff estimate that $80 million in incentive funding will be required by remote communities to cover capital funding gaps for renewable electricity projects scheduled for construction in the next three years. Further funding will be required once early-stage projects move towards construction.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- The Community Clean Energy Branch (CCEB) is working to develop and implement RCES in collaboration with the Ministry of Indigenous Relations and Reconciliation and the Climate Action Secretariat, as well as key partners including BC Hydro, Indigenous Services Canada, and Natural Resources Canada.
- RCES focuses on communities served by the 22 largest diesel-powered generation stations: Twelve are served by BC Hydro (non-integrated areas) and ten independent stations are supported by Indigenous Services Canada (ISC).
- In 2019, BC Hydro NIA stations consumed about 19.1 million litres of diesel fuel, resulting in 51,784 tonnes of greenhouse gas (GHG) emissions. In 2019, independent stations consumed approximately 2.7 million litres, resulting in approximately 7,218 tonnes of GHG emissions.
- RCES objectives are aligned with the B.C. Indigenous Clean Energy Initiative, the CleanBC Communities Fund, the Community Energy Leadership Program and the First Nations Clean Energy Business Fund.

Cross Reference: BC Indigenous Clean Energy Initiative

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity and Alternative Energy	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: British Columbia Indigenous Clean Energy Initiative

Revised: June 16, 2020

Issue: Supporting early stage development of clean energy projects in Indigenous communities

Response:

- The BC Indigenous Clean Energy Initiative (BCICEI) provides early-stage clean energy project development and capacity-building funding for Indigenous communities.
- The BCICEI is administered by the New Relationship Trust (NRT), which has partnered with Western Economic Diversification Canada and the Province for three funding intakes.
- CleanBC has provided $5 million in total to BCICEI, alongside a $4.5 million contribution from WD, funding the program through March 2022.
- The most recent CleanBC-suported BCICEI intake closed in January 2020, with 39 applications requesting $8.6 million in funding. The Advisory Committee recommended the awarding of $2.7 million to 13 clean energy projects proposed in Indigenous communities across BC. Successful applicants will be announced in summer 2020.
- The BCICEI funds projects that reduce energy bills and increase community resiliency. The Advisory Committee paid close attention to opportunities for COVID-19 economic recovery when selecting projects for approval.
- The next intake is planned for early 2021. A program evaluation underway will inform program priorities and proposals for recapitalization.

Background/Status:

- The BCICEI is an established program launched in 2016 that is supported and well respected by British Columbia's Indigenous communities.
- To date, five BCICEI funding intakes have been completed, with over $8 million invested in 57 projects (the last two intakes included CleanBC funding).
- Treasury Board staff approved a fiscal 2019 contribution of $1.5 million from contingencies for the Ministry of Energy, Mines and Petroleum Resource's initial investment to ensure continuation of the program, with an additional $3.5 million in base funding in fiscal 2020, for a total contribution of $5 million.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Building on the success of the existing program, CleanBC funding extends the BCICEI for three years.
- Funding from the BCICEI supports the planning of clean energy generation projects, such as hydro, wind, biomass, solar, marine, and geothermal projects. The BCICEI also supports energy efficiency projects and energy storage.
- Funding through the BCICEI supports Indigenous nations' clean energy projects through feasibility and site selection activities; environmental review and permitting; project design and engineering; demand side management; Clean Energy (small scale installation/non-utility scale); and Pre-Construction/Pre-Commercial Operating Date (COD).
- BCICEI supports clean energy developments in remote, off-grid, diesel dependent or end of line communities.

Cross Reference: Remote Community Energy Strategy

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity and Alternative Energy	778-698-7183

Approved ICE Fund Projects / Special Account Administration

		2019/20	2020/21	2021/22	2022/23	2023/24
Forecast Balance at beginning of fiscal year		2.281	4.538	7.342	10.516	13.690
Levy Revenue Estimate		5.500	5.500	5.500	5.500	
	Total	7.781	10.038	12.842	16.016	
Approved Budget 2020						
ICE Fund Portfolio - Allocated Funding		1.057				
SDTC Partnership		1.679	2.279	0.400		
Unallocated funding *				1.502	1.902	
Special Account Administration / RLCFRR Auditor Position		0.507	0.417	0.424	0.424	
	Total	3.243	2.696	2.326	2.326	

	Approved Year-End Increased Expenditures			
	2019/20	2020/21	2021/22	2022/23
ICE Fund / SDTC Joint Call Partnership - Tranche 2 Projects				
Canfor Pulp Ltd.		0.800	0.200	
Clir Renewables Inc.				
Consolidated Biofuels Ltd.				
Ionomr Innovations Inc.		0.679		
MineSense Technologies Ltd.		0.800	0.200	
ICE Fund / SDTC Joint Call Partnership - Tranche 3 Projects**				
Advanced Intelligent Systems (SDTC Approved)	0.950			
Cryologistics Refrigeration (SDTC Approved)	1.439			
Nano One (SDTC Approved)	3.033			
RecycleSmart (SDTC Approved)	0.606			
s.16; s.21			s.16; s.21	
Subtotal	6.028	2.279	1.902	1.902
Special Account Administration & RLCFRR Auditor		0.417	0.424	0.424
Total	6.028**	2.696	2.326	2.326

s.16; s.21

** Ministry Vote, from CleanBC Contingencies not ICE Fund revenue.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Joint Call Partnership between Sustainable Development Technology Canada (SDTC) and the Innovative Clean Energy (ICE) Fund

Revised: June 16, 2020

Issue: Joint Call Partnership between SDTC and the ICE Fund to support the development of pre-commercial clean-energy projects and technologies.

Response:

- Under the Pan-Canadian Framework on Clean Growth and Climate Change, British Columbia (BC) and the Government of Canada agreed to work together to spur the development and commercialization of new technologies that will reduce emissions and create jobs for Canadians.
- On March 13, 2017, British Columbia and Canada announced a $40 million partnership to support the development of pre-commercial clean-energy projects and technologies, designed to run until March 31, 2020. The $20 million provincial contribution is from the Innovative Clean Energy (ICE) Fund. The federal contribution is provided through the SD Tech Fund managed by SDTC. The requirement was that at least a further $20 million will be leveraged from the private sector.
- The parties launched a joint call over an initial three-year continuous intake period in April 2017 to seek out clean energy projects and technologies to mitigate or avoid provincial greenhouse gas (GHG) emissions, including prototype deployment, field testing and commercial-scale demonstration projects.
- A streamlined and harmonized application process provides companies with a single-window approach to access funding from both the provincial and federal governments to support the development and demonstration of emerging clean technologies in BC.
- The partnership enables the leveraging of federal funds in a 1:1 ratio to fund clean energy technologies, and a minimum of 2:1 leveraging ratio including federal and industry contributions.
- The partnership with SDTC has continued beyond its initial three year term and is a signal to other federal funding agencies (e.g. Natural Resources Canada; Innovation, Science and Industry Canada; Transport Canada) that the Province is interested in developing further relationships to undertake investments in clean energy and GHG reduction projects.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The February 11, 2020 mandate letter to Honourable Bruce Ralston directed the Minister to "Invest in promising new energy technologies, clean technology, and climate change solutions through the Innovative Clean Energy program."

Background/Status:

- The ICE Fund is a Special Account designed to accelerate the marketability of emerging clean energy technologies with its own statutory funding authority.
- SDTC is a policy delivery foundation for the Government of Canada with a mandate to deliver environmental and economic benefits to Canada. Its focus is on the development and demonstration of technological solutions that address clean air, climate change, clean water and clean soil.
- Funding for the ICE Fund Special Account comes via a 0.4 percent levy applied to the sale of specified "energy products" (primarily natural gas). The levy is forecast to generate approximately $5.5 million in 2020/21. Any spending below forecast revenues increases the balance available in future years.
- In Fiscal 2017/18 Treasury Board approved the first partnership project - $2 million in support of D-Wave Systems Inc., of Burnaby for the development of a Next-Generation Quantum Computer.
- In November 2018 Treasury Board approved an increased spend in 2018/19 from the ICE Fund special account of up to $4.427 million for five partnership projects. This increased spend was fully expensed in 2018/19.
- Treasury Board also approved at that time a three-year spending plan for the ICE Fund of $8.223 million (including administration costs of $0.403 million per year) under Budget 2019, of which $4.357 million is allocated to three of the Partnership projects approved in November 2018 as detailed in Table A and Table B of Attachment 1. The Ministry was also directed to prioritize $1.502 million in unallocated funding in the ICE Fund in 2021/22 toward projects that advance under the Province's partnership with SDTC.
- On March 26, 2020 Treasury Board approved $6.028 million from CleanBC 2019-20 Contingencies towards the Partnership with SDTC, with specific project approvals conditional on SDTC's joint project approval. This funding was to be fully expensed in 2019/20 and along with $3.404 million in unallocated funding appropriated for ICE Fund in 2021/22 and 2022/23 ensures the province will meet its $20 million commitment
- In addition to enabling the ICE Fund to leverage federal investment, the partnership allows the Ministry to benefit from SDTC's additional resources for conducting due diligence and expert reviews during the project evaluation process, while maintaining independent decision-making authority and governance requirements.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Current Joint-Call Status

- The ICE Fund has committed $17.112 million in funding through 2021/22 towards eleven projects. SDTC has committed $46.187 million to these eleven approved projects. The total project cost exceeds $215 million.
- In Fiscal 2017/18 Treasury Board approved $2 million in support of D-Wave Systems Inc., of Burnaby for the development of a Next-Generation Quantum Computer. SDTC is contributing $10 million and total project costs are $56 million. ICE Fund support for this project was announced in December 2018.
- Treasury Board approved five projects in November 2018:
    - Canfor Pulp – Pulp Mill Biocrude Demonstration Project. ICE Fund is contributing $2 million and SDTC $13 million. Total project costs are $90 million.
    - Clir Renewables – Software-as-a-service to increase energy production at wind farms ICE Fund contributing $1.494 million and SDTC $1.494 million. Total project costs are $8.83 million.
    - Consolidated Biofuels – Production of polyurethane from bio-based organic feedstock rather than from traditional petrochemicals. ICE Fund is contributing $0.933 million and SDTC $0.933 million. Total project costs are $3.09 million.
    - Ionomr Innovations – Demonstration of alkaline anion-exchange membranes: a platform for efficient, cost-effective clean energy generation, storage, and advanced wastewater treatment. ICE Fund is contributing $2.357 million and SDTC $2.357million. Total project costs are $8.69 million.
    - MineSense Technologies Ltd. – Develop and demonstrate next generation multi-model sensing systems for integration into mining operations enabling more effective optimization of resource value for both underground and surface mining operations. ICE Fund is contributing $2 million and SDTC $2 million. Total Project costs are $16.24 million.
- $6.028 million in funding for the Partnership was approved by Treasury Board on March 26, 2020 from CleanBC Contingencies, to be fully expensed in 2019/20 and transferred to SDTC for administration in support of specified projects where SDTC's own project approval was in place by March 31, 2020. Six projects were specified, of which five were approved by SDTC by March 31. Funding could only be transferred by the province by March 31, 2020 in support of projects where SDTC had provided the province with an executed Project Funding Agreement (PFA). Four executed PFAs were provided by SDTC and $6.028 million was transferred in support of those projects. A fifth project was approved by SDTC's Board of Directors but the PFA was still under development on March 31.

- $0.300 million from ICE Fund's appropriated $1.502 funding in 2021/22 has therefore been committed in support of the fifth project. This is in line with the March 26, 2020 Treasury Board specified projects decision and the November 2018 Treasury Board directive to prioritize unallocated funding in the ICE Fund in 2021/22 toward projects that advance under the Province's partnership with SDTC.

- Together this funding of $6.328 million is in support of the five specified and approved projects as detailed in Table C of Attachment 1: ICE Fund 2019/2020 - 2022/23 Committed Project Expenditures.
- The five approved projects represent $6.328 million in support over three years with total project costs of $40.907 million. SDTC contributions total $14.355 million:
    - Advanced Intelligent Systems (SDTC Approved) – Development of an autonomous, driverless battery-driven cart pulling system for outdoor on-site transportation of carts/wagons in a plant nursery. ICE Fundt: $950,000 SDTC $2,240,000 Total Estimated Project Cost: $5,617,356.
    - Recyclesmart (SDTC Approved) – Development of a multi sensor driven cloud-based system that gathers data from commercial and industrial waste and recycling bins. ICE Fund $606,161 and SDTC $1,676,380. Total Estimated Project Cost: $4,198,228.
    - Nano One, Vancouver (SDTC Approved) – Development of a scalable industrial process for producing low-cost high-performance battery materials for electric vehicles. ICE Fund $3,033,000 and SDTC $5,000,000. Total Project Costs are $14,755,566.
    - Cryologistics (SDTC Approved) – Development and demonstration of a carbon-dioxide refrigeration technology to reduce emissions in the high-value cold freight transportation sector (pharmaceuticals and high-value food). ICE Fund $1,438,645 and SDTC $1,438,645. Total Estimated Project Cost: $5,017,917.
    - s.16; s.21 s.16; s.21 ICE Fund $300,000 and SDTC $4,000,000. Total Estimated Project Cost: $11,317,963.
    - The balance of $3.104 million in ICE Fund spending plan appropriations in 2021/22 - 2022/23 exceeds the $2.888 million outstanding to meet the province's $20 million partnership commitment with the federal government.

- There is an additional specified project from the March 26, 2020 Treasury Board Decision that is currently in due diligence under the Partnership, which should it be approved under the Joint Call would be funded in line with the March 26, 2020

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Treasury Board decision and the Treasury Board directive of November 2018 by accessing unallocated appropriated funding available in 2021/22 and 2022/23:
s.16; s.21

s.16; s.21 The ICE Fund request is $3,000,000 and SDTC Funding is $3,000,000. Total Estimated Project Cost: $57,050,000.

Attachment 1: Joint Call 2017/2018 to 2019/20 Overview; Tables A, B and C (ICE Fund 2019/2020 - 2022/23Committed Project Expenditures)

Cross Reference: **Innovative Clean Energy Fund**

Contact:

Les MacLaren	Assistant Deputy Minister	Electricity & Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

ATTACHMENT 1:

Table A: Joint Call 2017/2018 - 2020/21 Approved Projects

Sustainable Development Technology Canada (SDTC) Partnership	**Project**	**Total ICE Fund Expenditure ($ millions)**
D-Wave Systems Inc. (2017/2018)	Next-Generation Quantum Computer	2.000
Canfor Pulp	Pulp Mill Biocrude	2.000
Clir Renewables	Software to increase energy production at Wind Farms	1.494
Consolidated Biofuels	Polyurethane from biobased organics	0.933
Ionomr Innovations Inc.	Membrane technology for clean energy systems	2.357
MineSense Technologies	Sensor systems and data optimization for mining	2. 000
Advanced Intelligent Systems	Autonomous, battery-driven cart puller for plant nurseries	0.950
Recyclesmart	Hardware system for Optimizing garbage collection and diversion to recycling	0.606
Nano One	Low-cost high-performance battery materials for electric vehicles	3.033
Cryologistics	Cryogenic pallet container for cold storage	1.439
s.16; s.21		0.300
Total		**17.112**

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Table B: Joint Call 2020/2021 and 2021/22 Spending Overview

ICE Fund / SDTC Joint Call Partnership	Expenditure ($ Millions)	
	2020/21	**2021/22**
Canfor Pulp Ltd.	0.800	0.200
Ionomr Innovations Inc.	0.679	
MineSense Technologies Ltd.	0.800	0.200
s.16; s.21		0.300
Total	**2.279**	**0.700**

Table C: ICE Fund Committed Project Expenditures - Treasury Board Decision March 26th 2020

Specified Joint Call Partnership Projects	Project	Expenditure ($ millions)
Advanced Intelligent Systems (SDTC Approved)	Autonomous, battery-driven cart puller for plant nurseries	0.950
Recyclesmart (SDTC Approved)	Hardware system for Optimizing garbage collection and diversion to recycling	0.606
Nano One (SDTC Approved)	Low-cost high-performance battery materials for electric vehicles	3.033
Cryologistics (SDTC Approved)	Cryogenic pallet container for cold storage	1.439
Total Project Funding Approved from CleanBC Contingencies 2019/20		6.028
s.16; s.21		0.300 in 20221/22
Total Project Funding		**6.328**

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: CleanBC

Revised: June 16, 2020

Issue: CleanBC

Response:

- CleanBC sets out the pathway to integrate the Province's vision for clean economic development, sustainable energy production and use, and reducing greenhouse gas emissions (GHG).
- CleanBC actions have been modelled showing nearly 17 million tonnes (Mt) of GHGs being reduced by 2030, getting BC 79 per cent of the way to its 2030 target. This puts BC on a path to reduce emissions by 80 per cent by 2050, in line with Canada's commitment under the Paris Agreement.
- CleanBC includes actions across key sectors that represent the majority of B.C.'s GHG emissions – transportation, buildings, and industry.
- In Budget 2020, Government announced an additional $419 million in funding to support CleanBC over the next three years.
- The Climate Solutions Council provides independent advice to Government on CleanBC to strengthen our actions moving forward.
- In February 2020, Government released the 2019 Climate Change Accountability Report for CleanBC which outlines progress over the first year of CleanBC implementation.

Background/Status:

- CleanBC is a collaborative effort of many ministries across the B.C. Government. The plan was launched December 5, 2018, with a positive reception from stakeholders and the media.
- The plan was developed in collaboration with the Green Party Caucus and is a key commitment in the Confidence and Supply Agreement.

Transportation – Early Signs of Success:

- More zero-emission vehicles (nearly 9% of light duty sold in 2019/ *ZEV Act*);

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- More and cleaner public transit (27% rider increase since 2007, 14 new e-buses in 2019, two battery-hybrid ferries with four more by 2022);
- Developing a plan to increase renewable fuel production in BC and the proportion of renewable content in fuels;
- In June 2019 launched the Active transportation engagement and strategy to help people get out of their cars and "Move. Connect. Commute.".

Cleaner Industry – Early Signs of Success:

- Reported industrial emissions down 7%, while economy grew over 18% since 2012;
- Oil and gas methane emissions down 17% from 2014;
- Investing in new technology through the Clean Industry Fund;
- Developing a Hydrogen Roadmap to decarbonize BC's energy systems;
- Developing a BC Bioenergy Strategy to reduce GHGs by turning organic waste (agricultural, forestry, and municipal) into products and energy;
- Implementing regulatory approaches to make residential and industrial natural gas cleaner by putting in place a minimum requirement of 15 % renewable content by 2030;
- The Province and the Business Council of British Columbia are developing a Low Carbon Industrial Strategy to boost business investment and build a strong, identifiable low-carbon brand for BC.

Buildings and Communities – Early Signs of Success:

- Progress on the BC Building Code and widespread adoption of the Energy Step Code;
- Updated and expanded Better Homes, Better Buildings program, including offers for commercial new construction, specialized support for small businesses, indigenous and non-indigenous communities, and incentives for low-income households.
- A steady increase in use of our free Energy Coaching service, with an average of 35 inquiries per day in the past six months.
- Since 2007, residential energy use decreased by 14% and commercial use by 15% despite an 18% and 10% growth in square footage respectively;

Cross Reference: Renewable and Low Carbon Fuel Requirements Regulation
Increasing Renewable Fuel Production in BC
Energy Efficiency and Built Environment
CleanBC – Better Homes and Buildings

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Clean Portfolio Standard

Revised: June 16, 2020

Issue: The Clean Portfolio Standard will allow gas utilities to meet the 15% renewable gas target under CleanBC by reducing GHGs across their operations.

Response:

- CleanBC commits to making British Columbia's (BC's) domestic residential and industrial natural gas consumption cleaner by requiring that 15% of the gas consumed come from renewable sources by 2030 (the target).
- To address the target, MEMPR officials have had discussions with natural gas utilities, BC Utilities Commission staff and the Climate Solutions Council to amend the *Utilities Commission Act* (UCA) to create a Clean Portfolio Standard (CPS).
- The CPS would require natural gas utilities to meet CleanBC's natural gas-related GHG reduction targets, equivalent to 15% renewable content.
- The CPS would be an outcome-based approach which would allow natural gas utilities to undertake a broad range of compliance activities, actions, and investments that would effectively meet BC's GHG reduction targets.
- Utilities would not be limited to just injecting renewable gas content into their pipeline systems since there will not enough affordable RNG available.
- Regulations will further define what operations will be covered and how GHG emissions are calculated.
- The BC Utilities Commission (BCUC) would oversee CPS compliance.
- Further analysis is being undertaken by the Ministry.
- Government has not made a decision on whether to adopt a CPS for natural gas utilities.

Background/Status:

- After consultation with the BCUC, FortisBC and Pacific Northern Gas (PNG), MEMPR staff understand that achieving the target by injecting 15% renewable content into the natural gas grid is not achievable due to supply constraints, cost, and the need to protect utility ratepayers from significant rate increases.
- FortisBC estimates that 15% renewable gas equates to 30 PJ of current consumption by 2030. Given current supply estimates for RNG, this means a shortage of up to 26 PJ that would need to be made up by other sources of clean gas, such as hydrogen.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- In July 2019, FortisBC advised MEMPR that it was planning significant curtailment of its current voluntary RNG program due to an uncertain supply of RNG.
- In 2017, the province co-sponsored a study by Hallbar Consulting to determine the economically viable biogas resource potential in BC. The study noted that, although there was a theoretical resource potential of 7.6 PJ/year, only 4 PJ was economically viable at prices below $30 per gigajoule (GJ), the price cap set under the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR).
- In July 2018, FortisBC conducted a Request for Expressions of Interest for renewable natural gas (RNG) supply, seeking offers from across Canada and the United States. The total response resulted in almost 6 petajoules (PJ) of potential RNG supply, of which only half would be commercially viable.
- CleanBC provides an opportunity for Government to align the CPS approach with both MEMPR's hydrogen and bioenergy strategies, and also with the Ministry of Environment and Climate Change Strategy's waste diversion, landfill gas reduction and organic utilization strategies.
- MEMPR staff have consulted with a number of agencies across government to ensure that the proposed legislation would not impact other government programs.
- MEMPR is working closely with the Climate Action Secretariat staff to develop the CPS and broader consultations are ongoing.

Cross Reference: 22 - CleanBC

Contact:

Les MacLaren	ADM	EAED	778-698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: BC Hydro Force Majeure Implications for Indigenous Nations

Revised: June 16, 2020

Issue: **Certain Indigenous Nations may face reduced funding under Provincial revenue sharing agreements and/or benefits agreements with their Independent Power Producer (IPP) partners as a result of a temporary reduction of energy deliveries to BC Hydro under some Electricity Purchase Agreements (EPAs)**

Response:

- BC Hydro is experiencing an unprecedented decline in system load due to COVID-19 which could extend for some time into the future.
- The unprecedented drop in electricity demand creates significant challenges to how BC Hydro's complex electricity system is operated and managed. BC Hydro has had to take reasonable and prudent measures, including issuing force majeure notices to a number of IPPs which temporarily reduced energy deliveries for a limited period of time.
- The force majeure notices were issued on May 19 and 21, 2020, and are in accordance with terms in the EPAs.
- The EPAs in question are a commercial matter between IPPs and BC Hydro, and I can not divulge which projects were issued force majeure notices, nor how much the energy deliveries were reduced by.
- The force majeure notices do not terminate the EPAs. They mean that the amount of energy that BC Hydro will accept and purchase will be reduced for a limited period of time.
- The Province recognizes these force majeure notices may have implications for certain Indigenous Nations with interests in the projects.
- Our Government takes these implications seriously and invites Nations to raise any concerns they may have with the Province.
- In the meantime, BC Hydro is taking the steps necessary to keep all of our communities safe in this unprecedented time.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- Economic disruptions created by the spread of COVID-19 has significantly reduced electricity demand, both domestically, and in export markets.
- This reduction has coincided with the annual spring freshet period (May – July), when BC Hydro must safely manage run-off flows into its reservoirs.
- As a result, BC Hydro has had to act to mitigate the amount of water it would have to spill to safely manage its reservoirs. Prolonged and sustained high volume spills can cause environmental and public safety issues, create system constraints, and even damage BC Hydro infrastructure.
- BC Hydro's mitigation actions include:
  - shutting down operations at some of its own smaller operations to reduce BC Hydro's own generation;
  - spilling water at its facilities, including Seven Mile and Revelstoke, to balance the amount of power generated with BC's electricity demand levels in real-time, when needed; and
  - issuing force majeure notices to certain IPPs which reduce energy deliveries between May and July 2020.

Revenue Sharing Implications (Attachment):

- Several Indigenous Nations have interests in the IPP projects that have received force majeure notices.
- Many of these Nations receive, or will receive, a share of the water and/or land resource rents collected by the Province from IPP projects located within their traditional territories, through agreements under the First Nations Clean Energy Business Fund (FNCEBF), administered by the Ministry of Indigenous Relations and Reconciliation (MIRR).
- With the reduction in power production, water rental revenues will decline. It is likely that the amount of shared revenues will be decreased as a result of the reduced energy deliveries, through a corresponding reduction in the amount of water rental revenues payable by each IPP project that received a force majeure notice. Water rental amounts for hydroelectric projects are based a complex, tiered formula which includes the size of the project, and output of power it produces, in megawatt hours (MWh).
- MIRR is currently estimating the potential financial implications for each Nation. As the amount of water rental payable depend, in part, on the actual annual amount power generated by the project, the exact impacts will not be known until early in 2022.

- Any reductions for Nations would affect payments they would receive next year. FNCEBF revenues to be shared with Nations this year are based on actual revenues collected by the Province for power generation that took place last year.
- Any questions with respect to FNCEBF revenue sharing should be directed to Honourable Scott Fraser, Minister of MIRR, as his staff are the subject matter experts in this area.

s.13; s.14; s.16; s.17; s.21

Other Implications

- Some or all of the Nations in Appendix 2 may also have separate benefits sharing agreements with their IPP partners.
- Neither the Province nor BC Hydro are party to these confidential commercial arrangements and cannot comment on any impact the force majeure notices may

have on benefits Nations would otherwise have received under these agreements.

Attachment : Indigenous Nations Potentially Impacted by Force Majeure Notifications

Cross Reference: **BC Hydro Estimates Note "System Spill Management and Force Majeure Notices"**

Contact:

Les MacLaren	ADM	Electricity and Alternative Energy Division	778 698-7183

2020/21 Estimates Note
Advice to the Minister

Ministry: Ministry of Energy, Mines and Petroleum Resources
Minister Responsible: Hon. Bruce Ralston

Attachment:
Indigenous Nations Potentially Impacted by Force Majeure Notifications

First Nation	IPP Partner(s) and Project(s)	Provincial (FNCEBF) Revenue Sharing[1] Forecast F2021 disbursement	Other
s.12; s.13; s.16; s.17			
			Provincial revenue sharing agreement not yet signed

[1] Does not include any reductions related to the force majeure curtailments.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

First Nation	IPP Partner(s) and Project(s)	Provincial (FNCEBF) Revenue Sharing[1] Forecast F2021 disbursement	Other
s.12; s.13; s.16; s.17			
			s.16 s.16 is not eligible for FNCEBF revenue sharing
			FNCEBF forecast amount is combined for both projects
			s.16 project is not eligible for FNCEBF revenue sharing

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

First Nation	IPP Partner(s) and Project(s)	Provincial (FNCEBF) Revenue Sharing[1] Forecast F2021 disbursement	Other
s.12; s.13; s.16; s.17			Provincial revenue sharing agreement not yet signed
			Provincial revenue sharing agreement not yet signed

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Mining Regulatory Excellence

Revised: March 13, 2020

Issue: Minister's mandate letter and Budget commitment to expedite permit processing and advance reconciliation with Indigenous Nations

Response:

- Building on the government's commitments to advance Mining Jobs Task Force actions, EMPR is continuing to advance regulatory performance by:
    - Delivering more efficient and effective permitting to create quality economic growth opportunities;
    - Enhancing environmental sustainability and outcomes;
    - Implementing the Province's reconciliation goals by partnering with Indigenous Nations on mining related opportunities.

Background/Status:

- Building on the outcomes from the Mining Jobs Task Force and engagement with BCBC through the Low Carbon Industrial Strategy, EMPR is taking a renewed approach to regulatory performance in the mining sector.
- This approach is being overseen by an Executive Project Board (Board) made up of natural resource Deputy Ministers. The purpose of the Board is to ensure that permitting, environmental assessments (where applicable), and associated reconciliation efforts are conducted in a timely, coordinated and high-quality manner and meet agreed upon timelines over the next 18 months.
- Implementation of each regional strategy will be overseen by an Assistant Deputy Minister Committee and led by an Executive Lead.
- Key project activities include:
    - Enhanced project management approaches on major projects;
    - Advancing mining opportunities in partnership with Indigenous Nations;
    - Assessment of and improvements to the Province's statutory decision-making framework; and
    - Assessment of project specific economic barriers.
- This initiative will contribute to the Province taking advantage of opportunities to become a jurisdiction of choice to supply responsible low-carbon products and

attracting investment from a growing pool of investors concerned about environmental, social and governance outcomes.

Cross Reference: Mining Jobs Task Force

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Permitting Regional Mines- Standardization and Service Improvement Project

Revised: June 9, 2020

Issue: Industry concerns regarding timelines for processing applications for regional mines

Response:

- The Ministry is aware that industry is concerned about inefficiencies and long timelines for the processing of Notice of Work applications.
- The Ministry has work underway with the Ministry of Forests, Lands and Natural Resource Operations and Rural Development to improve processing of applications for regional mines which include mineral and coal exploration, placer, aggregate and stone quarries.
- A review of the roles and responsibilities between between FrontCounterBC and the Ministry of Energy, Mines and Petroleum Resources is underway and recommendations will be brought to the Deputy Minister Project Board overseeing the Mining Regulatory Excellence Project in the fall of 2020.

Background/Status:

- The intake of Notice of Work applications for regional mine permits is shared between FrontCounterBC within the Ministry of Forests, Lands, Natural Resource Operations and Rural Development and the Ministry of Energy, Mines and Petroleum Resources, and managed through a service level agreement.
- Industry is particularly frustrated with the time needed for an application to be accepted for review by technical staff and decision makers.
- Some of the factors contributing to inefficiencies are:
    - Lack of quality guidance regarding application information requirements;
    - Multiple process steps resulting in handoff delays between staff; and
    - Inconsistent processes between regions.
- A "*Mines Standardization and Service Improvement Project*" is underway to address these issues. It is guided by a project steering committee with industry representation. The work is intended to improve the consistency and transparency of the process and ensure both industry and staff have adequate information and training to support an efficient process.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Mining and Mineral Exploration in BC in 2019

Revised: June 9, 2020

Issue: Update on Mineral Exploration and Mining Numbers for BC in 2019

Response:

- According to the Ernst & Young Exploration Survey, spending in BC was steady at $329 million in 2019 compared to $330 million in 2018.
- 55% or $180.8 million of BC's total exploration expenditure was in the Northwest Region, mainly in the traditional territory of the Tahltan and Nisga'a First Nations.
- The Exploration Survey found that 39.8% of expenditures were in grassroots and early-stage exploration in 2019, down from 44.4% in 2018. Expenditures are shifting to advanced and mine evaluation stages, implying BC's projects are moving through the mining cycle.
- In 2019, mineral exploration, mining and related sectors are estimated to contribute over $9 billion[1] to the BC economy and provide well-paying direct jobs for more than 30,000[2] British Columbians, especially in rural areas of the province.
- Approximately 600 exploration and 80 major mining companies are headquartered in BC[3].
- Exploration claims staking has been declining dramatically. It was down 27% in March and 38% in April 2020 when compared with the same periods in 2019.
- The Province has announced a series of measures to support mineral exploration through the COVID-19 pandemic, including issuing a blanket Time Extension Order for all claims and leases and providing extensions for expiring Notice of Work permits on a permit-by-permit basis.

Background/Status:

- The goal of exploration is to locate large, high-grade mineral and coal reserves with minimal disturbance to the ground and the environment.
- Over 30,000 people are directly employed in mineral exploration, mining and related sectors. Exploration projects result in benefits for nearby communities, particularly rural communities, as many mineral and coal deposits are found in

[1] Natural Resources Canada
[2] Statistics Canada
[3] TMX Group

rural areas of BC. The industry also provides thousands of spin-off jobs and business opportunities for suppliers and service providers located close to project sites.

- In 2019, gold received the highest proportion of exploration expenditure with $127 million or 38.6% of the total expenditure, down from $142 million (43.3%) in 2018. Copper exploration expenditures increased from $79 million (24%) in 2018 to $103 million (31.3%) of the total expenditure in 2019 consistent with global trends shifting to base metals.
- Relative to exploration expenditures across all Canadian provinces in 2019, BC saw a decline of 16.8% in exploration expenditure year on year, compared with both Québec and Ontario, which saw declines of 9% and 13%, respectively[1]. Nunavut, Manitoba, and Newfoundland and Labrador all saw modest exploration growth.
- Currently, there are 7 coal mines, 8 metal mines, approximately 30 industrial mineral mines, and hundreds of aggregate pits and quarries operating in BC.
- According to preliminary estimates from Natural Resources Canada, BC mines produced $8.80 billion worth of commodities in 2019, $1.16 billion less than 2018's estimates of $9.66 billion due mainly to a decrease in coal price.

COVID-19 Impacts

- Mining and mineral exploration have been designated essential services in BC, along with smelters, quarries and aggregate operations and service and supply companies.
- The Association for Mineral Exploration (AME) has indicated disruption in capital markets is posing a significant challenge for junior mining companies. A survey of AME members found that only 70% of exploration firms believe they will be able to get in the field this year, but nearly half of these companies have not yet been able to finance their work programs.
- AME BC and Natural Resources Canada have noted significant challenges in accessing capital to finance exploration activities in the field. From April 2019 to April 2020, Canadian flow-through share issuances have fallen by over 90% from April 2019, to $2 million from $36.3 million. Total Canadian junior exploration financing in April 2020 was $23.4 million (9% of 2019 levels).
- Exploration claims staking has been declining dramatically. It was down 27% in March and 38% in April 2020 when compared with the same periods in 2019.
- The Province has announced a series of measures to support mineral exploration through the COVID-19 pandemic, including issuing a blanket Time Extension Order for all claims and leases and providing extensions for expiring Notice of Work permits on a permit-by-permit basis.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: British Columbia Geological Survey

Revised: June 10, 2020

Issue: Update on the British Columbia Geological Survey

Response:

- British Columbia Geological Survey (BCGS) develops, disseminates and acts as the custodian for BC's geoscience data, including geoscience maps, databases, publications and technical reports.
- BCGS is the provincial agency that links the mineral industry, government, and British Columbians to the Province's geology and mineral resources.
- Investment in public geoscience enhances a jurisdiction's competitiveness by reducing exploration risk. In BC, every $1 provided to public geoscience typically results in $5 of private sector investment.
- BCGS's annual budget is approximately $4 million.

Background/Status:

- The Mining Jobs Task Force's (MJTF) final report (Dec. 2018) recognized geoscience enhances BC's mineral exploration competitiveness but recommended an independent review of BC's current delivery of geoscience through BCGS and Geoscience BC.
- To keep pace with other jurisdictions and maintain BC's status as a highly-competitive exploration destination, the independent review of BC's geoscience delivery found the current dual-delivery model unsatisfactory and recommended increased base funding to BCGS, improved coordination of Geoscience BC and the BCGS and provide $1-2 million/year of airborne geophysical and geochemical surveys.
- The independent review noted that for every $1 provided to public geoscience, it is expected that there will be $5 of private sector investment. According to a recent Geological Survey of Canada evaluation of their programs, the return is >$7 and audits of several Australian State public geoscience programs have realized >$20 return on public geoscience funding.
- BCGS's key roles are to:
    - advise government on behalf of all British Columbians on the best use of the province's minerals resources;
    - create, maintain and deliver geoscience knowledge to lead the way for informed decision making;

- attract companies and individuals to explore BC for new mineral and coal resources;
- act as the public steward of mineral resources for current and future generations; and
- provide assessments on the nature and economic health of mineral exploration and the mining industry to guide government policy.

- BCGS is BC's government geoscience agency with in-house expertise, whereas Geoscience BC is a non-government granting society. Both provides important geoscientific data to support the development of future mines and energy projects in BC. However, Geoscience BC complements but does not replace or compete with the BCGS.
- BCGS is responsible for carrying out geological field surveys and publishing the resulting maps, data and reports, and providing geoscience expertise to support Government's objectives of responsible resource development and job creation.
- BCGS databases are world class and consistently rank in the top ten globally in the Fraser Institute's annual industry poll.
- BCGS supports land use decisions by providing mineral potential assessments. The BCGS is currently working towards an updated and modernization BC pan-provincial mineral potential evaluation through assessment in the Tahltan traditional territory.
- BCGS leads the mining industry to frontier areas of BC with high mineral potential through strategic, multi-year geoscience projects, typically with the federal government (Geological Survey of Canada).
- BCGS monitors industry activity, connects investment to BC's mineral resources and growth opportunities, and provides industry intelligence to government through the Mineral Development Office in Vancouver.

Cross Reference: Geoscience BC

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Honourable Bruce Ralston**

Title: Geoscience BC

Revised: March 10, 2020

Issue: Update on Geoscience BC funding and research

Response:

- Geoscience BC is a non-government, not-for-profit society that has received $76.8 million in grants from the BC Government to fund mineral, oil and gas and water related geoscience activities since its inception in 2005.
- Geoscience BC has a mission to generate and publicly share high quality and unbiased earth science research and data that improves our collective level of geoscience knowledge; informs responsible natural resource development and investment decisions; catalyzes socio-economic opportunities; and stimulates innovation and geoscience technologies.
- In March 2019, government approved a grant of $5 million in 2018/2019 contingencies to support Geoscience BC's research projects in the 2019/2020 fiscal year, as recommended by the Mining Jobs Task Force (MJTF)
- Geoscience BC has requested $5 million in 2019/2020 contingencies, but a decision has not been made at this time.
- An independent review of BC's current delivery of geoscience through Geoscience BC and the BC Geological Survey (BCGS) concluded that the priority action for the Province should be to increase funding to the BCGS.

Background/Status:

- Geoscience BC provides important geoscientific data to support the development of future mines and energy projects in BC. Geoscience BC's key roles are to:
    - take advantage of emerging opportunities by funding large, multi-million dollar geoscience projects;
    - design and deliver high-profile geoscience programs in response to immediate industry needs and priorities;
    - rapidly release project results and data to industry, academia, governments, First Nations and communities; and
    - undertake community outreach, promote awareness of geoscience and attract investment.
- BCGS is the BC's government geoscience agency with in-house expertise whereas Geoscience BC is a non-government granting society. Both provide important geoscientific data to support the development of future mines and

energy projects in BC; however, Geoscience BC complements but does not replace or compete with the BCGS.

- Since 2012, the Ministry of Energy, Mines and Petroleum Resources has undertaken extensive reviews of long-term funding options for Geoscience BC; however, no clear and practical options have emerged from analysis and industry consultation.
- Under the current funding/governance arrangement, Geoscience BC projects are not eligible for matching federal funds for public geoscience.
- An independent review of BC's current delivery of geoscience through BCGS and Geoscience BC was conducted as recommended by the MJTF and concluded that:
    - BC is falling behind other jurisdictions with respect to geoscience;
    - The current dual-delivery model is unsatisfactory;
    - Base funding to BCGS should be increased;
    - Coordination between Geoscience BC and the BCGS should be improved; and
    - $1-2 million/year should be directed to airborne geophysical and geochemical surveys.
- In March 2019, government approved a grant of $5 million in 2018/2019 contingencies to support Geoscience BC's research projects in the 2019/2020 fiscal year as recommended by the MJTF. As a condition of the grant, Geoscience BC was required to coordinate with EMPR on overlapping projects to ensure coordination and avoid duplication.
    - Geoscience BC had requested $50 million for 5 years to support their strategic plan.
- Since 2005, Geoscience BC has received a total of $76.8 million in grants from the BC Government.

s.13; s.17

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Mining Exploration Tax Incentive Programs

Revised: June 15, 2020

Issue: BC's mining exploration tax incentive programs include the BC Mining Flow Through Share Tax Credit and the BC Mining Exploration Tax Credit. Both of these programs encourage exploration - a critical part of discovering sites for new mines.

Response:

- BC's mineral exploration incentive programs include the BC Mining Flow-Through Share Tax Credit (MFTS) and the BC Mining Exploration Tax Credit (METC).
- Both of these programs encourage investment in mineral exploration, which is a critical part of discovering new mineral deposits which can lead to the development of new mines throughout the Province.
- The MFTS and the METC programs were made permanent in 2019 as recommended by the Mining Jobs Task Force (MJTF).
- Government will continue to evaluate the MJTF recommendation to increase the MFTS and METC to a level that is nation leading.

Background/Status:

Provincial Exploration Tax Incentives

- The MFTS provides a 20% non-refundable tax credit to individuals who invest in flow-through shares associated with BC flow-through mining expenditures. The MFTS is completely harmonized with the federal Mineral Exploration Tax Credit for flow-through shares making the after-tax cost of qualifying flow-through share-financed grassroots exploration expenditures in BC among the lowest in Canada.
- The METC is a refundable tax credit equal to 20% of non-flow-through funded, eligible BC grassroots mineral exploration expenditures incurred after July 31, 1998. In Mountain Pine Beetle-affected areas, the METC has been increased by 10% to 30% for eligible exploration.
- The MFTS and METC were made permanent as part of BC's 2019 budget. The credits had previously been renewed on an annual basis.
- Over the past five years (FY15/16 to 19/20), the METC and MFTS have been estimated to cost the Province $25 million annually.

- NRCan's preliminary estimates indicate that BC was ranked third out of the Canadian provinces in mineral exploration expenditures for 2019 behind Ontario and Quebec. Both of these other provinces have tax incentives for flow-through share investors while Quebec offers an additional tax incentive program similar to BC's METC program (see table below for details).
- The Association for Mineral Exploration has advocated for the following changes in tax credit rates to support industry's recovery from COVID-19:
    - An increase to 60% for one year beginning June 2020 for METC followed by a three-year increase to 35% beginning in 2021/22; and,
    - An increase to 60% for one year beginning June 2020 for MFTS followed by a three-year increase to 30% beginning in 2021/22.

Federal Exploration Tax Incentives

- The federal Flow-Through Shares program allows companies to flow qualifying Canadian Exploration Expenses through to investors who can then deduct those expenses from otherwise taxable income. This encourages exploration by reducing the amount of funds the investor has at risk. Companies issuing the shares and their investors typically share any gains associated with exploration.
- The federal Mineral Exploration Tax Credit is a non-refundable, 15% tax credit for grassroots exploration expenses pursuant to a Flow-Through Share Agreement. The federal government announced in November, 2018 that it would extend its METC credit for five years to 2024. The credit had previously been renewed on an annual basis.

Jurisdiction	Incentive	Rate
BC	MFTS (non-refundable)	20% (Mining Jobs Task Force proposed increase to 35% for 3-year trial)
	METC (refundable)	20% to 30% (Mountain Pine Beetle-affected areas) (MJTF proposed increase to 30% for 3-year trial)
Ontario	Focused Flow-Through Share Tax Credit (refundable)	5%
Quebec	Tax Credit Relating to Resources (operators) (refundable)	12% 18.75% (Near and Far North)
	Tax Credit Relating to Resources (explorers) (refundable)	28% 38.75% (Near and Far North)

	Flow-Through Share deductions	Up to 20%
Yukon	Mineral Exploration Program – Hardrock (Total Program funding is approximately $2.5 million)	100% up to $15,000 (prospecting in new areas) 75% up to $25,000 (under-explored areas) 50% up to $40,000 (to develop project to advanced exploration stage, including placer)

Contact:

Peter Robb	ADM	MCAD	(250) 812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Golden Triangle

Revised: June 9, 2020

Issue: Overview of mining activity in the Golden Triangle

Response:

- Located in Northwest BC, the Golden Triangle is home to the highest concentration of mineral exploration activity in the Province, and to two operating mines.
- In 2019, exploration expenditures on projects were estimated at $180.8 million (55% of BC's exploration expenditures), with production values for active mines estimated to be $817 million.
- This area is in the traditional territory of Tahltan Nation and Nisga'a Lisims Government.
- The Golden Triangle continues to be an attractive area for mining exploration and investment, and is supported by the work of the Regional Mining Alliance.

Background/Status:

- Located in the northwest part of the Province, the Golden Triangle has been historically known for some of the richest gold ore bodies in the world, as well as abundant silver, nickel and copper deposits.
- The region is the traditional territory of the Tahltan Nation and the Nisga'a Lisims Government.

Mineral Exploration:

- In 2019, exploration expenditures on projects was estimated at $180.8 million. This marks an 8.6% increase from 2018. The Golden Triangle accounted for 55% of BC's total exploration expenditures.
- In 2019, Newmont invested $25.9 million into GT Gold to expedite exploration and development at the Tatooga project.
- In April 2020, Skeena Resources announced it had raised $33.3 million to continue the advancement of the Eskay Creek and Snip projects.

Operating Mines:

- Brucejack is an underground gold-silver mine owned by Pretivm Resources. Brucejack began production in mid-2017 and is projected to have a mine life of 18 years and employs approximately 570 people.

- Red Chris is an open pit copper-gold mine majority owned by Australia-based Newcrest Mining. Red Chris began production in 2015 and is projected to operate until 2043, employing 380 people. Approximately 220 Tahltans work full time at Red Chris and $25 million annually in contracts is awarded to Tahltan businesses.
- Both mines in the Golden Triangle have taken extensive measures to reduce risk of transmitting COVID-19 to Indigenous communities.
- Newcrest Mining has established an AUS$20 million community support fund to provide financial help to its host communities, including Tahltan communities, with the challenges associated with the pandemic.
- There are four advanced projects with three having Environment Assessment Certificates (Galore Creek, KSM and Red Mountain) with a potential for $11 billion in capital expenditures.

BC Regional Mining Alliance:

- In 2018, the Province, the Tahltan Central Government (TCG), the Nisga'a Lisims Government, the Association for Mineral Exploration and select industry partners formed the Regional Mining Alliance (RMA).
- This unique collaboration promotes BC's mining opportunities to the international investment community with a focus on the Golden Triangle.
- In 2019, the Province committed $1 million over three years to support the work of the RMA.
- Due to COVID-19, 2020 events and conferences have been postponed or will be held virtually.

Placer Jade Mining:

- The Golden Triangle is home to a number of placer jade mining operations. TCG have expressed strong concerns about this activity, including the environmental and cultural impacts, and lack of economic benefits of placer mining.
- On May 11, 2020, an Order In Council (OIC) was issued under section 7 of the *Environment and Land Use Act*, deferring permitting on placer jade operations in Northern BC for a period of 24 months during which time the Ministry will work closely with Indigenous Nations and jade placer operators to develop higher operational and reclamation standards.

Attachments: Appendix 1 – BC Geological Survey Information Circular Map

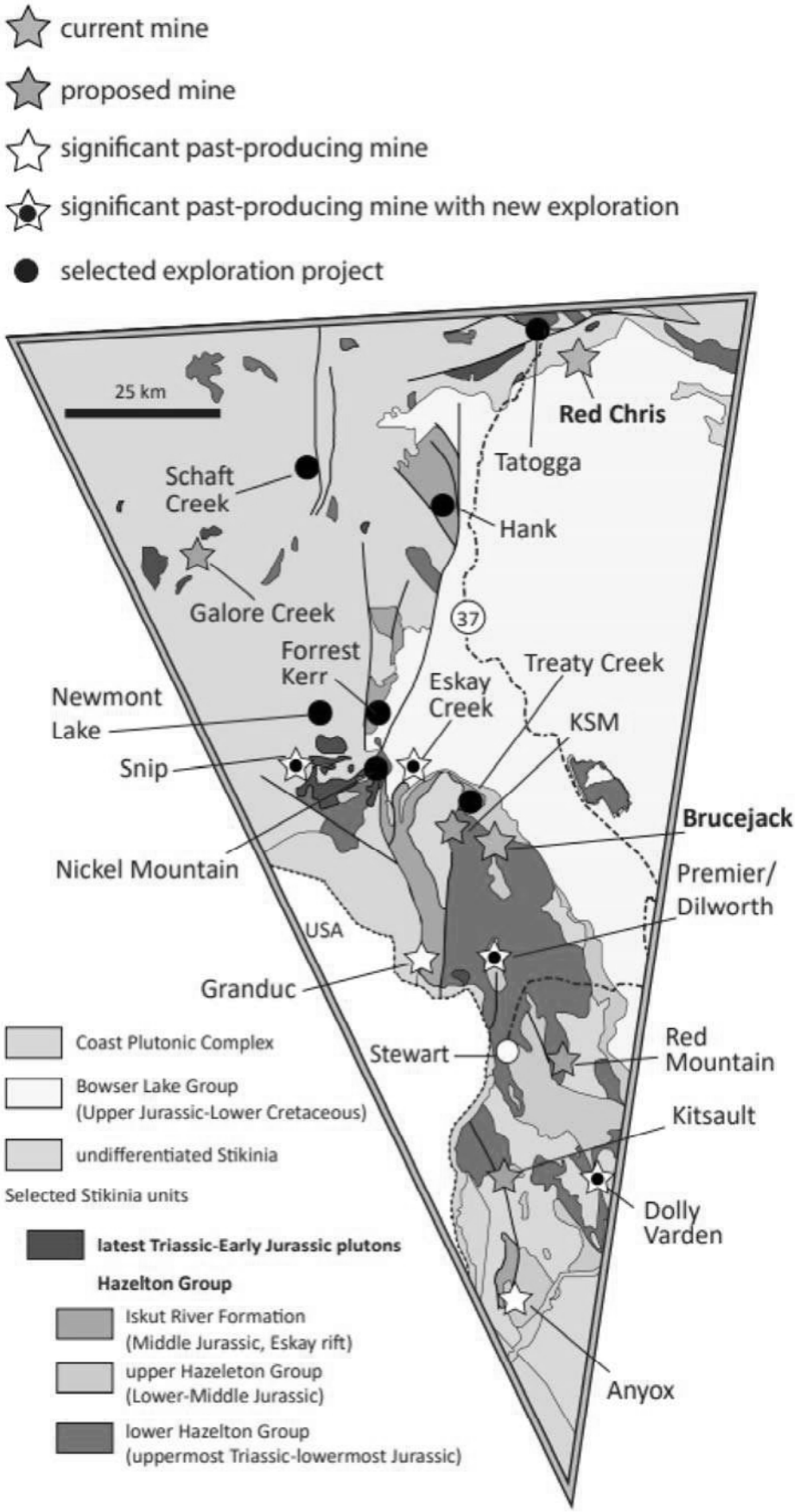
Cross Reference: Placer Jade Mining in Northern British Columbia

Contact:

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Peter Robb	ADM	MCAD	250-812-7392


current mine
proposed mine
significant past-producing mine
significant past-producing mine with new exploration
selected exploration project
25 km
Red Chris
Tatogga
Schaft Creek
Hank
Galore Creek
37
Forrest Kerr
Treaty Creek
Eskay Creek
Newmont Lake
KSM
Snip
Brucejack
Nickel Mountain
Premier/ Dilworth
USA
Granduc
Stewart
Red Mountain
Kitsault
Dolly Varden
Anyox
Coast Plutonic Complex
Bowser Lake Group
(Upper Jurassic-Lower Cretaceous)
undifferentiated Stikinia
Selected Stikinia units
latest Triassic-Early Jurassic plutons
Hazelton Group
Iskut River Formation
(Middle Jurassic, Eskay rift)
upper Hazeleton Group
(Lower-Middle Jurassic)
lower Hazelton Group
(uppermost Triassic-lowermost Jurassic)

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Thor Project – Taranis Resources

Revised: **June 15, 2020**

Issue: **Taranis Resources feels that the technical review of their bulk sample application has not been fair**

Response:

- The Ministry of Energy, Mines and Petroleum Resources (EMPR) will continue to work with the proponent to ensure there is adequate information provided to determine if the mine plan, tailing storage facility and reclamation plan satisfy the Health Safety and Reclamation Code for Mining in British Columbia (Code).
- The current submitted plans do not satisfy the requirements of the Code.
- The proponent lodged a complaint with the Ombudsperson and the Office of the Information & Privacy Commissioner.
- The Ombudsperson is facilitating an agreement between EMPR and the proponent that will allow the review to continue.
- The Office of the Information & Privacy Commissioner is reviewing a complaint by the proponent relating to an alleged breach of privacy. Ministry staff believe that the complaint is without merit.

Background/Status:

- Taranis Resources applied for a *Mines Act* permit to extract a 10,000 tonne bulk sample on October 15, 2018. The project also requires an Environmental Management Act (EMA) discharge permit.

- A Mine Development Review Committee (MDRC) was struck to review the joint application since the legacy mine site has significant issues surrounding water quality, acid rock drainage, recreational use and critical caribou habitat.

- Taranis Resources sent a letter to the Office of the Ombudsperson on January 21, 2020 requesting a review the MDRC process. They believe that too much information is being requested for a permit to extract a bulk sample.

- s.21

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

s.21

- s.21

- In addition to the *Mines Act* permit application, the Ministry of Environment & Climate Change Strategy must also consider an application for a discharge permit.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

Project	Product	Employment	Location	EA/Permitting	Cap. Costs	Proponent/Owner
CertainTeed – Kootenay West Mine	Gypsum	43 construction 17 operations	Canal Flats	• Environmental Assessment Certificate (EAC) granted in Jan 2018; and • MA/EMA permits issued in April/May 2019	$20M	CertainTeed Canada Inc.
Sukunka Project	Coal	250 construction 543 operations	Tumbler Ridge	• EA is in Technical Review	$444M	Glencore
Premier	Gold	573 construction 220 operations	Stewart	• Permitting Pre-Application; and • Estimated to not trigger an EA Review	$60M	Ascot Resources
Red Mountain	Gold	293 construction 193 operations	Stewart	• EA granted on October 5, 2018 • Timing to start permitting Pre-Application unknown; and • Bulk Sample Program planned for 2020	$136.5M	IDM Mining Ltd.
Wolverine Hermann Pit Expansion	Coal	300 employees (currently	Tumbler Ridge	• EAC Application is in Technical Review; and	$68M	Conuma Coal Resource Ltd.

Project	Product	Employment	Location	EA/Permitting	Cap. Costs	Proponent/Owner
		employed at Wolverine) May expand to 400 during construction of Hermann Pit		• Joint Permitting Application has not passed screening. Supplemental water treatment information submitted on June 1, 2020		
Tenas Coal	Coal	100 construction 90 – 110 operations	Smithers	• Pre-Application for EA and permitting; and • EA was placed on hold until April 30, 2020 at the request of the Proponent. Proponent plans to request concurrent review of the *Mines Act* (MA) permit Application submission targeted for Fall 2020	$84.2M	Telkwa Coal Limited (wholly-owned subsidiary of Allegiance Coal Ltd.)
Teck Coal – Water Treatment Project/Elk	Water treatment facilities	20 employees per operation	Elk Valley	• Fording South Active Water Treatment Facility (AWTF)	$200M per water treatment plant	Teck Resources Limited

Project	Product	Employment	Location	EA/Permitting	Cap. Costs	Proponent/Owner
Valley Water Quality Plan				will be commissioned by end of 2020; and • Teck has indicated intent to construct next water treatment facilities as Saturated Rock Fills		
Teck Coal – Implementation Plan Adjustment	Area-based management plan for Elk River watershed and Canadian portion of Koocanusa Reservoir	N/A	Elk Valley	• Teck submitted an updated plan to the Province and KNC in 2019	N/A	Teck Resources Limited
Murray River	Coal	780 jobs (including construction and operations)	Tumbler Ridge	• Permits issued in 2018; and • Proponent considering final investment decision	$555M	HD Mining Inc.
Blackwater	Gold and Silver	1,500 construction 495 operations	Vanderhoof	• Federal EA issued April 15, 2019	$1.96M	New Gold Inc.

Project	Product	Employment	Location	EA/Permitting	Cap. Costs	Proponent/Owner
				• Provincial EAC issued June 21, 2019; and • No permitting anticipated in 2020		
Kerr-Suphurets – Mitchell (KSM)	Gold and Copper	1,800 people during its 5-year construction and approximately 1,040 jobs during its 52-year mine life	65km NW of Stewart	• Provincial EA issued July 20, 2014 • Federal EA issued December 19, 2014 • Provincial EA granted extension to July 29, 2024 on March 26, 2019 • Permitting process nearing completion for the Iron Cap Exploration Adit. This includes an amendment to the EMA Permit, Water Licence and a MA (M) Permit	$5.5B	KSM Mining ULC (Subsidiary of Seabridge Gold)

Mine Development Projects

Project	Product	Employment	Location	EA/Permitting	Cap. Costs	Proponent/Owner
Giscome Quarry and Lime	Lime	215 person-years of direct and indirect labour	27 km east-northeast of Prince George	• MA permit and *Environmental Management Act* (EMA) Permit Issued in the summer of 2018	$150M	Graymont Western Canada Inc.
Kutcho	Copper and Zinc	250 Construction 250 Operations	100 km east of Dease Lake	• EA in Pre-Application	$287.8M – 345M	Kutcho Copper Corp (KCC)
Crown Mountain	Coal	NA/ 16 year mine life	Sparwood	• EA in Pre-Application		NWP Ltd
Michel Coal	Coal	190-300 full time jobs 25 year mine life	Sparwood	• EA in Pre-Application		North Coal
Caribou Gold	Gold	333 During Mine Life	Barkerville	• EA in Pre-Application	$306M	Osisko Gold Royalties
Elk Gold Restart	Gold	15 for 1-2 months construction 20 for 11 year Mine Life	45 km southeast of Merritt	• No EAC required • Pre-Application Permitting MA/EMA	$0.5M estimate	Bayshore Minerals Incorporated
Yellowhead (formerly Harper Creek)	Gold-Silver	Previous PD indicated 600 construction jobs and 450 permanent	150 km northeast of Kamloops	• Initial Project Description in early development.	Previous PD estimated ~$1B	Taseko Mines Ltd.

Project	Product	Employment	Location	EA/Permitting	Cap. Costs	Proponent/Owner
		jobs over 28 year Mine Life		• Early engagement on EA and permitting processes.		

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Blackwater Gold Project

Revised: June 29,2020

Issue: Status of Blackwater Gold Project

Response:

- In October, 2015 New Gold Inc. applied for an environmental assessment (EA) certificate to develop the Blackwater Project (Project), a proposed open pit gold and silver mine.
- An EA Certificate was issued on June 21, 2019 following substantial collaborative work between the Environmental Assessment Office (EAO), Indigenous Groups, the Working Group and New Gold.
- On June 9, 2020, Artemis Gold announced the purchase of the Blackwater project from New Gold in a deal worth C$190M.
- Artemis has announced that they will be raising funds over the next few months along with an updated project feasibility study.
- With a staged permitting process, initial infrastructure work could begin within a year. It is estimated that for the current project design, permitting would take approximately two years.
- To bring the Blackwater mine into production, significant infrastructure investment will have to be made including a 133 km transmission line and a 15 km mine access road.
- A decision to authorize construction of the Kluskus and Anahim Lake Forest Service Road connectors is separate from the EA and would be made by the Minister of FLNRORD.
- The Province has an agreement with the Lhoosk'uz Dené Nation and Ulkatcho First Nation regarding an Economic and Community Development Agreement (ECDA) that will enable sharing 35% of the mineral tax revenue collected from Blackwater.

Background/Status:

- The Project is located 160 kms southwest of Prince George and 110 kms southwest of Vanderhoof.
- The capital cost of construction is estimated to be $1.8 billion and the Project would create up to 1,500 construction jobs and approximately 495 jobs during its anticipated 17 years of operation (New Gold Inc., 2015).

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The proposed mine site overlaps Lhoosk'uz Dene Nation and Ulkatcho First Nation territories and the existing access road and proposed 140 kilometre long transmission line overlap Carrier Sekani Tribal Council (CSTC) territory.
- EAO and Canadian Environmental Assessment Agency signed collaboration agreements with Ulkatcho, Lhoosk'uz Dene and CSTC.
- Federal and Provincial EA certificates were issued for Blackwater on April 15, 2019 and June 21, 2019 respectively.
- Blackwater was sold by New Gold to Artemis in June, 2020 for $190 million.
- Artemis' Chairman & CEO, Steven Dean, is an ex-president of Teck. The first payment for the Blackwater purchase is "backstopped" by Ryan Beedie, an Artemis director. Mr. Beedie is primarily involved in real estate and has an estimated net worth in the billions.
- If Blackwater is not producing after 7 years of this deal closing, payments from Artemis to New Gold begin at 28M/year for three years until production begins.
- Artemis has announced that they will be raising funds over the next few months along with developing an updated project feasibility study. The revised project design is unknown at this time, but EA amendments could be required if the design changes significantly.
- To bring the Blackwater mine into production, significant infrastructure investment will have to be made including a 133 km transmission line (cost estimate of $49.6M found in the 2012 feasibility study) and a 15 km mine access road (cost estimate of $15.7M).
- The Ministry of Indigenous Relations and Reconciliation, Lhoosk'uz Dene, and Ulkatcho have negotiated an Economic and Community Development Agreement which will provide mineral tax revenue sharing generated by Blackwater over the course if its mine life.
- MMO and all five Nations impacted by the Project are working together to finalize a permitting collaboration plan and will also develop a Life of Mine Framework agreement to structure engagement during Project construction, operation and closure.
- The District of Vanderhoof is concerned about the Kluskus connector due to a perceived loss of economic opportunity for their community. CSTC is concerned with the connector roads due to potential impacts on wildlife.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: New Prosperity Stand Down Agreement

Revised: June 9, 2020

Issue: Tsilhqot'in and Taseko have agreed to suspend legal challenges

Response:

- The Province supports Tsilhqot'in and Taseko in working to a resolution outside of litigation to the long-standing issues with New Prosperity.
- The Province supports a growing mining sector in BC that contributes both to the provincial economy and reconciliation with Indigenous Peoples.
- A healthy mining sector will play a key role in the Province's economic recovery post COVID-19.
- The New Prosperity project is on temporary standstill, with no work proceeding, to allow negotiations between Tsilhqot'in and Taseko to proceed.
- All regulatory approvals, permits and licences, including the EA Certificate were extended by 12 months. The extension report, including a Reasons for Decision, is publicly available and considers input from Indigenous groups, including Tsilhqot'in.

Background/Status:

- Taseko Mines Ltd. (Taseko) is a BC-based copper producer seeking to develop the proposed Prosperity (now New Prosperity) gold-copper mine project located 125 km southwest of Williams Lake in the Chilcotin region.
- The New Prosperity ore deposit has a measured and indicated resource containing 5.3 billion pounds of copper and 1.3 million ounces of gold. The mine would cost an estimated $1.6 billion to construct and would provide 700 jobs for its 33 year life of mine operations.
- New Prosperity is located within the traditional territory of the Tsilhqot'in National Government (Tsilhqot'in), which represents six Indigenous communities.
- In June 2014, the Supreme Court of Canada granted Tsilhqot'in a declaration of Aboriginal title to a defined area adjacent to, but not including, New Prosperity.
- In December 2019, the Province announced that Tsilhqot'in and Taseko are working with the Province to reach a resolution to the long-standing conflict over the New Prosperity project through a facilitated negotiation process.
- Tsilhqot'in and Taseko have agreed to pause certain litigation and regulatory matters related to New Prosperity while discussions are underway to reach a

long-term solution. The two parties requested extensions to certain, current authorizations and tenures to support this request.

Environmental Assessment Certificate

- In January 2010, the Province granted an Environmental Assessment (EA) Certificate for the original Prosperity project; however, the project was not approved under the federal *Environmental Assessment Act*. This resulted in the submission of an alternate design for the New Prosperity project.
- At the request of Taseko and Tsilhqot'in, on January 13, 2020 the EA Office (EAO) granted a 12-month extension to the deadline in Taseko's EA Certificate for substantial start of the project - extending the deadline to January 14, 2021. Information about the New Prosperity EA Certificate extension, including Reasons for Decision, is publicly available on EAO's EPIC website.

Notice of Work, Mineral Tenures and Occupant Licence to Cut

- In October 2016, Taseko submitted a Notice of Work (NoW) application to the Ministry of Energy, Mines and Petroleum Resources (EMPR) to conduct site investigation work, which EMPR authorized in a *Mines Act* permit in July 2017.
- The permit includes 37 conditions to address Tsilhqot'in concerns associated with wildlife, water and riparian protections, cultural heritage assessments, environmental management, reclamation activities, and ongoing updates.
- Tsilhqot'in initiated a judicial review of the *Mines Act* permit decision, citing inadequate consultation and accommodation and a decision outside the range of reasonable outcomes. The *Mines Act* permit decision was upheld by the BC Supreme Court and the BC Court of Appeal. Further appeal to the Supreme Court of Canada was denied. A related civil action brought by the Tsilhqot'in has been put in abeyance.
- Following consultation with potentially-affected Indigenous groups, statutory decision makers granted a 12-month extensions to the *Mines Act* permit, the date for filling work or making payments on the mineral tenures, and the related forestry Occupant Licence to Cut.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Giant Copper Proposed Mineral Exploration

Revised: March 9, 2020

Issue: Opposition to Mineral Exploration in Skagit Headwaters

Response:

- A final decision has not been made on Imperial Metals application for a *Mines Act* permit for mineral exploration in the Skagit headwaters.
- Government respects the independence of the Statutory Decision Maker (SDM) on this *Mines Act* permit.
- The SDM for this application is conducting a thorough and comprehensive review based on input from numerous parties and Indigenous nations.

Background/Status:

- Imperial Metals' (Imperial) Giant Copper site is surrounded by E.C. Manning Provincial Park and Skagit Valley Provincial Park in the Cascade mountain range of Southern BC. Despite being surrounded by park land, the value of the mineral tenures created an area open to mineral exploration. Imperial holds 145 mineral claims in the area.
- Imperial's Notice of Work application for mineral exploration includes a proposal to construct a 500m access trail, dig five trenches, each being 50m long by 2m wide, build drill pads and drill one to two diamond drill holes adjacent to the trenches. Total disturbance for the project is approximately 0.35 hectares.
- On March 20, 2019, the Ministry of Energy, Mines and Petroleum Resources referred Imperial's proposed exploration program to First Nations and stakeholders, including the Skagit Environmental Endowment Commission (SEEC) and BC Parks. Comments were received from both of these groups as well as a number of Indigenous groups in both BC and Washington. The City of Seattle and Washington State government have also provided comments through the referral process.
- s.16; s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

s.16; s.17

- The SDM has considered all available information from the proponent, stakeholders and Indigenous Groups on both sides of the border. In consultation with the Ministry of Forest, Lands and Natural Resource Operations and Rural Development's First Nations Advisor, the SDM will be ending the formal consultation period associated with the review of the proposed project in the coming days.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: OK Industries Proposed Quarry – Millstream Road

Revised: May 25, 2020

Issue: Opposition to Quarry Development on Millstream Road in Langford

Response:

- Permit and Reasons for Decision were released to the proponent and key stakeholders on March 18, 2020.
- The Highlands District Community Association appealed the permit to the Chief Inspector on April 16, 2020 and the Chief Inspector denied this appeal.
- The Statutory Decision Maker (SDM) has done a comprehensive review of application, including multiple reviews of the reasons for decision with the Ministry of the Attorney General.
- The SDM has appropriately mitigated concerns about the application through site specific permit conditions.
- We are aware that the Highlands District Community Association has filed an application to the BC Supreme Court for a judicial review of the recent approval of OK Industries' application for a *Mines Act* permit on Millstream Road. We respect their right to file this application as part of the judicial process. As the matter is before the court, we can not provide further comment

Background/Status:

- OK Industries has submitted a notice of work for a *Mines Act* permit to construct a quarry in the Langford-Juan de Fuca riding. The proposed quarry is located on Millstream Road in the District of Highlands adjacent to Thetis Lake Regional Park, a hazardous waste disposal site, an industrial park, and another rock quarry.

- District officials have expressed concerns around the proposed quarry, particularly with respect to how it may impact local drinking water. A resident's group submitted a petition to the SDM requesting that the quarry not be granted a *Mines Act* Permit. The SDM has conducted a fulsome review of the project including consultation with major stakeholders, the District, residents and local Indigenous groups.

- After purchasing the property in 2015, OK Industries applied to the District of Highlands to rezone the land for a rock quarry, but that application was rejected by Council.

- The SDM has considered available information from OK Industries, the District of Highlands and others. The SDM was acutely aware of concerns that had been

raised surrounding the potential for contamination of drinking water, and the decision made took these concerns into consideration.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Operating Coal Mines in BC

Revised: June 17, 2020

Issue: Summary of coal mines currently operating in BC

Response:

- There are currently six metallurgical coal mines operating in BC, employing approximately 4,200 workers.
- BC remains Canada's largest exporter of coal with primary production being metallurgical coal used for steelmaking.
- The estimated value of the coal produced in the Province in 2019 was US $4.4 billion.
- Over 93% of the mineral tax the Province collected from BC mines in 2018/19 came from coal operations ($378 million)
- On June 17, 2020, Conuma announced a two-month curtailment of operations at the Willow Creek Mine due to sustained low coal prices.

Background/Status:

- The following coal mines are currently operating in BC

Operation	Company	Community	Est. Employees[1]
Brule	Conuma Coal	Tumbler Ridge	280
Elkview	Teck	Sparwood	1,080
Fording River	Teck	Elkford	1,340
Greenhills	Teck	Elkford	685
Line Creek	Teck	Sparwood	490
Wolverine	Conuma Coal	Tumbler Ridge	355

- The estimated value of the coal produced in the Province in 2019 was $4.4 billion, down from $5.1 billion in 2018, and represents 50% of BC's total mining production value.
    - In 2019, Teck's Coal Mountain operation went into planned care and maintenance as it ended its mine life, and the owner of the Quinsam thermal coal mine on Vancouver Island went bankrupt and the Mine shut down.

[1] As reported by the companies.

  - On June 17, 2020, Conuma announced a two-month curtailment of operations at the Willow Creek Mine due to sustained low coal prices. Continued low commodity prices could extend the temporary closure.
- Four of BC's six operating coal mines are located in the southeast corner of the Province.
  - These mines are all owned by Teck and are a significant part of the regional economy and the provincial economy as a whole, employing nearly 3,600 people.
  - Teck continues to advance mining in new areas of the existing Fording River, Greenhills and Elkview operations with a goal to extend their mine life. In April 2020, the company submitted an Initial Project Description as the first step in its Environmental Assessment application for the Castle expansion at the Fording River site, which would extend the life of the mine by decades.
- Two of BC's seven operating coal mines are located in the Peace River Coalfield near Tumbler Ridge.
  - These are owned by Conuma Coal and employ over 600 people from the communities of Tumbler Ridge and Chetwynd.
  - In December 2019, the Enviornmental Assessment Office accepted an Amendment Application for the Wolverine-Hermann Extension that would extend its life by seven years.
- Over 93% of the mineral tax the Province collected from BC mines in 2018/19 came from coal operations ($378 million of $404 million).
- Coal produced at these operations is shipped by rail to shipping terminals in Vancouver (Port Metro, Westshore or Neptune Terminals) and Prince Rupert (Ridley Terminals).
  - In February 2020, Teck announced that North Vancouver's Neptune Terminal will be shut for five months to complete an $800 million upgrade project that will double capacity year to 20 million tonnes per year.
- Proposed coal projects in the pre-application phase for Environmental Assessment include the Crown Mountain Coking Coal Project (NWP Coal Canada) and Michel Coal Project (North Coal Limited). The Bingay Main Coal Project (Centremount Coal Limited) recently applied for an Environmental Assessment Certificate.
- Metallurgical coal prices have dropped significantly in the past 12 months from an average price of US $207/tonne in May 2019, to US $114/tonne in May 2020. Consensus forecasts predicts slight price recovery through the end of 2020 and stability through 2021.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Honourable Bruce Ralston**

Title: Operating Metal Mines in British Columbia

Revised: June 8, 2020

Issue: Summary of metal mines currently operating in British Columbia

Response:

- There are currently eight metal mines operating in BC, employing approximately 4,700 workers.
- The key metals mined in BC are copper, gold, silver and molybdenum.
- BC is Canada's largest producer of copper and Canada's only producer of molybdenum.
- In 2019, the value of metals produced in BC was approximately $3.4 billion.

Background/Status:

The following metal mines are currently operating in BC:

Operation	Company	Community	Est. Employees[1]	Commodities
Brucejack	Pretium Resources Inc. (Pretivm)	Stewart	570	Gold/Silver
Copper Mountain	Copper Mountain Mining Corporation	Princeton	490	Copper/Gold/Silver
Gibraltar	Taseko Mines Limited	Williams Lake	700	Copper/Molybdenum
Highland Valley Copper	Teck Resources Limited	Logan Lake	1,270	Copper/Molybdenum
Mount Milligan	Centerra Gold Inc.	Prince George	485	Copper/Gold/Silver
Myra Falls	Nyrstar	Myra Falls	320	Zinc/Copper/Gold
New Afton	New Gold Inc.	Kamloops	500	Copper/Gold/Silver
Red Chris	Newcrest Mining Limited	Iskut	380	Copper/Gold

[1] As reported by the companies.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Honourable Bruce Ralston**

- According to preliminary estimates from Natural Resources Canada, the estimated production value of BC metal mines in 2019 was $3.4 billion, down from $3.7 billion in 2018. This represents 39% of BC's mining production in 2019.
- Nyrstar's Myra Falls mine came out of Care and Maintenance and began production in February 2020. The company estimates that Myra Falls will operate for 10 more years, and a recent MABC survey put estimated employment at the site at 320.
- Imperial Metals suspended mining at Mount Polley due to low copper prices, but the mill continued treating stockpiled material until the end of May 2019. The operation has since been put on care and maintenance.
- The Silvertip mine entered care and maintenance in February 2020 due to low prices for lead and zinc. The operating company, Coeur, does not anticipate restarting the mine until late 2021.
- There has been a number of investments in BC's operating and proposed mines over the past 18 months:
    - In June 2020, Artemis Gold agreed to acquire the Blackwater gold project in central BC from New Gold in a deal in worth over $200 million.
    - In March 2019, Newcrest Mining Limited announced the purchase of a 70% stake in the Red Chris mine, previously operated by Imperial Metals, for $806 million. Under this agreement, Newcrest will take over operations of the mine.
    - In March 2019, Ascot Resources completed a $45 million acquisition of IDM Mining and its Red Mountain project, a proposed underground gold mine near Stewart, BC.
    - In September 2019, Osisko Gold Royalties completed the purchase of Barkerville Gold Mines in the Cariboo. The total value of the share conversion transaction was $338 million. Osisko has agreed to fund an existing development program on the site.
    - Newmont invested $25.9 million in Vancouver-based GT Gold. Newmont's ownership of the company is now 14.9%.
- In Q1 2020, copper prices dropped significantly. Starting at US$2.79/lb, it closed the quarter slightly higher at US$2.18/lb. In April 2020, prices increased to US$2.37/lb and have remained around that level through the month of May. Forecasts of copper prices begin with modest price growth through Q4 2020 and into 2021.
    - The recovery of many commodity prices will likely be dictated by the speed in which global COVID-19 lockdowns can be lifted, and normal activity resumes.

Contact:

Peter Robb	ADM	MCAD	(250) 812-7392

British Columbia Geological Survey
Open File 2020-01

Mines, mine development, selected proposed mines, and selected exploration projects in British Columbia, 2019

Gordon Clarke, Bruce Northcote, Fiona Katay, and Sean Tombe
Cartography by Holly Arnold

0 Kilometres 250

Property status (overlay on sector and predominant deposit group)

- Operating mine*
- Care and Maintenance **
- Mine development
- Proposed mine
- Exploration project

* Operated in, or for a portion of 2019
** Operated within the last 3 years

Sector and predominant deposit group (possible commodities listed beside)

Metal
- Porphyry - Cu, Mo, Au, Ag
- Vein, breccia, and stockwork - Au, Ag, Cu, Pb, Zn, Co, Te
- Sediment-hosted - Cu, Co, Pb, Zn, Au, Ag
- Epithermal - Au, Ag, Cu, Sn, Pb, Zn
- Marine volcanic association - Cu, Pb, Zn, Au, Ag
- Skarn - W, Cu, Fe, Au, Ag, Pb, Zn, Mo, Co
- Ultramafic/Mafic - Cu, Ni, PGE, Co, Au, Ag
- Manto - Ag, Pb, Zn
- Carbonatites - Nb, REE

Coal
- Metallurgical
- Thermal

Aggregate
- Aggregate

Industrial
- Industrial rocks - Andesite, basalt, dimension stone, limestone, marble, pumice, shale, silica
- Sediment-hosted - Bentonite, magnesite, barite, kaolin, talc
- Chemical sediment - Gypsum, diatomite, phosphate
- Continental sediments and volcanics - Zeolite, silica
- Metamorphic-hosted - Graphite

Gems and semi-precious stones
- Jade

Miscellaneous
- Clay
- Slag

Geology
Post accretionary assemblages
- Intrusives
- Supracrustal
- Neogene to Quaternary volcanics

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

Ancestral North America
- Cassiar
- Basinal strata
- Platformal strata
- Craton and cover

Mineral Development Office and Regional Geologist Contacts

Gordon Clarke, Director
604-660-2094
Gordon.Clarke@gov.bc.ca

Bruce Northcote, RG
Southwest
604-660-2713
Bruce.Northcote@gov.bc.ca

Fiona Katay, RG
Southeast
250-417-6010
Fiona.Katay@gov.bc.ca

Sean Tombe
Northwest
250-847-7543
Sean.Tombe@gov.bc.ca

Vacant
South Central

Vacant
Northeast
North Central

Smithers
Prince George
Kamloops
Cranbrook
Vancouver

British Columbia Geological Survey
British Columbia Ministry of Energy, Mines and Petroleum Resources

Adrian Hickin, Chief Geologist and Executive Director
Larry Jones, Resource Information Director
Fil Ferri, Cordilleran Geoscience Director
Gordon Clarke, Mineral Development Office Director

Geological.Survey@gov.bc.ca
www.gov.bc.ca/geologicalsurvey

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

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

Revised: June 9, 2020

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

Response:

- Mineral tax revenue depends on the level of mineral production in BC's mining sector along with commodity prices. Mineral tax revenues are mainly supported by coal, copper and gold sales in the Province.
- With the decrease in metallurgical coal prices, the Ministry of Finance (FIN) forecasts mineral tax revenues to decrease from approximately $404 million in 2018/19 to $249 million in 2019/20.
- Up to 37.5% of incremental mineral tax is shared with First Nations (FN) for new mines and expansions with s.16; s.17 in 2018/19.
- Economic Community Development Agreements (ECDAs) representing 48 individual mineral tax revenue sharing streams have been signed with 48 FNs and further are underway or planned.
- The Province recognizes that FNs have been requesting amendments to revenue sharing policy. The Ministry of Energy, Mines and Petroleum Resources (EMPR) and The Ministry of Indigenous Relations and Reconciliation (MIRR) continue to evaluate ECDA policy improvements as part of the new fiscal relationship with Indigenous nations. This recently resulted in expanding ECDA eligibility requirements to include mines coming out of care and maintenance.

Background/Status:

BC Mineral Tax

- The mineral tax is a profit-based tax payable by the mines and quarries operating in BC. The tax was enacted in 1990.
- The program applies a tax on prescribed commodities:
  - Coal (approximately 85% of forecasted revenue) - Metallurgical, Thermal, PCI (Pulverized Coal Injection)
  - Base and Precious Metals (approximately 15% of revenue) – Copper, Molybdenum, Zinc, Gold and Silver
  - Other (less than 1%) – Industrial Minerals, Gemstones, rare elements and dimension stones

- The Mineral Tax Revenue projections are based on forecasted commodity prices, various economic indicators and knowledge of the industry. EMPR is responsible for providing commodity price forecasts while FIN is responsible for the Mineral Tax Revenue projections. EMPR subscribes to a publication called Consensus Economics to generate its price forecasts (Appendix 1).
- There are two tiers of mineral tax:
    - The lower tier is called the net current proceeds tax and is calculated at two%of operating cash flows (i.e. revenues plus recoveries minus operating expenditures for the period). This tax is paid before recovery of all operating and capital costs and other deductions.
    - The higher tier is called the net revenue tax and is calculated at 13% of profits over the life of the mine (i.e. cumulative revenue minus cumulative operating and capital costs and other tax-related deductions). The higher net revenue tax is only paid after recovery of all operating and capital costs and other deductions.

Mineral Tax Revenue Sharing

- In 2008, BC became the first province in Canada to introduce a policy to share with FNs direct provincial mineral tax revenue from new and expanded mines.
- ECDAs secure support for mining projects, increase process certainty for the Province, FNs and industry, and reduce litigation risks for the life of the agreement.
- MIRR leads the negotiation of ECDAs, and FNs receive a percentage of up to 37.5% of incremental mineral tax revenue from mine developments in FNs traditional territories.
- The Province's ECDA's represent 48 individual mineral tax revenue sharing streams to FNs which cover 24 metal and coal mines in BC.
- Agreements for mines which have recently come out of care and maintenance (Brule, Wolverine, Willow Creek and Myra Falls) were signed at the end of March, 2020.
- Other agreements, including those for Myra Falls and Silvertip, are underway, with further negotiations planned for the near future.
- ECDA payments have been made to FNs on 25 of the 48 mineral tax revenue sharing streams (Appendix 2). The 23 revenue sharing streams where payments have not been made include:
    - five established for the Trend and Quintette coal mines in the northeast which are currently in care and maintenance,
    - twelve new ones for the Brule, Willow Creek, Wolverine, Bonanza Ledge and Gibraltar mines that could all make a payment as early as this year,
    - five new ones for the Giscome, Blackwater, and Kemess Underground mines which could make a payment within the next 3-5 years, and

- one for the Kitsault mine which has been delayed due to weak molybdenum prices.

s.13; s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

s.16; s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Financial Security for Mines

Revised: June 9, 2020

Issue: **The purpose of mine reclamation security and an update on the Ministry of Energy, Mines and Petroleum Resources' upcoming revised security policy.**

Response:

- The Ministry of Energy, Mines and Petroleum Resources (EMPR) requires security at the time of mine permitting and conducts regular reviews of the amount held as conditions change throughout the life of the mine.
- Following the Auditor General's (AG) report in May 2016, the Ministry commissioned Ernst and Young to undertake an in-depth examination of reclamation securities practice. Ernst and Young found that:
  - EMPR has established a carefully-considered and systematic financial security approach for mine reclamation that includes elements of a risk-based approach and is tailored to the context of mining in BC.
  - Many aspects of the EMPR's current practice are sound but should be formalized into a well-defined policy that is clear to industry and the public.
- EMPR worked with a consultant who engaged with First Nations (FN), the environmental community, industry and other stakeholders and developed a report with recommended reclamation security policy options.
- A draft policy has been developed and is undergoing internal review. The policy considers what we heard from Indigenous groups, ENGOs and Industry.
- Further engagement with industry and Indigenous groups will be undertaken before the policy is adopted.
- The policy will protect BC taxpayers while ensuring that mining in BC continues to be nationally and globally competitive.

Background/Status:

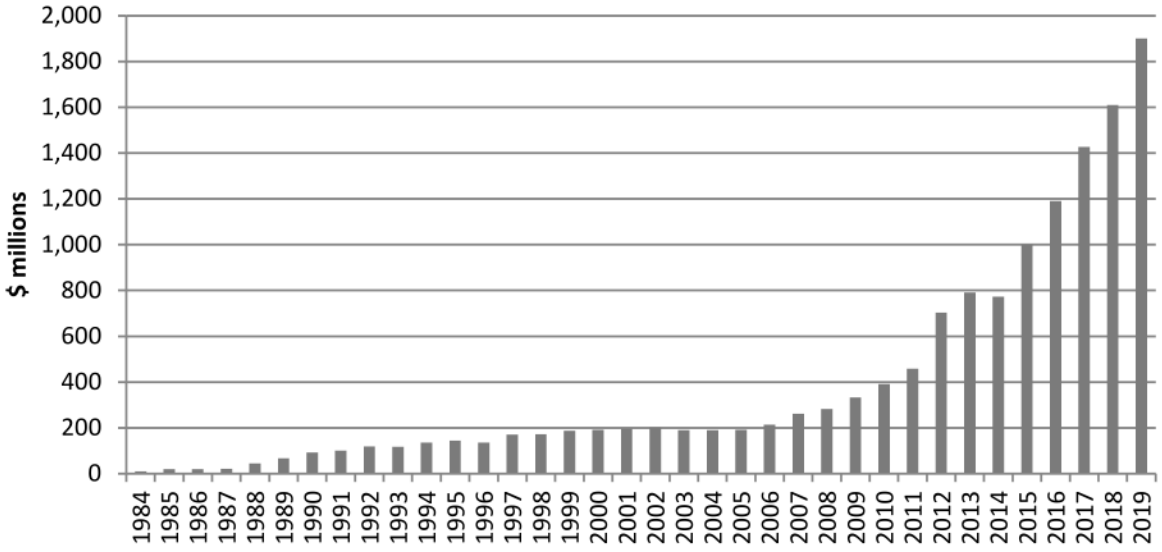
- EMPR reclamation security practice seeks to provide strong assurance that the costs of mine reclamation work will not fall to the Province.
- Under the *Mines Act*, the Chief Inspector sets the financial security requirements at the permitting stage, regularly reviews them during mine operations, and can adjust them as liability or other factors change at any point during the mine's life.
- Acceptable forms of security include cash, surety bonds, qualified environmental trusts, and irrevocable standby letters of credit.
- The AG's report of May 2016 highlighted a security shortfall of $1.2 billion. A similar figure has been reported in the most recent Chief Inspector of Mines Annual

Report[1].

- Lack of clear policy and insufficient security has been identified in several recent AG reports across the country (Ontario 2015, Alberta 2015, Nova Scotia 2014). This is an evolving area of policy development.
- EMPR's updated draft policy is based on current best practices as informed by the Ernst and Young report, and the consultant's report which included input from industry, environmental organizations and FNs. Primary objectives of the policy update include incentivizing progressive reclamation, increasing transparency with respect to the manner in which securities are calculated, promoting ongoing exploration to increase mine life, closing the gap between reclamation liabilities and reclamation securities for disturbance on existing mines and ensuring the continued competitiveness of BC's mining industry.
- Security held by the Province has risen from $10 million in 1984 to more than $2.0 billion as of June, 2020 (Appendix 1).

Attachments:

Appendix 1 – Reclamation Security Deposits held by the Province



Contact:

Peter Robb	ADM	MCAD	250-812-7392

[1] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/ci-annual-reports/2018_ci_annual_rpt.pdf

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: South Island Aggregates

Revised: March 16, 2020

Issue: Update on Progress of *Mines Act* Orders on South Island Aggregates Site

Response:

- Closure activities continue on Lot 23 under a Ministry of Environment and Climate Change Strategy's (ENV) Spill Protection Order.
- No soil has been removed from Lot 21 to date. HSE Inspectors are considering administrative monetary penalties against the Named Parties associated with SIA for not complying with the Order to remove imported soil.
- In Jan 2020 the Ministry of Energy, Mines and Petroleum Resoures' (EMPR) Compliance and Enforcement team issued a $10K administrative monetary penalty against the Named Parties for failure to adhere to a Stop Work Order from 2017. This penalty has not been paid.
- As of Dec 2019 Cobble Hill Holdings has forfeited ownership of the land due to outstanding taxes.
- The Named Parties are still responsible for complying with all Orders associated with the Lots 21 and 23.
- Both lots have *Mines Act* Permits and Inspectors will continue to monitor activities.

Background/Status:

- The South Island Aggregates (SIA) site consists of two lots with two *Mines Act* Permits:
    - Lot 23 has a Spill Prevention Order under the Environmental Management Act (EMA) and an approved closure plan for the site that is overseen by ENV.
    - Lot 21 has an Order on it under the *Mines Act* to remove deposited soil and remediate the site.
- SIA had until September 30, 2019 to comply with the Order on Lot 21, as of that date no work had occurred and EMPR is considering an AMP, in addition to the AMP already issued.
- On December 4, 2019, ENV announced that the Province had started the certificate of forfeiture process to take over ownership of the land owned by Cobble Hill Holdings near Shawnigan Lake due to outstanding taxes.
- The change in ownership does not impact the closure plan for the landfill.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The properties are permitted under the *Mines Act* and closed to the public.
- On January 9, 2020 a $10K administrative monetary penalty was issued under the *Mines Act* to SIA (c/o Cobble Hill Holdings) for failing to comply with a suspension of work order that was issued in 2017.
- SIA did not appeal the AMP. Payment was due by February 18, 2020, the AMP has not been paid to date.
- On October 16, 2019, the operator participated in an opportunity to be heard to ensure that the Statutory Decision Maker (SDM) was presented with all relevant information prior to making a final determination.
- The company remains responsible for implementing a final closure plan for the landfill situated on the same property (lot 23) under the ENV Spill Prevention Order.
- Information regarding Lot 23, including sampling data, inspection reports, and orders & warnings are posted publicly on the ENV website.
- The Province continues to review and inspect the adjacent permitted mine site. (Lot 21).

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Deasan Holdings Gravel Pit – Old Fort Landslide

Revised: March 9, 2020

Issue: A significant landslide occurred September 29, 2018 below the Deasan gravel pit affecting the community of Old Fort in northeast British Columbia

Response:

- An investigation of the landslide was ordered by the Chief Inspector of Mines and is currently ongoing
- Investigations and the information generated regarding geotechnical issues are complex. The ministry is taking the time required to ensure that information is thoroughly reviewed and the correct conclusions have been made.
- The Ministry of Transportation and Infrastructure is currently monitoring the slide area.
- The Ministry of Energy, Mines and Petroleum Resources (EMPR) is working with Deasan Holdings to determine if mining operations can resume.
- A Notice of Civil claim against the Peace River Regional District, the Province, Deasan Holdings and Golder and Associates is on-going.

Background/Status:

- On September 29, 2018, a landslide occurred above the community of Old Fort near Fort St. John in northeastern BC. The landslide destroyed the only access road into the community of Old Fort and affected several houses and private properties.
- Parts of the Deasan Holdings mine site were affected by the slide. It is not known if the mine site contributed to the slide.
- The Peace River Regional District has issued an evacuation order for the area including the Deasan Holdings mine site. This order is currently in force.
- A suspension of work order was issued by the EMPR geotechnical inspector for the mine site and is currently in force.
- A Notice of Civil Claim has been launched by affected residents of Old Fort against the Peace River Regional District, the Province, Deasan Holdings and Golder and Associates.
- Deasan Holdings has recently provided additional geotechnical information to EMPR and has applied to recommence mining operations. The information is currently under review.
- The Chief Inspector of Mines initiated an investigation of this incident to clarify what happened and make recommendations for prevention of such incidents in the future.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- This investigation is nearing completion. The duration of the investigation reflects the complexity of geotechnical information, importance of drawing correct conclusions, and unfortunate timing of the departure of several key staff involved in the investigation.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

Project	Product	Employment	Location	EA/Permitting	Nature/Purpose of Amendment	Capital Costs	Proponent/Owner
Mt. Milligan	Copper-Gold	485 during operations	Fort St. James (90 km Northeast)	EA and Permitting Pre-Application	Environmental Assessment (EA) Certificate (EAC), *Mines Act* (MA), and Water *Sustainability Act* amendments for long term water sources	Unknown	Centerra Gold
Myra Falls	Zinc, Copper and Lead concentrates, Silver and Gold	375 during operations	Strathcona Park (56 km Southwest of Campbell River)	1. Quarry Application: Permitting Review 2. Three Tailings Storage Facilities (TSF) design amendments Permitting Screening	1. MA amendment to increase permitted mine area in order to expand existing rock quarry and associated FLNRORD authorizations; Application Review nearing completion 2. MA amendments for: 1. 2020 tailings capacity	$5M	Nyrstar Myra Falls Ltd.

Project	Product	Employment	Location	EA/Permitting	Nature/Purpose of Amendment	Capital Costs	Proponent/Owner
					increase (one raise); 2. maximum tailings 'ultimate' capacity (six additional raises); and 3. closure of old TSF structure		
Silvertip	Silver-Lead-Zinc	167 during operations	Watson Lake	Post-decision	Silvertip went into care and maintenance on February 19, 2020.	N/A	Coeur Silvertip Holdings Ltd.
Bonanza Ledge	Gold	130 during operations, 30 during care and maintenance	Wells	Permitting Pre-Application	MA and *Environmental Management Act* (EMA) permit amendments for increased mining rate and stockpile storage capacity, construction and operation of water treatment facility and Potentially Acid	$35M	Barkerville Gold Mines

Project	Product	Employment	Location	EA/Permitting	Nature/Purpose of Amendment	Capital Costs	Proponent/Owner
					Generating Management		
Highland Valley Copper 2040	Copper-Molybdenum	1,320 during operations	Logan Lake	EA and Permitting Pre-Application	EAC, MA and EMA permit amendments for mine expansion	$2.5B	Teck Resources
New Afton – B3 Amendment	Copper-Gold-Silver	410 during operations	Kamloops	Pre-Application	MA permit amendments for mine expansion	Unknown	New Gold
Teck Fording River Operations - Turnbull West	Coal	1,300 during operations	Elkford	Withdrawn	MA and EMA permit to expand mining of Turnbull Mountain and extract 8M tonnes of metallurgic coal. Paused by Teck due to project economics	N/A	Teck Coal Limited (Fording River Operations)
Teck Fording River Operations - Castle Mountain	Coal	1,300 during operations	Elkford	Early EA Pre-Application Permitting decisions required Q3 2023	Extend mine life by 30 years	Unknown	Teck Coal Limited (Fording River Operations)

Major Amendments

Project	Product	Employment	Location	EA/Permitting	Nature/Purpose of Amendment	Capital Costs	Proponent/Owner
Kemess Underground	Gold-Copper	593 employees and 508 contractors during construction 409 people during operations	250 km north of Smithers	Permitting – Review	MA Amendment: Production rate increase	$603M	Centerra Gold
Brule	Metallurgical Coal	285 during operations	Chetwynd/Tumbler Ridge	Pre-Application	MA amendment: Mine Plan update. Conuma to confirm week of March 10, 2020 when application is expected to be submitted	$200M (for new Mine from 2005 Environmental Assessment Office Press Release); unknown with respect to amendment	Conuma

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Tulsequah Chief Mine

Revised: June 4, 2020

Issue: Abatement and remediation of ongoing contamination from legacy mining into the Tulsequah River and transboundary watersheds

Response:

- BC shares Alaska and the Taku River Tlingit First Nation's (TRTFN) concerns about the longstanding pollution being discharged from the Tulsequah Chief Mine.
- In February 2019, the Province and TRTFN collaboratively selected a proponent to develop a Remediation Plan for Tulsequah Chief Mine. A final Remediation Plan was submitted to the Province in April 2020.
- COVID-19 presents a challenge in operationalizing field plans this season. However, BC is seeking to have workers on site in Summer 2020 to conduct preliminary site preparation and additional studies that are necessary to support further remedial works.
- BC is committed to working closely with our partners and addressing the ongoing contamination and remediation concerns at the site through collaborative efforts.

Background/Status:

- Tulsequah Chief Mine (mine) is located approximately 120 kms south of Atlin on the Tulsequah River in the traditional territory of the TRTFN.
- Historic mining activities undertaken prior to mining legislation and bonding occurred from 1951-1957 and have left a legacy of acid rock drainage issues.
- An aquatic and ecological risk assessment in 2016 found that there is environmental risk proximate to the mine but that the impacted areas do not extend to the BC-Alaska border.
- The mine is currently owned by Chieftain Metals (Chieftain), who acquired the property in 2010. Chieftain had agreed to address the historical ARD issues as part of re-development of the mine.
- In September 2016, Chieftain filed for bankruptcy and was assigned into receivership. The $1.2 million security bond provided by Chieftain has been confiscated by the Ministry of Energy, Mines and Petroleum Resources (EMPR) and to date has been used towards securing the site areas, addressing immediate issues and funding the development of a remediation plan.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Legal Context:

- Over four years ago, the Ontario Superior Court appointed Grant Thornton LLP as receiver over all of Chieftain's assets, undertakings and properties, simultaneously introducing "stay provisions" limiting the Province's ability to uphold provincial statutes and regulatory oversight.

s.13; s.14; s.16

Collaborative Remediation Plan Development:

- The Province and TRTFN collaboratively selected SNC-Lavalin and SRK Consulting as contractors to develop the remediation plan.
- The costs and timelines contemplated in the draft plan were highly variable and preliminary, and have since been refined to better inform the long-term remedial approach and costing.
- The remainder of the reclamation security will be used to support preliminary site preparation and required additional studies in Summer 2020, which are essential before larger-scale remedial activities can be initiated.

United States and International Interests:

- s.16

- BC has committed to Alaska and the International Joint Commission that workers will be on site to conduct preliminary remedial works by Summer 2020.

Cross Reference: British Columbia's BC's Transboundary Relations with Alaska, Montana and Washington (2020/2021 Estimates Note)

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Fraser Institute Annual Survey of Mining Companies

Revised: June 9, 2020

Issue: A summary of findings from the Fraser Institute Annual Survey of Mining Companies

Response:

- The 2019 Fraser Institute's Annual Survey of Mining Companies concluded that BC's score for Investment Attractiveness decreased slightly from last year.
- Budget 2020 expanded PST exemptions on production machinery and location requirement used for pollution control and waste management and extended the New Mine Allowance for five years.
- The Province's tax incentives, rich mineral deposits, world-class infrastructure and abundant source of clean and affordable energy continue to make BC an attractive jurisdiction for mine investors.
- The Mining Jobs Task Force identified a number of actions that the Ministry of Energy, Mines and Petroleum Resources is implementing in a staged approach to enhance the competitiveness of BC's mining industry.
- In 2019 there was an increase in investment in BC from major mining companies with over $1.2 billion spent purchasing BC companies and assets.

Background/Status:

- On February 25, 2020, the Fraser Institute released its Survey of Mining Companies 2019 for overall investment attractiveness of 76 jurisdictions worldwide.
- BC ranked 19th out of 76 jurisdictions for overall investment attractiveness (a combination of pure mineral attractiveness and policy perception). In 2018, BC ranked 18th out of 83 jurisdictions.
- In this current survey, no Canadian provinces were in the top 10. Saskatchewan (11th), Ontario (16th), Quebec (18th) and BC (19th) were in the top 20.
- Respondents were asked about the amount of time required to get all permits and licenses required to begin exploration activity. 54.5% of BC respondants claimed it would take within six months, compared to 64.3% for Quebec and 81.3% for Ontario.
- The survey is an attempt to assess how mineral endowments and public policy factors affect exploration investment.

  - The survey was circulated electronically to approximately 2,400 individuals between August 20 and November 8, 2019.
  - The Fraser Institute Survey is a perception-based survey and it has a response rate of approximately 11%. It is difficult to say how representative the results are.
- The Overall Investment Attractiveness consists of Policy Perception and Best Practices Mineral Potential.

Policy Perception Index:

- BC ranked 36th out of 76 for overall policy attractiveness and had the fourth lowest score of Canadian jurisdictions.
- Policy factors examined include: uncertainty regarding administration of current regulations, environmental and labour regulations, regulatory duplication, the legal and taxation regime, uncertainty regarding protected areas and disputed land claims, infrastructure, development conditions, trade barriers, political stability, geological database quality, security and skills availability.
- The report notes that BC's relative rank decreased this year due to the perception of BC's environmental regulations, including uncertainty over protected areas, availability of labour and skills and uncertainty around disputed land claims.

Best Practices Mineral Potential Index:

- BC ranked 10th out of 76 for pure mineral potential under "best practices" conditions.
- This index ranks each jurisdiction based on whether their geology encourages exploration investment and BC was the only Canadian jurisdiction in the top 10.

2019/20 Investment in BC Mining Companies and Properties:

- Newcrest Mining Limited announced the purchase of a 70% stake in the Red Chris mine, previously operated by Imperial Metals, for $806 million.
- Ascot Resources completed a $45 million acquisition of IDM Mining and its Red Mountain project, a proposed underground gold mine near Stewart, BC.
- Osisko Gold Royalties purchased Barkerville Gold Mines for $338 million.
- Newmont acquired a 14.9 share of Vancouver-based GT Gold for $25.9 million.
- Artemis Gold announced a purchase of the Blackwater Project from New Gold worth over $200 million.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: British Columbia's Transboundary Relations with Alaska, Montana and Washington

Revised: June 11, 2020

Issue: Neighbouring US States ongoing concerns regarding downstream impacts from mining in BC

Response:

- BC is committed to ongoing collaboration, information sharing and engagement with our US transboundary neighbours.
- BC shares the same concerns as Alaska regarding the need for remediation at the historic Tulsequah Chief Mine. This continues to be a strong focus for BC.
- BC continues to strive to be a globally attractive and competitive mining jurisdiction and recognizes the importance of maintaining and building on our strong relationship with our US neighbours.

Background/Status:

Alaska-BC:

- In November 2015, the Province and Alaska signed the Memorandum of Understanding and Cooperation Between the State of Alaska and the Province of British Columbia (MOU). The MOU is being implemented through a Statement of Cooperation (SoC) on the Protection of Transboundary Waters.
- The SoC is overseen by a Bilateral Working Group (BWG) of BC Deputy Ministers and Assistant Deputy Ministers from the Ministry of Energy, Mines and Petroleum Resources and the Ministry of Environment and Climate Change Strategy (ENV), and Alaska department commissioners of Environmental Conservation, Fish and Game and Natural Resources. The BWG meets on a bi-annual basis to discuss transboundary matters and developments on projects proximate to the Alaskan border.

Washington-BC:

- BC and Washington State have enjoyed a collaborative working relationship since the creation of the Environmental Cooperation Agreement in 1992. The Agreement and the Environmental Cooperation Council have a successful history of promoting and coordinating mutual efforts to ensure the protection, preservation and enhancement of our shared environment.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Montana-BC:

- The foundation of BC and Montana's collaboration on regional ecosystems and shared protection of transboundary waters is captured in the 2003 Environmental Cooperation Arrangement and underpinned by the Memorandum of Understanding and Cooperation on Environmental Protection, Climate Action and Energy, which also provides for reciprocal opportunities for Montana to participate in BC's environmental assessment process.

Key Transboundary Concerns:

Alaska - Tulsequah:

- Tulsequah has long been the source of historical contamination concerns and an area of strong focus for the collaborative work between BC and Alaska. Advanced efforts continue through this summer to undertake studies and planning for reclamation and remediation of the site; while holding past owners jointly and severally liable. BC staff are working closely with our Alaskan neighbours as progress is made on this key issue.

s.16

Montana - Elevated Selenium Levels in Southeast BC:

- In 2014, the Elk Valley Water Quality Plan was approved as an Area Based Management Plan by the Minister of ENV to improve environmental outcomes downstream of Teck's coal mines in the Elk Valley and Koocanusa Reservoir, requiring Teck to construct a number of innovative water treatment facilities. Construction of the second water treatment facility at Fording River Operations is underway and is anticipated to be fully operational by December 2021.
- BC and Montana continue to work towards adopting aligned selenium water quality objectives/criteria for Koocanusa Reservoir by the end of 2020 through the Lake Koocanusa Monitoring and Research Working Group, a cross-border forum through site-specific criteria and water quality guidelines are discussed and recommended. It includes representatives from US federal and state agencies, First Nations and US Tribes, stakeholders and non-government organizations and experts.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Cross Reference: Tulsequah Chief Mine, Giant Copper Proposed Mineral Exploration

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Mining Jobs Task Force

Revised: June 8, 2020

Issue: Status update on Mining Jobs Task Force implementation

Response:

- The Mining Jobs Task Force (MJTF) submitted their final report in December 2018.
- Government has embraced the 25 recommended actions and developed a plan to implement, develop and study the actions through a staged approach.
- Government is implementing MJTF actions through a collaborative approach involving multiple agencies and external partners.
- To date, 21 MJTF actions have been completed or substantially started.
- The COVID-19 pandemic has affected the implementation timeline for some MJTF actions. Impacted initiatives are planned to initiate by the end of 2020.

Background/Status:

- The MJTF was mandated to work with the mining industry, workers and mining communities to make jobs secure and mines viable as commodity prices fluctuate and provide recommendations to the Minister of Energy, Mines and Petroleum Resources (EMPR).
- The MJTF was comprised of representatives from labour, Indigenous Nations, financial sector, an environmental non-governmental organization, post-secondary training, municipal government and industry.
- The MJTF Final Report (Attachment 1) was delivered to Honourable Mungall in December 2018.
- The MJTF identified a clear vision for the BC mining sector: “British Columbians are proud of our growing mining industry as the backbone of an inclusive, progressive and low carbon economy.”
- Government reviewed all actions contained in the Final Report and developed a plan to implement, develop and study actions through a staged approach. Government response and the Final Report was released at Roundup 2019.
- Implementation is being led by EMPR in collaboration with other agencies and external partners.
    - Partners include the Ministries of Environment and Climate Change Strategy; Jobs, Economic Development and Competitiveness; Finance; Advanced

Education and Skills Training; Indigenous Relations and Reconciliation, Labour, Citizen Services, the Association for Mineral Exploration and the Mining Association of BC.

- MJTF members continue to participate in a monitoring and evaluation capacity and are engaged regularly for their expertise.
- To date, 21 MJTF actions have been completed or substantially started. A summary of the actions and status can be found in Attachment 2.
- The COVID-19 pandemic has affected the implementation timeline for some MJTF actions. Impacted initiatives are planned to initiate by the end of 2020.
- Highlights of MJTF report implementation include:
  - The Mining Flow-Through Share tax credit and the BC Mining Exploration Tax Credit made permanent incentives to support investment (Budget 2019).
  - $20 million investment in EMPR (Budget 2019).
  - Launch of a Standing Code Review Committee (Budget 2019).
  - $0.2 million to host a multi-stakeholder forum on responsible metals markets (Budget 2019).
  - $1 million for a Mining Innovation Roadmap (2018/19 Contingencies).
  - $1 million for the Regional Mining Alliance (2018/19 Contingencies).
  - $5 million in funding for Geoscience BC (2018/19 Contingencies).
  - Location restrictions on pollution control and waste management machinery and equipment removed from the Provincial Sales Tax exemption (Budget 2020).
  - A five-year extension of the New Mine Allowance (Budget 2020).

Attachments: Attachment 1 – Mining Jobs Task Force Final Report
Attachment 2 – Mining Jobs Task Force Actions Status

Contact:

Peter Robb	ADM	MCAD	250-812-7392

BRITISH COLUMBIA

DECEMBER 19, 2018

MINING JOBS TASK FORCE

FINAL REPORT





TABLE OF CONTENTS

INTRODUCTION ..... pg 1

MINING JOBS TASK FORCE ACTION PLAN ..... pg 2

BACKGROUND ..... pg 4

HOW WE GOT HERE ..... pg 6

OVERVIEW OF THE MINING JOBS TASK FORCE STRATEGIC FRAMEWORK ..... pg 8

THE OPPORTUNITY ..... pg 11

ACTIONS ..... pg 15

- *Supporting a healthy and diverse workforce ..... pg 15*
- *Realizing community benefits ..... pg 22*
- *Enhancing BC's fiscal and regulatory competitiveness ..... pg 30*
- *Fostering innovation ..... pg 47*
- *Building awareness of mining's role in a prosperous BC ..... pg 50*

NEXT STEPS ..... pg 54

IN CONCLUSION ..... pg 56

INTRODUCTION

One of government's key commitments is to build a strong, sustainable, innovative economy and create good-paying jobs in every corner of British Columbia (BC); a healthy and growing mining sector is foundational to achieving that goal. To this end, the Minister of Energy, Mines and Petroleum Resource's mandate letter included a commitment to establish a Task Force to identify measures to create and sustain good jobs in this important industry.

Launched on February 26, 2018, the BC Mining Jobs Task Force (Task Force) was created to work with Indigenous peoples, labour, educators, the mining industry, communities and other concerned constituencies to develop actions government should take to grow the mining sector and create good jobs for people across the Province today, tomorrow and beyond. The mining industry spans a range of activity from early stage, grassroots exploration to mature, operating mines through to reclamation of impacted environments. These activities in turn create good jobs for thousands of workers, provide benefits through partnerships with Indigenous groups and form the foundation of healthy, vibrant communities across the province.

The mining sector is in a time of transition. With transition comes great opportunity, as well as risk. The Task Force commends the Minister for the foresight to assemble, for the first time, such a diverse Task Force representing all constituents at such an important juncture.

To capitalize on this opportunity, the Task Force focused not only on the current state of industry, but also on identifying a long-term vision to reach a desired future state: British Columbians are proud of our growing mining industry as the backbone of an inclusive, progressive and low carbon economy.

Driven by this desired future state, the Task Force has crafted a suite of innovative and impactful actions to support a healthy and growing industry in BC. These actions are wide-ranging and deeply interconnected, representing the diversity of the constituencies, communities and segments of industry that make up BC's world class mining industry. If not embraced as a whole, the Task Force believes this vision cannot be realized – there is no one discrete initiative, but rather a suite of fundamental actions that if implemented collectively will succeed in moving the sector and BC's reputation forward. Furthermore, if these actions are not implemented there is real risk of a contraction of this mining sector and the foundational benefits and opportunities it brings to the people of British Columbia.

Achieving this vision will take considerable work, but successful adoption of these actions will drive a progressive, inclusive and competitive sector that maintains its place as a leader in innovation and environmental best practices, supports job creation and ongoing socio-economic development, and meaningfully contributes to advancing reconciliation with Indigenous peoples.

MINING JOBS TASK FORCE VISION:

British Columbians are proud of our growing mining industry as the backbone of an inclusive, progressive and low carbon economy.

MINING JOBS TASK FORCE ACTION PLAN

The Task Force's actions have been summarized in the placemat graphic on the next page (Figure 1), to visually represent the holistic suite of actions, strategic areas of focus, goals and ultimate vision for the sector. These actions are diverse and interlinked, with multiple interdependencies existing between each. The greatest dependency is the existence of a thriving sector needed to provide the strong economic foundation with which to drive increased and wider-reaching benefits. Ensuring a competitive and healthy sector is first and paramount to achieve enhancements to job growth, skills and training, benefit sharing, community sustainability, innovation and increasing the positive impact of the mining sector throughout the province.



MINING JOBS TASK FORCE ACTION PLAN

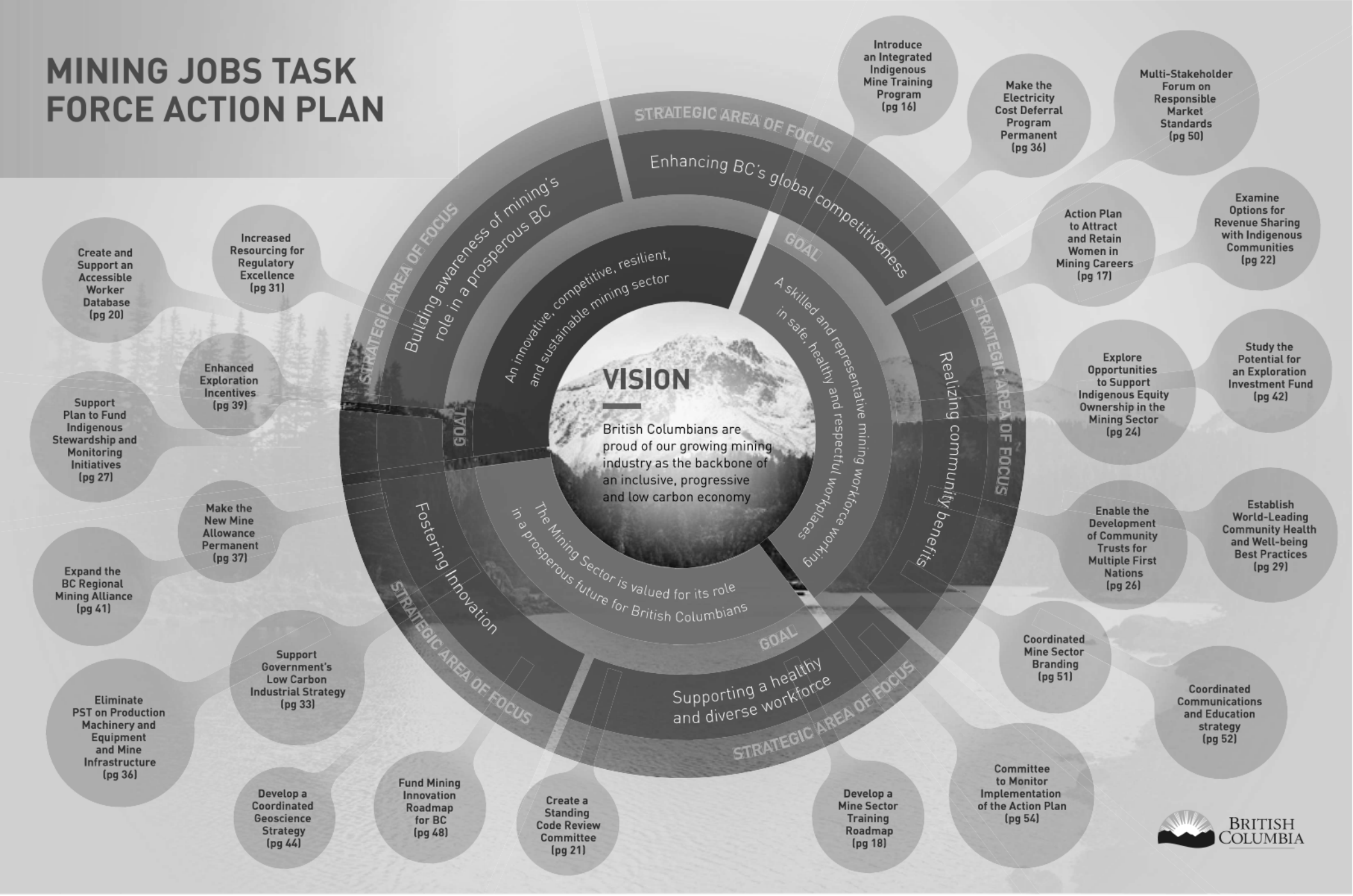


FIGURE 1: Mining Jobs Task Force Action Plan

BACKGROUND

BC's mining sector directly employs over 30,000 workers and thousands more through indirectly-related employment. In 2017, the sector contributed an estimated $9.9 billion to the BC economy while generating economic spin-offs in local communities throughout BC, including expenditures by suppliers and mine employees. The mining sector is consistently a top exporter, bringing into the province 'first dollar' resources that drive a myriad of different activities – from service sectors to innovation funding to local benefits.

Mining is at the forefront of advancing reconciliation with Indigenous peoples and implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Mining is a key employer of Indigenous people in rural and remote communities, and benefit agreements and revenue sharing provide revenue streams to advance community priorities. The mining sector has been and continues to be a leader in developing and implementing collaborative decision-making and including Indigenous communities in compliance monitoring and verification.

The sector also provides the minerals, metals and steelmaking coal needed for the growth of emerging technologies such as electric cars, wind turbines and transit systems necessary for a low carbon future. Global demand for metals will rise to support this transition, and BC is well-positioned to meet these needs due to the Province's existing competitive strengths, including a low greenhouse gas (GHG) profile globally, strong infrastructure network, rule of law, skilled workforce and commitment to reconciliation with Indigenous groups.

While there is much to celebrate about British Columbia's mining industry, there are also challenges that must be addressed if we are to achieve our collective vision. Government has a critical role to play in ensuring that the standards that regulate the industry are kept up to date, and that in addition to the economic benefits mining provides British Columbians, its social and environmental impacts are accounted for and properly managed. Investment in enhancing regulatory oversight, transparency, community engagement, reconciliation and driving technological innovation will assist the sector in improving public trust and moving toward a cleaner, safer sector.

United Nations Declaration on the Rights of Indigenous Peoples

The Province of British Columbia has committed to the full implementation of the UN Declaration, an international human rights instrument adopted by the United Nations which was fully endorsed by Canada in 2016. The rights affirmed in it "constitute the minimum standards for the survival, dignity and well-being of the indigenous peoples of the world" (Article 43).

TABLE 1: 2017 B.C. Minerals Sector Employment (Stats Canada)

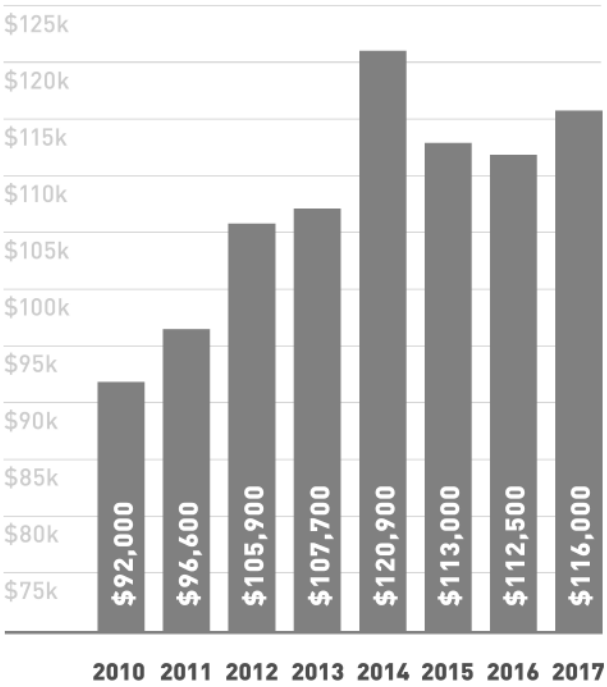
INDUSTRY	JOBS
Metal Mining	3,420
Coal Mining	4,745
Industrial Minerals and Construction Aggregates	1,345
Exploration	4,125
Total Direct Exploration and Mining Employment	**13,635**
Mineral Refining and Smelting	4,990
Downstream Minerals Processing	19,815
Total Direct Minerals Economy Employment	**24,805**

To remain competitive relative to other jurisdictions and make BC an attractive jurisdiction for investment in Canada, there are several key gaps identified by the Task Force, supported by an independent review, that need to be addressed. Overall, BC has been at risk for several years to eroding market share and competitiveness challenges from both regulatory and cost perspectives. While these challenges are not unique in a global context, there is evidence that BC is falling behind. Over the past decade BC's share of investment in the mining sector, both nationally and globally, has declined.

As an inherently cyclical industry, fluctuating commodity prices force the sector to cut costs at times, and in some cases, put projects and job creation on hold until markets improve. As a mining jurisdiction, BC's risk increases due to a profile that is largely mid-to low tier in grade and scale, this creates unique challenges for the sector.

The Task Force has focused on areas that can help the sector maintain its current strength, mitigate impending risk and grow into the future to become an even stronger economic driver, benefitting all corners of the province. The mining sector provides vital economic contributions in rural BC, but also supports a significant service and supply sub-sector providing well-paying jobs in the province's urban centres. For every direct job in the BC mining industry there are at least two jobs in mining supply and services. In addition to direct and indirect employment, the mining sector represents hundreds of millions of dollars in taxes. This vital contribution to the provincial treasury funds progressive initiatives in health care, education and broader economic development. Mining is truly a province-wide industry supporting the growth of a modern British Columbia.

TABLE 2: Average earnings of mine-site full-time employees in BC (Stats Canada)



HOW WE GOT HERE

Since its launch in February 2018, the BC Mining Jobs Task Force has worked to identify a desired future state for the BC mining sector. Actions to reach this desired future state were collaboratively developed through the Mining Jobs Task Force Strategic Framework (the Framework) (detailed in Section 5). The Task Force used this consensus tool to develop actions to bring more certainty to the mining sector and create good jobs today and into the future. In developing the Framework, the Task Force reviewed British Columbia's diverse mining sector, highlighting key drivers of change and strategic areas that will enable BC to undeniably state that we are the most attractive jurisdiction for investment in Canada.



The Task Force represents a diversity of constituents unprecedented in a mining task force, including members from: Indigenous groups; labour; an environmental non-governmental organization; post-secondary/training; financial sector; municipal government; and industry. This diverse group brought unique perspectives and ideas to the table, but all Task Force members shared a common goal – a desire to produce consensus based, realistic, innovative and implementable actions that will support the long-term growth of mining jobs in BC. The full membership of the BC Mining Jobs Task Force is as follows:

- **Keith Bertrand**, Mayor, District of Tumbler Ridge
- **Bryan Cox**, President and CEO, Mining Association of British Columbia
- **Earl Graham**, Staff Representative, United Steelworkers
- **Michelle Laurie**, Staff Representative, United Steelworkers
- **Don McPherson**, Past-Mayor, District of Tumbler Ridge
- **Codie Morigeau**, Director of Education and Employment, Ktunaxa Nation Council
- **Mark Podlasly**, Senior Adviser, First Nations Energy and Mining Council
- **Neil Pogany**, Partner, Deloitte LLP (operating in his personal capacity)
- **Peter Robb**, Assistant Deputy Minister, Ministry of Energy, Mines and Petroleum Resources
- **Regina Saimoto**, Associate Dean, Coast Mountain College, Eastern Region
- **Tom Syer**, Head of Government Affairs, Teck Resources Limited
- **Edie Thome**, President and CEO, Association for Mineral Exploration
- **Richard Tremblay**, Vice-President and General Manager, Taseko Gibraltar Mine
- **Alan Young**, Director, Materials Efficiency Research Group

The Task Force met in-person for ten full-day sessions, in-addition to regular teleconference calls. Highlights of these working sessions include the development of the Framework, constituent engagement strategy and an intertwined suite of actions. The Framework was developed by the Task Force to provide context and clear pathways for action that align with long-term strategies, goals and an overall vision for mining in BC. The Framework is explored in detail in Section 5.

The Task Force was supported in its work by Ministry of Energy, Mines and Petroleum Resources (EMPR) staff, whose responsibilities included providing technical expertise and secretariat support, coordinating Task Force activities, background research and fact-finding and liaising with other agencies on complementary initiatives. The Task Force invited presentations from key stakeholders, such as the BC Geological Survey and Geoscience BC. The Ministry also engaged Ernst & Young LLP (EY) to develop a report including baseline data metrics and a jurisdictional competitiveness review to inform the Task Force's work: BC Mining Industry Assessment – Performance and Competitiveness.

EY's report assessed BC's investment attractiveness based on the major drivers of investment returns, geology and geography, fiscal policy and regulatory framework. EY compared the conditions in BC to our major competitors for metallurgical coal, copper and gold, which include Chile, Queensland (Australia), Western Australia, Ontario and Quebec. They concluded that our competitors have an edge in geology and geography leaving fiscal policy and regulatory framework as the levers that government can pull to improve competitiveness. For fiscal policy EY identified that, in general, BC's fiscal regime is competitive for exploration, mine development and operating mines with exception of the BC carbon tax.

EY also noted the rapid pace of change seen in the sector due to a number of disruptive technological, social and demographic forces. This rapid pace of change means that the mining industry of the future will look considerably different than it does today, presenting challenges but also exciting opportunities. The BC sector has the opportunity to take proactive steps to lead the way in advancing innovation, workforce inclusion and training, Indigenous partnerships, regulatory agility and the shift to a low-carbon economy.

Task Force members solicited input from constituents to inform their work. A designated engagement period took place in September and October 2018, and included conversations with constituencies represented on the Task Force including Indigenous groups, industry, labour, communities and stakeholders with an interest in the matters contained within the Terms of Reference. The Task Force also presented the Framework findings to key target audiences to gather information to enhance recommended actions for the Province.

BC Mining Industry Assessment - Performance and Competitiveness Report

The *BC Mining Industry Assessment – Performance and Competitiveness* report provided to the Task Force by Ernst & Young LLP concluded that the primary policy levers that government can pull to improve mining sector competitiveness are fiscal policy and regulatory framework. It also noted that one area of fiscal policy that stood out as a challenge is the BC carbon tax, but highlighted the opportunity for the BC's mining sector to be a leader in the shift to a low-carbon future.

OVERVIEW OF THE MINING JOBS TASK FORCE STRATEGIC FRAMEWORK

Introduction and Purpose of the Framework

As a part of fulfilling its mandate, the Task Force chose to adopt a strategic approach to addressing the areas in their Terms of Reference for which they were asked to provide recommended actions. The result of this approach is the development of the Framework.

The Framework (Figure 2 on page 10) describes the desired future state for mining in British Columbia, along with specific areas of focus for realizing the desired future state. Additionally, the Framework outlines short and long-term drivers of change in BC's environment and guiding principles.

To capitalize on the opportunities provided by these drivers of change, the Task Force identified five key strategic areas of focus to create good, sustainable jobs for British Columbians and make BC the most attractive mining jurisdiction in Canada. For each strategic area, core areas were identified where concrete action is necessary to ensure a healthy, sustainable and competitive sector. Through the Framework, Task Force actions feed into each of these strategic areas, while at the same time addressing drivers of change and targeting desired outcomes, goals and, ultimately, the vision.

The Framework was developed by the Task Force through a consensus-based approach and all members are in support of it. The Task





Force worked to table all issues and ideas and debate their suitability for inclusion. The Framework represents a balanced collection of the drivers and principles informing the essential strategic areas of focus and desired outcomes identified as important by the Task Force. This process and Framework were a significant achievement and provided the foundation for the Task Force's collaborative development of these actions.

The Framework supported the development of the actions by providing a strategic lens. This lens ensured that the actions address current challenges while also considering downstream implications and, concurrently, advance the sector towards the desired future state. Finally, this approach allows Task Force members to develop actions from a holistic perspective and consider how potential actions influence or impact others.

How the Framework was used to develop Actions

As outlined above, the Framework provided a strategic lens to the development of the actions. As actions were developed, each was assessed from a number of perspectives outlined in the Framework prior to finalization for inclusion in this report and submission to the Minister, including but not limited to:

- How the action supports realizing the goals and desired outcomes;
- How the action considers or addresses environmental factors, such as drivers of change;
- How the action aligns with the guiding principles;
- How the action supports the areas of focus and the available data that underpins and validates the action.

This assessment provided a level of certainty beyond what was originally contemplated in the Terms of Reference and ensures that all actions are strategic, synergistic and forward thinking in nature while based on available evidence.

Mining Jobs Task Force Strategic Framework

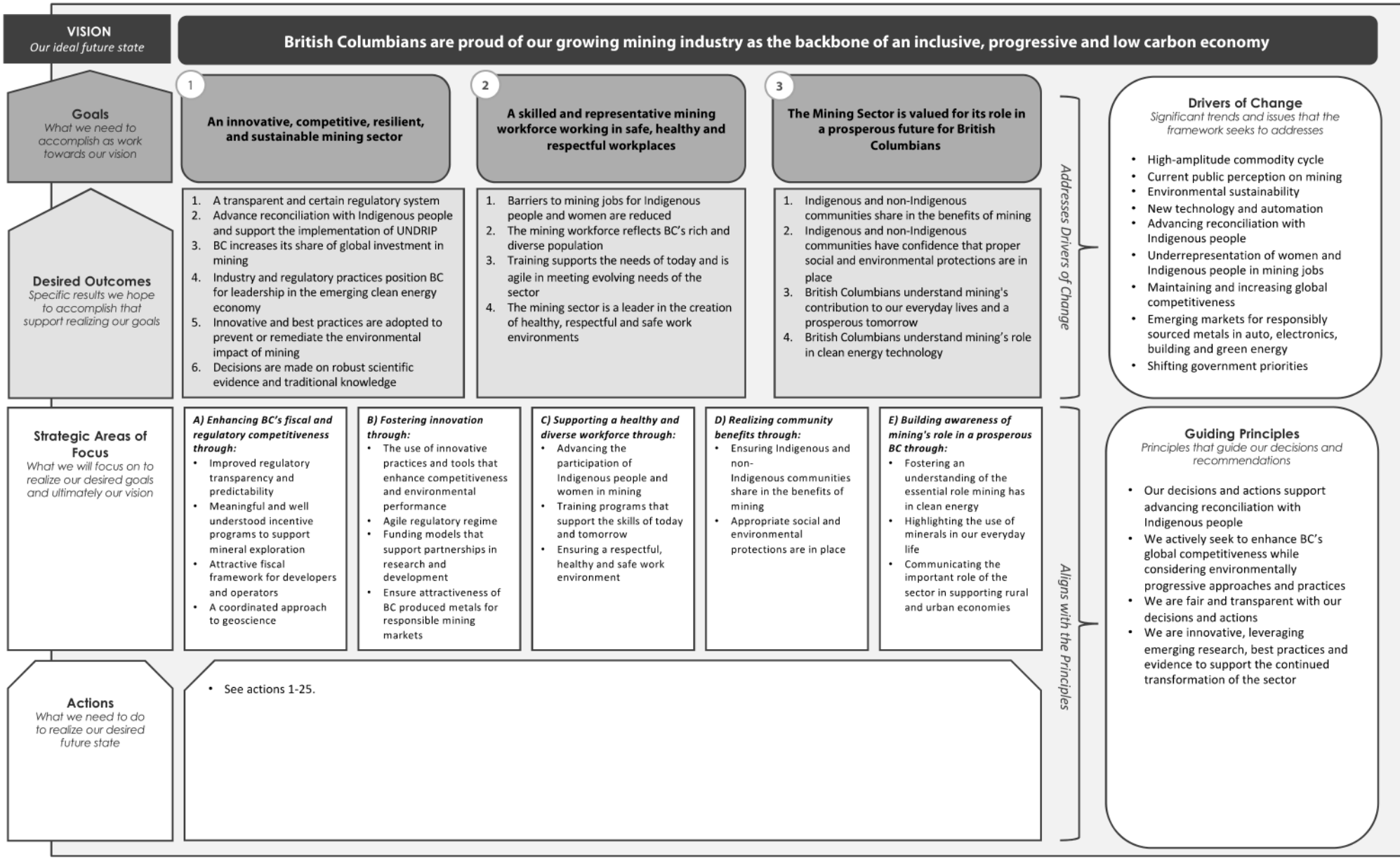


FIGURE 2: Mining Jobs Task Force Strategic Framework

THE OPPORTUNITY

The mining sector, from exploration to operations to reclamation, is an essential part of the economic and social fabric of British Columbia; the very foundations of the province rest on the mining sector. A vibrant, competitive and responsible industry provides benefits to British Columbians in all corners of the province. However, the rapid pace of change seen both in industry and in broader society require bold and innovative responses to ensure that the BC mining sector is fiscally competitive with jurisdictions throughout the country and the world, maintains its place as a leader in innovation and environmental best practices, and contributes to ongoing socio-economic development and the advancement of reconciliation with Indigenous peoples in the province.

BC has exciting mining projects, both early stage and nearing development, that are well-positioned to become BC's mines of the future. At the same time, many of BC's operating mines are primed for expansion or mine-life extensions if conditions are right. However, in the last year, two companies with significant BC operations have chosen to invest billions in rival jurisdictions. By taking action to ensure competitiveness, BC can better position our projects to attract these investments, thereby driving new and expanded mines that create new jobs for British Columbians. For example, EY's report provided an estimate on the incremental impact that an additional steelmaking coal mine has on the BC economy. Based on their findings, an additional coal mine in BC would have a total economic impact of $691 million and employ approximately 639 employees.

The opportunity is at hand to grow this foundational industry that employs tens of thousands of workers and contributes a total economic impact of almost $10 billion to the provincial economy. At the same time, BC risks a contraction of this vital sector of the economy by not taking concrete, immediate action. BC's competitors are advancing initiatives of their own, and BC needs to implement innovative, actionable ideas to maintain a healthy and competitive mining sector that is positioned for growth.

To meet these challenges and capitalize on new opportunities, the Task Force focused not only on the current state of industry, but also on identifying a long-term vision to reach a desired future state. Significant trends and issues projected to impact the sector have been identified and analyzed, and these drivers of change comprise the foundational challenges and opportunities that this Task Force report seeks to address.

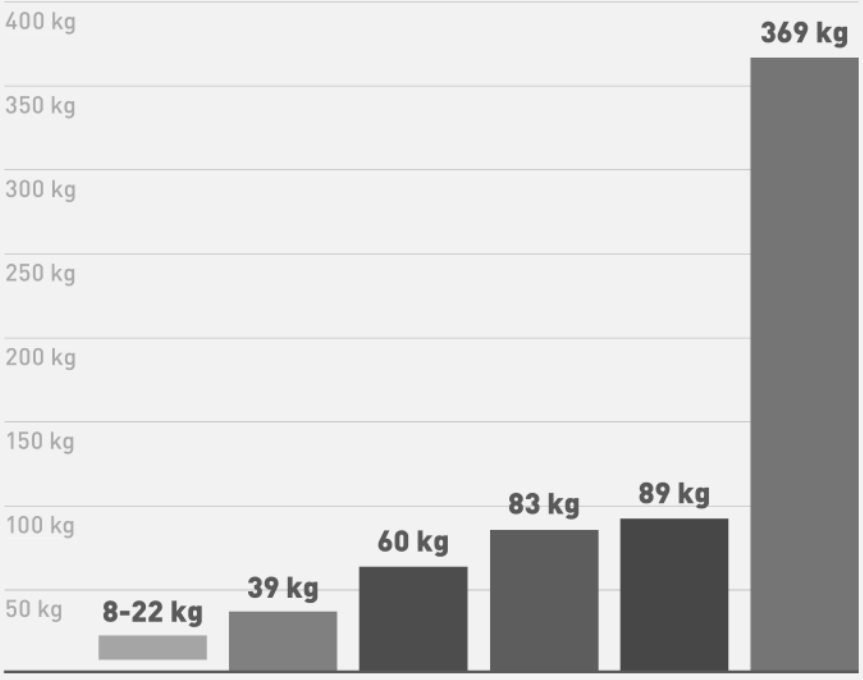
The mining sector is intertwined with its neighbouring communities – the sector's well-paying jobs form the economic backbone of towns and cities across BC.

There remains significant work to do to fulfill government's commitment to lasting reconciliation and implementation of UNDRIP, and the mining sector can continue to play a significant leadership role. There are opportunities for joint decision-making, wealth and capacity building, employment, revenue sharing, investment, economic growth, and partnership opportunities with Indigenous groups and businesses across the entire mining life cycle. This type of investment in Indigenous communities is a mutually beneficial proposition – improving predictability and the self-determination, sustainability and socio-economic conditions of Indigenous and rural communities while mobilizing new capital and meeting the long-term labour force needs of a growing mining sector.

The mining sector is intertwined with its neighbouring communities – the sector's well-paying jobs form the economic backbone of towns and cities across BC. There is the opportunity to deepen this bond by supporting industry to ensure it can stay in these communities for the long term; training local workers, providing crucial economic stimulus to these regions and providing opportunity for workers to raise their families in vibrant, sustainable communities.

As the demand for clean energy grows, so too will the associated need for the metals and minerals used to manufacture those technologies. BC is already a major producer of metals used in solar power cells, as well as the coal used to make steel that goes into wind turbines. The inherent connection between these two industries represents significant opportunities at the

TABLE 3: Kilograms of Copper contained in specific vehicle technology



Copper is Essential to Electric Vehicle Technology

Copper is used throughout electric vehicles, charging stations and supporting infrastructure because of the metal's durability, hight conductivity and efficiency.

- **Conventional Cars**
- **Hybrid Electric Vehicles (HEV)**
- **Plug-in Hybrid Electric Vehicles (PHEV)**
- **Battery Electric Vehicles (BEVs)**
- **Hybrid Electric Bus**
- **Battery Electric Bus**



provincial level. This new reality is highlighted by government's recent commitment that by 2040 all new cars and trucks sold in BC will be zero-emission vehicles. A clean energy vehicle can require up to four times the amount of copper as a standard combustion engine and 600kg of metallurgical coal. On a global basis, this transition represents a tremendous opportunity for future growth.

BC must work to ensure new markets and the drivers of demand for our products are well understood – identifying areas where industry can address challenges and develop competitive advantage. While the transition to a low-carbon economy is moving slowly in terms of product demand, emerging demand for responsibly sourced metals in auto, electronics, building and clean energy is expected to enter the market in the years ahead. By positioning itself to take advantage of this evolving marketplace, BC has the opportunity to position BC to have a competitive advantage in these markets.

EY's report compared the conditions in BC to our major competitors for metallurgical coal, copper and gold including Chile, Queensland (Australia), Western Australia, Ontario and Quebec. EY highlighted the main levers available to increase the BC's attractiveness to investors are lowering taxes, offering greater incentives, and improving the regulatory framework – and there exists an additional opportunity for the province to invest now to position itself as Canada's leader of the 'mining industry of the low-carbon future'.

EY's strongest competitiveness finding is that BC is not competitive in is its treatment of carbon. Although government has proposed some targeted support to industry to alleviate competitiveness concerns related to the BC carbon tax through the Clean Growth Incentive Program, mining companies operating in BC currently, and will continue to, pay substantially more than their competitors in other jurisdictions. This cost-burden has a direct effect on

the competitiveness of existing operations and creates a challenging investment environment for new mines and mine expansions.

However, BC's mining sector has worked to reduce its carbon footprint and has become a model internationally for how to lower emissions. Industry continues to work with government and the clean tech sector to develop innovative solutions to reduce emissions and keep BC operations competitive. The Province's recently announced CleanBC program is an opportunity to continue these efforts, reducing carbon tax costs and investing directly into emissions reduction projects.This program will help the sector and its workers thrive, create a clean industry brand for BC, and help the sector compete in a global market where consumers are increasingly demanding cleaner products.

Operating mines directly provides thousands of full-time jobs and training opportunities with salaries well above the provincial average.

BC's mining sector faces strong global competition for investment and financing. Fiscal incentives can play an essential role in attracting investment for small to medium sized, non-revenue generating companies that undertake a significant portion of the high-risk grassroots mineral exploration in BC. Expanding these programs and exploring innovative ideas to sustain and grow mineral development activity will drive new discoveries to enter the project pipeline and become the operating mines of the future.

Investment dollars for mine development and mine expansion can also be challenging to attract. Building on existing programs to support and incentivize mine development and maintaining/expanding existing operations will ensure that BC remains one of Canada's top jurisdictions for mineral production, with direct impact to communities and the provincial treasury. Operating mines directly provides thousands of full-time jobs and training opportunities with salaries well above the provincial average. Indirectly, the mining services and supply sector of BC provides further high-paying full- and part-time employment in areas such as geological research, business administration, finance, management, engineering and environmental consulting, making mining an integral part of the BC labour economy.

This Task Force was struck by the possibilities presented by this transitional moment – this is an exciting time for those involved in and benefitting from the mining sector. Running concurrently through 2018/2019 and beyond are a number of government initiatives that can influence or be influenced by the work and outputs of the Task Force. These key initiatives, such as the Low Carbon Industrial Strategy, CleanBC Plan, Rural Economic Development Strategy, establishment of the Indigenous Economic Development Joint Office and the Canadian Minerals and Metals Plan, possess strong linkages to the Task Force's work. Wherever possible, synergies and alignment between Task Force actions complimentary to other initiates have been noted with the goal of leveraging the collective effort of partner agencies and other levels of government.

ACTIONS

The actions endorsed by the Task Force reflect the complex and intertwined nature of the mining sector – there is no single lever that immediately creates a growing, sustainable mining sector envisioned by the Task Force. These actions reflect the full development cycle of a mining project, from grassroots exploration to a mature, operating mine. They also reflect the diverse nature of the constituents whose livelihoods, communities and culture are linked to mining.

While the Task Force actions are divided into five areas of focus to provide clarity, they are collective vision for advancing BC's mining sector, with all actions jointly driving toward the desired future state. Action in any one area has numerous knock-on affects driving progress in other areas of the sector, and as such this list of actions must be viewed as a collective, holistic shift rather than a series of individual initiatives.

Only 16% of the mining workforce in BC is female, compared to 62% of the general labour force.

Mines are often long-term entities, with the full life-cycle of a mine often measured in decades rather than years, providing the multigenerational economic foundation for communities throughout the province. As such, long-term actions put forward by the Task Force are designed to be reflective of the current market opportunities, but also enable the Task Force's desired future state.

The five areas of focus are:

1. Supporting a healthy and diverse workforce
2. Realizing community benefits
3. Enhancing BC's fiscal and regulatory competitiveness
4. Fostering innovation
5. Building awareness of mining's role in a prosperous BC

1. Supporting a healthy and diverse workforce

Projections of market growth coupled with the limited availability of talent could create labour force challenges for the mining sector in BC. This risk is exacerbated by the aging mining workforce (20% over 55 years of age), highlighting the need for a long-term, cohesive and fully-funded training strategy. In addition to a commitment to training Indigenous people, this strategy must target a demographic that has been traditionally underrepresented in the mining workforce, women. Only 16% of the mining workforce in BC is female, compared to 62% of the general labour force.

These gaps represent an opportunity to develop a refreshed training strategy that is forward-looking and responsive to future needs. Specific programs targeting traditionally underrepresented demographics can drive a more inclusive sector and provide these workers with the skills needed to build lasting careers in mining. The rapid pace of change means that the mining industry five, ten, and twenty years

into the future will look considerably different than the industry today. Labour forecasting indicates that advancements in automation and the modernization of mines means future mining jobs will require higher education and/or more specialized skills, and training strategies must reflect this.

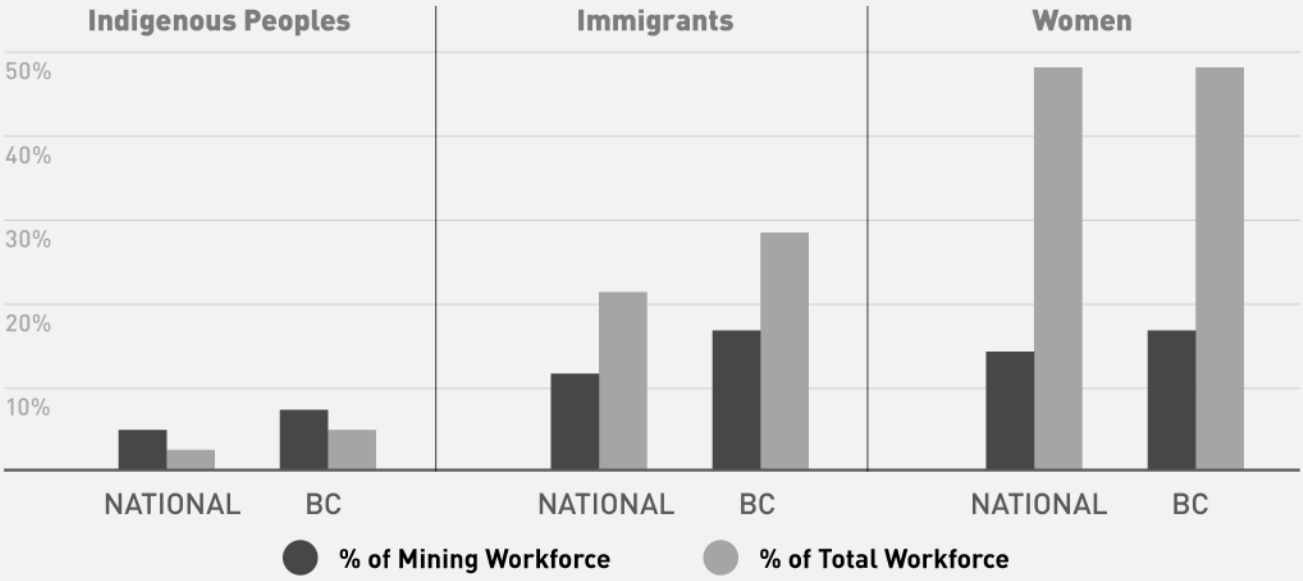
I. ADVANCING THE PARTICIPATION OF INDIGENOUS PEOPLE AND WOMEN IN MINING

ACTION: Introduce an Integrated Indigenous Mine Training Program, with provincial, federal and industry funding/participation.

With 25% of the mining workforce scheduled to retire within the next five years and 1,200 Indigenous communities within 200 kilometres of an operating mine or exploration project across Canada, providing target training and placing more Indigenous people into mining careers across the province will provide exciting opportunities for Indigenous workers and help meet future industry demand.

While the mining sector is already a significant employer of Indigenous peoples, creating a dedicated program that accelerates the ability of companies to hire and upskill Indigenous employees will assist with providing new opportunities and reducing barriers for this underrepresented group. Dedicated funding for this program can also leverage existing company-community agreements and other industry programs. In addition to a commitment to training Indigenous people, this strategy could expand to target additional demographics that have traditionally been underrepresented in the mining workforce, such as women and new immigrants. Program funding needs to be flexible to allow for program innovation and metrics for funding need to consider graduation and employment rates rather than just cost per student. The Task Force recommends this program be modeled after two award winning programs: the BC Aboriginal Mine Training Association (AMTA) that ran from 2009-2014, and the School of Exploration and Mining (SEM). In partnership with industry, governments and educators and Indigenous communities, AMTA

TABLE 4: Demographics of the BC Mining Sector



provided training and support services to Aboriginal participants through a formal process of personal and professional development and matched jobs to workers and would-be employees, providing paths to sustainable careersin the natural resource sectors for over 1,000 people. SEM was established in 2004 in partnership with Smithers Exploration Group. Between 2004 and 2014, 1,300 graduates completed SEM programs (89% graduation rate), the majority of whom were Indigenous. 72% of graduates and 75% of Indigenous graduates transitioned to employment. Graduates represented 113 communities, of which 86 were Indigenous communities.

RESOURCES + TIMELINES

2020/21 BUDGET CYCLE

COST: $5 MILLION

IMPLEMENTATION NOTES

- Work should commence in 2019 to build a blueprint for a robust program to be funded in the 2020/2021 budget.
- This program should be administered outside government.

BENEFITS:

- This action will support the development of a skilled and representative mining workforce and reduce barriers to mining jobs for Indigenous people and other traditionally underrepresented groups.
- Communities benefit from increased education and employment.
- Industry will be provided with a pipeline of skilled workers to meet future demand.

ACTION: Develop and implement an action plan to attract and retain women in mining careers.

While BC outperforms the national mining industry standard for employment of women, the mining industry still lags behind the general labour force rates for employment of women. The highest concentrations of women in the mining workforce are found in administrative or clerical positions (19%) and mid-level management (16%). Less than 1% of the women employed in the BC mining industry are in roles such as mine supervisor or apprentice tradesperson. Roles with the highest vacancies – heavy equipment operators, tradespeople and labourers – also have the lowest rates of female participation, with less than 5% of these jobs being filled by women.

Women's participation in the mining workforce has been steadily climbing – studies from groups such the Mining Industry Human Resources Council have influenced many companies to institute policy changes, create programs that foster diversity, and initiate targeted hiring campaigns to increase female workforce participation. Data from one of the largest producers in the province shows continued growth, outpacing the current national average of female employment in mining of 14%. However, additional effort is still required. The development and implementation of an action plan, led by women working in the sector in collaboration with industry and government, will provide direct benefits to the mining workforce, prospective workers, their communities and industry.

Attracting and retaining more women in the mining industry will require a combination of collaborative solutions—from enhancing early education programs aimed at exciting young girls about technology fundamentals,

to encouraging women to explore the varied opportunities for careers in mining, to building a gender-inclusive awareness of the industry, to appointing more women to senior leadership and board positions. In addition to high-level shifts to attract women to these careers, direct action is needed to retain women in the industry, including providing more options around childcare and work schedules, and ensuring equipment and facilities are inclusive of the female workforce.

The Canadian mining industry is projected to need to hire roughly 97, 450 workers over the next 10 years.

RESOURCES + TIMELINES

2019/20 BUDGET CYCLE

COST: $750,000

IMPLEMENTATION NOTES

- This plan should be developed in collaboration with the Ministry of Advanced Education, Skills and Training (AEST).

BENEFITS:

- This action will support a healthy and diverse mining workforce by expanding career opportunities to women.
- This action will help address the future labour shortages in the mining sector.
- This action will help to prepare for the expected future state by contributing to a local high-skilled pool of workers to support the evolving needs of the sector.

II. TRAINING PROGRAMS THAT SUPPORT THE SKILLS OF TODAY AND TOMORROW

ACTION: Support the development and implementation of a cohesive roadmap for enhanced mine sector training to meet the mining sector's future skills and labour needs through a collaborative, inclusive, innovative and geographically-focused approach.

Market growth projections coupled with the limited availability of talent could create future labour force challenges for BC's mining sector. The Canadian mining industry is projected to need to hire roughly 97,450 workers over the next 10 years (2019 to 2029). A significant portion of those workers will be needed in BC, and given the mobility of the Canadian workforce, the BC sector will be competing for employees with mines in other parts of the country.

Labour forecasting also indicates that advancements in automation and the modernization of mines means future mining jobs will require higher education and/or more specialized skills, and training strategies must reflect this. Today's mines access deeper, lower-grade and more complex deposits than ever before, and these activities necessitate the use of new, more sophisticated and innovative technologies at all stages of the mining cycle.

A forward-looking and responsive training strategy is needed to meet future need of skills and supply for BC's mining sector. A cohesive roadmap for enhanced mine sector training will meet the mining sector's future skills and labour needs through a collaborative, inclusive, innovative and geographically focused approach.

Greater integration is needed between industry, labour, training providers and government to close the gap between the education and the workplace. This integration can take the form of:

- Increasing the ease of transition from school and training to the jobs available through apprenticeships and on-the-job training.
- Locating post-secondary education/skills development in the communities proximal to mining operations.
- Improving coordination between industry and training providers to ensure workforce supply meets workplace demand and skills needs.
- Ensuring training programs and subsequent credentials are endorsed by industry.
- Supporting programs that emphasize transferable skills and accreditation (e.g. through professional associations) to assist in worker mobility between natural resource sectors, provide more stable employment and a more stable skilled workforce.

To support the success of an enhanced training strategy, further information is required regarding:

- The future skills gaps projected as a result of innovation and technological development in the mining industry.
- A clearer understanding of transferable skills between natural resource sectors (e.g. forestry and mining), and accreditation of training programs where possible would enhance worker mobility within and between sectors (career shifting, shifting back during upswings, upward mobility).
- Opportunities to advance the participation of Indigenous people, women and other underrepresented groups in training programs and long-term mining career paths.
- Encouraging post-secondary institutions to more fully integrate prior learning assessments to recognize skills and knowledge of students.

RESOURCES + TIMELINES

2019/20 BUDGET CYCLE

COST: $300,000

IMPLEMENTATION NOTES

- To be developed in collaboration with AEST.
- Budget to be confirmed with AEST.
- To be developed with deep input from industry, labour, Indigenous groups and post-secondary institutions.

BENEFITS:

- This action will help to prepare for the expected future state, where there will be significantly more automation in the industry, by creating a local tech-ready pool of workers and training facilities to support the evolving needs of the sector.
- This action will support a healthy and diverse workforce by expanding opportunities to groups traditionally underrepresented in the mining workforce and be geographically located to ensure Indigenous and non-Indigenous communities proximal to mining operations can participate fully.

ACTION: Create and support an accessible worker database to support workforce transitions across the natural resource sector.

BC's natural resource sector forms a strong economic foundation throughout rural BC. These industries, such as mining, provide good, well-paying jobs that support working families and vibrant communities. However, these industries are vulnerable to boom-bust cycles tied to global markets. These cycles can create labour shortages in times of high demand and adversely affect the feasibility of operations during down-cycles.

To buffer against the boom-bust nature of the natural resource sector, the Task Force recommends that government support, in partnership with industry and labour, the creation of an accessible worker database to support workforce transitions across the natural resource sector. The Task Force envisions this as an accessible database where workers can self-identify skill sets and operators can self-identify skills and labour needs within their operations. Cycles for different industries, such as mining and forestry, can be offsetting, and there is opportunity for workers to move between industries within their home region.

The Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) supports workforce transitions, economic diversification and development and community supports and services across BC. However, current programming is reactive to large-scale layoff events and facility closures. The Task Force recommends this work evolve to a proactive approach that includes an accessible worker database forecasting labour shortages, surpluses and skills gaps in addition to supporting workforce transitions.

RESOURCES + TIMELINES

2019/20 BUDGET CYCLE

COST: $200,000

IMPLEMENTATION NOTES

- To support and enhance ongoing FLNRORD initiatives in this area.

BENEFITS:

- This tool would allow for more fluid labour transitions during operational up- and down-turns across the natural resource sector.
- This action would improve the ability of workers to access employment opportunities in other natural resources industries requiring similar skillsets. This will assist in keeping local workers employed locally.
- Improving access to well-paying jobs will support the sustainability of communities throughout BC.
- Such a database would help to forecast skills gaps and surpluses, providing valuable data to the training and post-secondary sector.



III. ENSURING A RESPECTFUL, HEALTHY AND SAFE WORK ENVIRONMENT

ACTION: Create a fully funded Standing Code Review Committee to periodically review evolving trends and implement best practices in workplace health and safety.

The Health, Safety and Reclamation Code for Mines in BC (the Code) regulates the mining industry, governs worker safety, and is the foundation for the daily operational activities such as inspections, and compliance and enforcement. The Code, once considered to be a leading-edge regulation, is more than 20 years out of date in certain sections, with the exception of the recent changes made to regulate tailings storage facilities and limited health and safety sections.

Previous reviews of the Code were completed in 1996, 2003, 2008 and 2016/2017, with the last fulsome review taking place in 1995-1996. More recent reviews were only able to address very specific and limited sections within the Code and were in direct response to events that required an urgent or emergency response from government.

Other regulatory bodies, such as WorksafeBC and Technical Safety BC, have dedicated staff who work to ensure that their regulatory framework stays current and keeps workers and worksites safe. For example, Technical Safety BC has 16 employees dedicated to the 2018 Canadian Electrical Code Review. EMPR, at present, does not have any dedicated resources to undertake a Code Review. If the Code is not regularly updated and maintained this increases the risk of incidents occurring at mine sites. Any reallocation of existing resources would reduce resources available for permitting and Compliance and Enforcement.

With ongoing and rapid changes to technology and increased expectations from Indigenous groups, labour and industry for a transparent and leading edge regulatory framework for mining, the Task Force recommends that the Code Review continue as a regular function of the Mines and Mineral Resources Division (MMRD) in order to bring the current Code up to date and ensure that the mining industry remains relevant and is able to address the changing needs of the industry, the environment, Indigenous groups and residents of British Columbia.

RESOURCES + TIMELINES

STARTING IN 2019/20 BUDGET CYCLE

COST: $500,000 PER YEAR

IMPLEMENTATION NOTES

- EMPR intends to commence the Standing Code Review in early 2019 and is starting to put staffing and resources in place now.

BENEFITS:

- Funding a standing Code Review will help to maintain mining's place as the safest heavy industry in the province and enable EMPR to respond to the rapid pace of change that industry is experiencing.
- This action will ensure safe and healthy workplaces for the mining workforce, and also bolster an agile regulatory regime that supports the use of innovative practices and tools to enhance competitiveness and environmental performance.
- British Columbia was recently found to be the least risky jurisdiction in the world for companies to invest in mining projects, largely based on BC's Mining Code, according to the Mining Journal's 2018 World Risk Report. Ensuring the Code remains current will help to ensure the Province remains an attractive place for investment.

2. Realizing commmunity benefits

For generations, mining has generated jobs and prosperity for families in every region of BC. The sector provides benefits through salaries, taxes, ancillary economic activity and partnerships with Indigenous peoples, forming the foundation of healthy, vibrant communities across the province.

However, there are many communities that do not have the resources to fully engage in the benefits of mining, and there are constantly evolving tools and best practices that can be adapted to the BC context. There are opportunities for capacity building, employment, investment, economic growth, and partnership opportunities with communities throughout the entire mining life cycle.

There remains significant work to do to fulfill government's commitment to lasting reconciliation and implementation of UNDRIP, and the mining sector can continue to play a significant leadership role. BC can be a leader in the domestic and global movement towards reconciliation with Indigenous people, further transitioning our diversity into a global strength.

Investment in supporting mining communities can improve the sustainability and socio-economic conditions of Indigenous and non-Indigenous communities, improve community confidence in the mining sector and create new industry-community partnerships, while mobilizing new capital to support mining projects and meeting the long-term labour force needs of a growing mining sector.

I. ENSURING COMMUNITIES SHARE IN THE BENEFITS OF MINING

ACTION: Review the fiscal framework for BC's revenue sharing policy to determine ways to reduce the volatility of the revenue streams to Indigenous communities.

BC was the first province to institute revenue sharing with Indigenous communities so they can share directly in mineral tax revenue from mines operating within their traditional territories. To date, thirty-two Economic and Community Development Agreements (ECDAs) have been signed with forty-four Indigenous groups, and negotiations towards several further agreements are underway or planned.

ECDAs are agreements between Government and Indigenous communities for sharing the direct mineral tax revenue on new mines and major mine expansions. The revenues shared with Indigenous communities can provide valuable revenue streams to support numerous initiatives including community programs, infrastructure development and long-term sustainability.

Economic and Community Development Agreements

Sharing the wealth from extraction of natural resources within First Nations territories is an important part of reconciliation with Indigenous people and supporting self-determining, healthy Indigenous communities. Since 2008, the Province of BC has concluded Economic and Community Development Agreements with 44 First Nations for 16 different major mines in BC and has shared more than $64 million in mineral tax revenues.

The only source of revenue included in ECDAs is the direct Mineral Tax Revenue. Mineral Tax Revenue is the Incremental Mineral Tax Revenue or the Net Mineral Tax Revenue attributable to the project and is defined as the total amount of tax, penalty and interest paid by the operators of the project under the Mineral Tax Act, minus any refunds and/or interest the province has paid back to the operators. This amount is based on incremental production by the project. Incremental production for new mines means mining and production of all ore within the area of the project. The ECDA model sees 37.5% of incremental mineral tax revenue from a mine flow to affected Indigenous communities.

Singular reliance on shared revenue from ECDAs can create revenue stream volatility for communities. Mines often deduct their capital development costs from their Mineral Tax revenues, especially in the early-stages of mine development and later during expansion or high capital expenditures, leaving little to be shared. The BC Mining Tax is also a small portion of the taxes paid by a mine. As a result, under the current framework communities are challenged to make long-term plans, borrow against the revenue streams, or leverage these funds through strategic investments.

The ECDA model has been in place in BC since 2010, and the time is now right to evaluate this model and government's fiscal relationship with Indigenous communities with respect to operating mines. This review should examine two aspects:

- Examine approaches to smoothen the revenue sharing streams from operating mines to provide greater certainty to Indigenous communities.
- Examine the denominator of taxes paid by mines to understand the impacts and benefits of modifying revenue sharing with Indigenous communities to be based on a larger 'denominator' of taxes paid by a mine such as GST/PST, employer taxes, municipal taxes, etc.

RESOURCES + TIMELINES

BEGINNING IN 2019

COST: REVIEW TO BE CONDUCTED WITH INTERNAL CAPACITY

IMPLEMENTATION NOTES

- Conducted with internal capacity.

BENEFITS:

- This action would support Indigenous communities sharing in the benefits of mining by providing a more stable and consistent revenue stream, thereby improving stability for communities and contributing to government's adoption of UNDRIP.



ACTION: Explore opportunities to support Indigenous communities across BC in gaining equity ownership related to major projects.

Indigenous involvement in Canadian infrastructure projects is increasing. In the last few years, Indigenous involvement has taken on a wider range of roles, from more traditional involvement, such as being consulted or employed on projects developed on or near traditional lands, to equity stakes. In equity participation, there has been an evolution from small stakes, or full ownership of small projects, to potential control of very large projects and development roles. Currently, stakes rise as high as 50%, with construction costs for some projects in the hundreds of millions, if not billions, of dollars.

With larger projects and equity stakes, funding of equity is a bottleneck for many Indigenous investors. Many Indigenous communities have few internal financial resources for investment purposes, so will effectively need to borrow their equity to invest in larger projects and need long-term financing to match the life of the project asset. Providers of such debt are limited.

Ontario's Aboriginal Loan Guarantee Program (ALGP) was announced in the 2009 Ontario budget as a $250 million fund to support participation in renewable green energy infrastructure in Ontario including transmission projects and wind, solar and hydroelectric generation projects. The program provides a Provincial guarantee for a loan to an Indigenous



Page 183 of 479 EMP-2020-05126

owned corporation to purchase up to 75% of the corporation's equity in an eligible project, to a maximum of $50 million.

The program is available to corporations that are wholly-owned by Indigenous communities. By participating in eligible renewable energy projects, Indigenous communities can benefit from jobs and training as projects are developed and from dividends once projects come into service. The ALGP expanded by $150 million in 2012 and by $250 million in 2014, bringing the current envelope to $650 million.

Many Indigenous communities in BC have strong business relationships with operating mines.

In British Columbia, accelerating Indigenous capital formation through resource project partnerships (equity and supplier businesses) can form a core basis for expanding the benefits of mining and (further) de-risking projects. Such a program would be of interest to Indigenous groups in BC who are looking to secure equity in or around a mining project, particularly in ancillary or support infrastructure that does not feature the same resource price volatility as mines themselves. These types of projects provide a steady revenue stream to pay back loans.

Many Indigenous communities in BC have strong business relationships with operating mines. This program would enable these communities to expand the scope of investments that support mine development and operation, and provide opportunities for other Indigenous communities to engage in new partnerships.

In addition to providing increased opportunities for Indigenous communities to participate in project development, such a program would benefit industry by mobilizing an additional source of capital that would lower the capital requirements for mine expansions and new mines.

RESOURCES + TIMELINES

BEGINNING IN 2019

COST: REVIEW TO BE CONDUCTED WITH INTERNAL CAPACITY

IMPLEMENTATION NOTES

- Facilitate review across government initiatives that could support equity approach.

BENEFITS:

- This action would build upon existing partnership frameworks seen at infrastructure projects across Canada to support Indigenous groups in BC in becoming part owners in major projects proposed for their traditional territories.
- This program would enable communities who have existing business relationships with mines to expand the scope of investments that support mine development and operation and provide opportunities for other Indigenous communities to engage in these partnerships.
- In addition to providing increased opportunities for Indigenous groups to participate in project development, such a program would benefit industry by mobilizing an additional source of capital that would lower the capital requirements for mine expansions and new mines.
- An Indigenous community as an equity partner clearly addresses the UNDRIP issue of Free, Prior and Informed Consent (FPIC), advancing government's broader reconciliation goals.

ACTION: Amend or develop existing legislation to support the development of community trusts with participation of multiple Indigenous groups.

Across BC, mining operations have forged deep partnerships with neighbouring Indigenous groups. However, in many cases multiple Indigenous groups have overlapping traditional territories in direct proximity of a mine, complicating benefit sharing. Multi-community agreements can allow affected communities to address issues with shared territories without involvement of the Province and include provisions for a financial trust (i.e. Indigenous Sovereign Wealth Fund) that is managed by the communities collectively using existing trust laws and procedures for multi-generational returns.

These agreements also provide the Indigenous communities with a vested interest in seeing mines expand and prosper, and provide benefits to communities in the form of operational input to the mine operations, preferred contracting opportunities, reclamation planning and financial benefits such as revenue and mineral tax sharing.

As demonstrated by the success of the benefit sharing agreement between the BC Government, Teck Resources and multiple Indigenous groups at the Highland Valley Copper mine, supporting the development of multi-community agreements, including provisions for Indigenous Sovereign Wealth Funds, at mines in BC would provide greater opportunities for Indigenous groups to effectively participate in resource development. At Highland Valley Copper, eight Indigenous groups have collaborated to create one trust, pooling resources to provide better returns for future generations and share decision-making.

There is currently no mechanism in BC that allows for the capture of funds by Indigenous groups to be held in trust for their communities. Indigenous groups receiving benefits from the Highland Valley Copper Mine were forced to use the federal Family Trust Act to set up a trust model that worked. This work-around required significant administrative capacity – a barrier for other Indigenous groups to set up trusts of their own.

RESOURCES + TIMELINES

BEGINNING IN 2019

COST: REVIEW TO BE CONDUCTED WITH INTERNAL CAPACITY

IMPLEMENTATION NOTES

- Conducted with internal capacity.

BENEFITS:

- This action will support Indigenous participation in major projects across all resource sectors.
- These agreements provide the Indigenous communities with a vested interest in seeing mines expand and prosper and provides benefits to communities.
- Indigenous Sovereign Wealth Funds provide opportunity for Indigenous communities to better leverage the revenue streams coming from mining operations.
- Multi-community agreements provide opportunity for Indigenous communities to address boundary issues and division of benefits without the involvement of the Province.
- For government and operators, it provides long-term assurances and operational stability for mines to make major investments.

II. APPROPRIATE SOCIAL AND ENVIRONMENTAL PROTECTIONS ARE IN PLACE

ACTION: Support government's plan to fund Indigenous Stewardship and Monitoring Initiatives, such as guardianship programs, to enhance environmental performance and increase Indigenous involvement in environmental monitoring at mineral exploration and mining projects.

There are numerous provincial activities throughout the natural resource sector that fall under the banner of Indigenous Stewardship and Monitoring Initiatives (SAMI), including Indigenous monitoring, liaison and guardianship programs. These programs facilitate the participation of Indigenous communities in environmental monitoring for projects in their areas of interest.

There is a high degree of support for these initiatives across participating provincial agencies. Positive outcomes have included a greater degree of Indigenous awareness and influence over resource management issues, increased protection for significant cultural and ecological values, community capacity-building, and developing trust-based relationships with government agencies and other land users. Mining Inspectors and Compliance Officers have received consistent feedback from Indigenous communities that there is interest in increased Indigenous participation in mining oversight. Government currently supports nine SAMI

There are numerous provincial activities throughout the natural resources sector that fall under the banner of Indigenous Stewardship and Monitoring Initiatives, including Indigenous monitoring, liaison and guardianship programs.

Collaboration on Compliance and Monitoring

The Province of British Columbia and the Tahltan Central Government signed the Red Chris Mine Management Agreement on January 24, 2017. The Agreement sets out a framework for the Parties to collaborate with respect to the Red Chris Mine operated by the Red Chris Development Company, including:

- Working together to review applications for new Provincial authorizations;
- Providing opportunities for Tahltan participation in Provincial inspections; and
- Ensuring notification and engagement with Tahltan following incidents at the Mine.

programs involving 17 Indigenous groups across the natural resource sector, with existing funding set to expire in 2019. In many cases, however, lack of formal structure and long-term commitment to funding have hindered progress and resulted in a lack of capacity, diffuse goals, limited resources and inconsistent approaches.



RESOURCES + TIMELINES

BEGINNING IN 2019

COST: NO IMMEDIATE ADDITIONAL COST

IMPLEMENTATION NOTES

- Supports existing FLNRORD budget ask.
- Will seek to align with federal funding opportunities.

BENEFITS:

- Participation in oversight activities has the potential to strengthen trust between the mining industry and affected communities by allowing Indigenous participants to play a positive role in holding resource users to account in terms of permitting conditions.
- Other potential benefits include the facilitation of consistent and regular information-sharing, increased transparency and collaboration, the development of technical capacity in communities through an associated training component, and employment opportunities.
- The development of a cross-sector program would reduce additional levels of bureaucracy while creating alignment opportunities with potential partners. This includes the federal government, which provided $25 million for an Indigenous Guardians Pilot over five years starting in 2017-18.
- Allocating resources towards the identification of a model that meets the specific needs of the mining industry would help facilitate integration with existing EMPR compliance and enforcement practices in order to avoid creating additional bureaucracy. Further, engagement with industry and Indigenous groups would ensure the development of a mining-specific model that works for all affected parties.

ACTION: Support government initiatives to review the current state and establish world-leading best practices for supporting the health and well-being of communities impacted by the natural resource sector.

Mining development can cause positive, negative, direct and indirect impacts to nearby communities. Negative impacts can include rapid population influxes and migration, social and cultural disruption, strain on housing stock, strain on public infrastructure and services, increased crime and substance abuse, inequitable distribution of wealth and poor child development and education outcomes. Positive socio-economic benefits, such as employment rates, salaries, and higher standards of living are significant but can also have negative impacts if improperly managed.

The EY report commissioned by the Task Force on the BC mining sector included community well-being in-scope. The report included a jurisdictional scan of best practices required by government to support community well-being, including socio-economic effects management plans (SEEMPs), environmental registers, community engagement plans and consultative committees. The most detailed analysis was of contrasting approaches to SEEMPs across jurisdictions and found Queensland, Australia to be a leader in this area with legislation having required mining proponents to identify, manage and monitor social impacts from 2008.

In 2017, Government struck a Cross Ministry Working Group with a mandate to examine the social impacts of industrial camps related to natural resource development and to identify mitigation strategies. There now exists the opportunity to expand the work of this group by coordinating government initiatives – in partnership with industry, Indigenous groups and communities – to further review and enhance best practices to provide forward-looking guidance for supporting the health and well-being of communities impacted by the natural resource sector.

This analysis of community health and well-being could also be expanded to examine local levels of employment and local economic impact by mining operations. This could be similar to the monitoring framework that currently takes place for environmental impacts.

RESOURCES + TIMELINES

BEGINNING IN 2019

COST: $750,000

IMPLEMENTATION NOTES

- This resource allocation will support mining only, contributing to a full review of the broader natural resource sector.

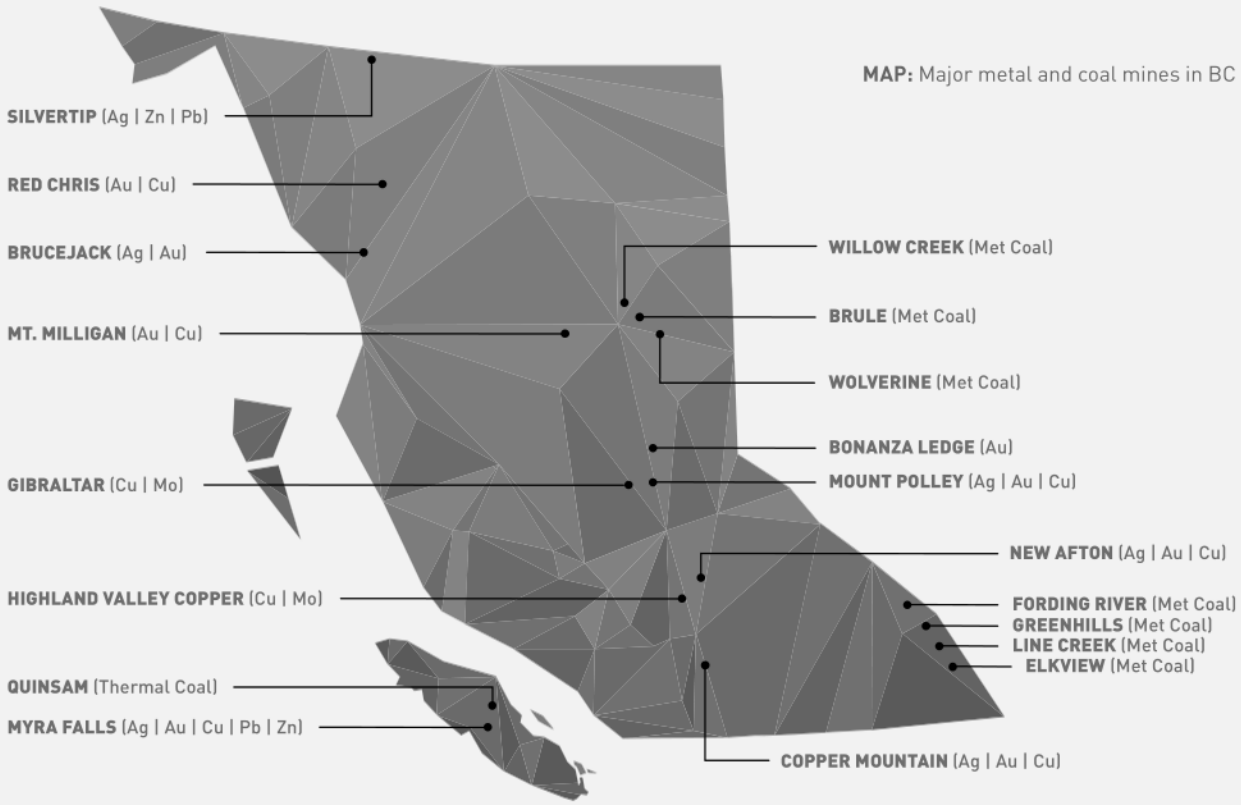
BENEFITS:

- This action will provide communities neighboring natural resource activities with confidence that sufficient social and environmental protections are in place and effective policies have been developed to ensure mines coexist harmoniously with neighbouring communities, and that communities most affected share in the benefits of mining.
- Requiring the reporting of statistics on local employment and local economic impact would allow government to accurately track local impact across the sector and capture positive impacts generated by the operation.

3. Enhancing BC's fiscal and regulatory competitiveness

While some of the fundamentals of BC's mining sector remain strong and BC remains a major player in the Canadian landscape, global forces strongly impact sector investment and performance. The high-amplitude commodity cycle requires BC explorers and operators to be responsive and competitive in the context of international markets where investment is mobile, and the low-price phase of commodity cycles can result in mine closures, deferred projects and lower exploration expenditures. This was demonstrated between 2012 and 2016, when a decline in commodity prices caused exploration expenditures in the province to decrease from $680 million to $205 million, and eleven operating mines were forced to enter care and maintenance with corresponding layoffs.

Government now has the opportunity to invest in proactive, rather than reactive, actions to improve fiscal and regulatory competitiveness to reduce the risk of future industry contraction and encourage the development of new mines and expansions at existing operations. BC competes with the world for investment, and BC producers of raw materials are price-takers, not price makers in the international marketplace. Competitive regulatory and tax structures must be in place to ensure the industry can grow jobs and sustain communities in the province. Government investment in key competitive advantages like geoscience, innovation, clean energy inputs and infrastructure must be increased to keep pace with rival jurisdictions. Included in these dimensions of competitiveness are strong socio-economic objectives, including world-class environmental performance and Indigenous relationships that generate tangible benefits which drive real economic reconciliation on the land base.



MAP: Major metal and coal mines in BC

I. IMPROVED REGULATORY TRANSPARENCY AND PREDICTABILITY

Given the significant, upfront capital outlays and long-lead times to develop mines and move them into production to generate cash inflows, mining investments are inherently high-risk. The regulatory framework governing a mining investment can further compound this risk. The EY report found that government investment in actions to increase the efficiency, transparency, and predictably of the regulatory framework governing the sector in BC would encourage investment by decreasing investment risk and improve competitiveness.

A more efficient, predictable, and effective regulatory framework with dedicated resources to implementing UNDRIP within the regulatory system will improve clarity and certainty for all stakeholders. This will enable proponents to make investment decisions with confidence, leading to new mines being built and corresponding employment growth. Committing resources to anticipating and incorporating innovation in the regulatory framework results in improved uptake of new tools to improve competitiveness and enhance environmental performance.

ACTION: Provide budget lift for EMPR to advance mandate letter commitments and enhance regulatory excellence, boosting its position as a world-leading regulator.

This action supports an increased focus on BC's competitiveness and advocacy for new mining investment, while supporting independence for



mining oversight and positioning BC to be a leader in industry safety. Clear separation of these functions will help increase public, Indigenous and industry confidence and trust, as well as improve permitting timelines - all of which are critical to a thriving mining industry in this province. EMPR initiatives will be advanced by enhanced budget funding to:

- Expand the mandate of the Major Mines Permitting Office (MMPO) to include broader range of permitting requirements, including concurrent permitting and other initiatives to streamline the complexity of BC's regulatory regime;
- Ensure clear(er) division of responsibility and resources between permitting functions and compliance and enforcement within EMPR;
- Bolster an agile regulatory regime that supports the use of innovative practices and tools to enhance competitiveness and outcome-focused environmental performance;
- Provide EMPR Regional Offices with sufficient resources to ensure EMPR permitting procedures align with government's commitment to the adoption and implementation of UNDRIP, and to permit efficiently, to support a healthy and competitive mining sector;
- Support increased cross-ministry and cross-jurisdictional collaboration on permitting to ensure a transparent and certain regulatory system that provides proponents and operators confidence throughout the regulatory continuum, with a specific focus on continuing to advance and strengthen partnerships with Indigenous communities involved in the mining sector; and,
- Collaborate with the Ministry of Environment and Climate Change Strategy (ENV) to support clear pathways to sustainable project approvals by providing certainty of process and clarity of regulatory considerations, including the option to advance projects from Environmental Assessment directly to permitting through MMPO when the regulatory framework and Indigenous support merit.

RESOURCES + TIMELINES

2019/2020 BUDGET CYCLE

COST: $11 MILLION

IMPLEMENTATION NOTES

- EMPR has developed a detailed budget to address these policy areas.

BENEFITS:

- Support a transparent and certain regulatory system that is responsive to shifting government priorities and the rapid pace of innovation.
- Ensure safe and healthy workplaces for the mining industry workforce, including camp environments.
- Improve public/stakeholder support and confidence with regulatory system decisions.
- Better coordination, alignment and delivery of responsibilities for permitting under one area of the ministry.
- Improve permitting times and certainty of process for proponents.
- Enhance Indigenous engagement during permitting and compliance monitoring, contributing to government adoption of UNDRIP and implementation of the Province's 10 Principles for Reconciliation.
- Improve health and safety capacity and effectiveness, and establish a compliance auditing and effectiveness monitoring function.

II. ATTRACTIVE FISCAL FRAMEWORK FOR DEVELOPERS AND OPERATORS

BC is Canada's largest producer of copper and steelmaking coal and among the top three provinces in the production of gold. Preliminary estimates provided by Natural Resources Canada (NRCan) show that BC produced almost $9 billion worth of minerals in 2017. Over the past ten years, mining in BC has generated an average of $250 million per year in mineral tax royalties to the province. Currently, there are nine major metal mines and eight major coal mines operating in BC directly employing over 8,000 people.

The mining industry's ability to maintain profitable mining operations and obtain financing for the development of new mines and expansions is heavily impacted by commodity price cycles and a jurisdiction's competitive cost structure. Commodity prices for BC's major mineral products have historically experienced periods of high volatility. For example, from 2011 to 2015 the US price of copper fell from an annual average of $4.00/lb to $2.49/lb. Gold and metallurgical coal went from $1,572/oz and $282/tonne to $1,159/oz and $101/tonne respectively. From June 2014 to July 2015 seven mines in BC were forced into care and maintenance due to financial difficulties. In addition, investment into mine development for BC fell from approximately $2 billion in 2011 to $1.2 billion in 2015.

Actions to manage industry cost-burden, enhance incentive programs and improve regulatory efficiency and predictability can buffer the volatility that commodity price cycles have on the industry in BC and encourage investment. These actions will ensure that the industry remains an important contributor to the provincial economy and position the sector for future growth.

ACTION: Support government's Low Carbon Industrial Strategy for British Columbia including development of programs to stimulate capital expenditures and address competitiveness challenges.

Emissions-intensive, trade-exposed (EITE) sectors of BC's economy face an increasing disadvantage versus domestic and international competitors, the majority of which have no or significantly lower carbon pricing. The Task Force commissioned EY report identified the carbon tax as the leading competitive disadvantage for BC mining operations, and anecdotal evidence suggests it is already contributing to carbon leakage. Despite previous commitments to address EITE issues, to date BC remains the only jurisdiction with a comprehensive carbon pricing system and no equivalent EITE system. Recent announcements by governments in Ontario, Alberta and Quebec have only served to further underscore this challenge, with new incentive funds that not only exempt EITE sectors for GHG costs or regulations, but incentivize capital expenditures which reduce GHG emissions. The EY report found the carbon tax as the single greatest barrier to sector competitiveness in BC.

Addressing the competitiveness challenges of the BC carbon tax system is a high priority for industry. More directly, as the pan-Canadian framework moves forward and carbon pricing is implemented by the federal government in provinces that do not have carbon pricing regimes in place, BC will be at a further competitive disadvantage given the misalignment in treatment of EITE sectors that is being implemented across the country. Compounding this disadvantage further, are the significant new incentive funds being put in place to assist

TABLE 5: Comparative carbon prices

JURISDICTION	STATED CARBON PRICE 2019	STATED CARBON PRICE 2022
British Columbia	$40/tonne	$50/tonne
Quebec	$18 - $20/tonne	$20 - $22/tonne
Ontario (federal backstop)	$20/tonne	$50/tonne
Chile	$5	$5
Australia	$0	$0

with the transition to a lower carbon economy in other provinces and by the federal government. While BC has made an initial step in the 2018 budget to address the EITE sector and provide a modest start to funding EITE sectors' transition to a lower-carbon profile, there remains a significant competitiveness gap and challenges to maintaining BC's position as a low-carbon resource provider for the world.

As the mining sector transforms towards a low-GHG profile there is a need for programs to enable capital to drive the sector's emissions profile lower – leveraging federal expenditures and working from a platform of a more competitive carbon tax framework. Through this, government can provide stronger incentives to EITE sectors that are vital pillars of BC's economic base, while incentivizing a shift to a lower emissions model that will help meet BC's carbon reduction targets and reduces the potential for carbon leakage.

The CleanBC program for industry announced in Budget 2018 directs a portion of BC's carbon tax paid by industry into incentives for cleaner operations. The program is designed for regulated large industrial operations, such as pulp and paper mills, natural gas operations and refineries, and large mines. This program will help the sector and its workers thrive – stable, efficient companies and industries will ensure a continuing supply of good jobs for British Columbians across the province.

CleanBC

In December 2018, the Government of British Columbia has released its CleanBC plan aimed at reducing climate pollution, while creating more jobs and economic opportunities for people, businesses and communities. The CleanBC plan was developed as a pathway to achieve the Province's legislated climate targets while growing the economy. The Province is helping the mining industry lower its emissions through the clean growth incentive program, which will help operators become the cleanest operators in the sector while competing with other jurisdictions that may not have a carbon price.

Government support for industry will also be shaped through the implementation of Budget 2018 and the Low Carbon Industrial Strategy. Actions include:

- Support for emissions intense industry to transition to a low carbon economy while maintaining competitiveness and minimizing carbon leakage.
- New green initiatives to grow innovation and investment.
- Direct a portion of BC's carbon tax paid by industry into incentives for cleaner operations, including a shift to cleaner heavy-duty fleets and further industrial electrification.
- Tax policy: developing criteria for a BC tax model to encourage capital investment and support lower GHG operations that advance sectors and competitiveness of BC industry, including tax inducements, referrals and/or exemptions.
- Input costs: developing BC 's broad energy policy framework to include incentives through BC Hydro and natural gas as tools to drive a low-carbon energy infrastructure.
- Examining the policy, fiscal and operating issues affecting the competitiveness of trade exposed industrial sectors with the goal of offsetting the competitiveness gap, thereby creating more jobs and opportunities.
- Supporting economic opportunities and outcomes that advance broad reconciliation goals for Indigenous peoples.

RESOURCES + TIMELINES

BEGINNING IN 2019

COST: TO BE FUNDED THROUGH EXISTING INITIATIVES SUCH AS THE LOW CARBON INDUSTRIAL STRATEGY, CLEANBC PLAN AND BUDGET 2018

IMPLEMENTATION NOTES

- The Task Force recommends EMPR collaborate with the Ministry of Environment and Climate Change Strategy and industry, leveraging these existing initiatives to develop innovative programs that incentivize the shift to low-carbon operations while preserving industry competitiveness and minimizing carbon leakage.

BENEFITS:

- This action will address a key impediment to BC's global competitiveness and reduce carbon leakage by creating a more competitive, attractive framework for developers and operators in EITE sectors such as mining.
- Low-carbon incentive programs will use appropriate fiscal tools to shift industry to a lower-emissions model, thereby contributing to a more competitive, resilient and sustainable sector.
- This approach to dealing with the competitiveness challenges of the carbon tax in BC enables government to utilize non-carbon tax measures to reduce the costs of GHG reducing capital programs and thereby improve EITE competitiveness while achieving GHG reductions that would otherwise not be economic



ACTION: Examine relief from PST on Production Machinery and Equipment and infrastructure for developers and operators to support new mines, mine expansions and investment in cleaner, lower-carbon operations.

Mine operators in BC are exempt from Provincial Sales Tax (PST) applied to eligible production machinery and equipment (PM&E) that is used in the extraction or processing of minerals. Eligibility for the exemption depends on whether the PM&E is an integral component and is in use for over 50% of the mineral production process, measured in either time or volume.

The PM&E exemption exists only at the qualifying part of the mine site, which is defined as the point where the mineral is extracted from the ground to the point where the finished product is first stored or first placed in a vehicle for removal from the mine site. For example, vehicles used to transport the finished product from the qualifying part of a mine site do not qualify for the PM&E exemption. Expanding the PM&E exemption could assist with supporting a shift to cleaner and lower-carbon operations through upgrades to transportation systems, water treatment facilities and other areas of operations. Mining and manufacturing PST exemptions for "pollution control" machinery and equipment are currently restricted to that used at the "qualifying part" of a mine, inhibiting capital deployment for improvements across other areas.

From a process perspective, mine operators also face significant challenges in administering the PST. This includes increased internal requirements for staff time as well as external (supplier) impacts. The administrative burden is also substantial for the Province and streamlining this tax structure would reduce red tape. Few jurisdictions apply sales tax in form of PST and have such a complex system for administering a narrow range of exemptions as in BC.

RESOURCES + TIMELINES

BUDGET CYCLE 2019/2020

COST: THE ESTIMATED ANNUAL FISCAL IMPACT TO THE PROVINCE WOULD BE $5 MILLION

IMPLEMENTATION NOTES

- A review of PST exemptions should take place through 2019 to inform the next budget.
- Costs would be partially offset by decreased administrative burden for the Province.

BENEFITS:

- Address a core competitiveness challenge for BC companies and induce a stimulative effect on capital deployment across key areas of the mining sector.
- Improving the capital cost in areas such as environmental technologies/infrastructure by removing the PST will result in improved competitiveness and equitable treatment.
- This action will contribute to a competitive resilient and sustainable sector. It will enhance BC's global competitiveness by creating an attractive fiscal framework for developers and operators.

ACTION: Make permanent the Electricity Cost Deferral Program (BC Hydro Mining Customer Payment Plan).

Electricity costs are one of the most significant operating costs for mines and have been increasing as electricity rates in BC rise. In 2015 and early 2016, low copper and coal prices put operations at a number of BC mines at risk, forcing some to reduce production and em-

ployment levels. To support the mining sector and safeguard jobs, the Province developed a strategy to allow companies to defer a portion of their monthly BC Hydro electricity bills until commodity prices recovered.

Under the five-year term of the program, which is delivered by BC Hydro, copper and coal mines in BC are able to defer up to 75% of their electricity costs over two years. As commodity prices recover, mines are required to repay the amounts deferred, plus interest equal to prime plus 5%. Six copper mines entered into the BC Mining Customer Payment Plan in 2016, including Gibraltar, Copper Mountain, Mount Milligan, Mount Polley and Red Chris.

RESOURCES + TIMELINES

2019/20 BUDGET CYCLE

COST: NO IMMEDIATE FISCAL IMPACTS

IMPLEMENTATION NOTES

- This program is currently in place and part of BC Hydro's fiscal plan.
- Evaluate interest rates on a 5-year basis.

BENEFITS:

- Making this program permanent can assist with de-risking mine closures/shutdowns.
- This action will contribute to a competitive resilient and sustainable sector. It will enhance BC's global competitiveness by creating an attractive fiscal framework for developers and operators.

ACTION: Make permanent the New Mine Allowance under the BC Mineral Tax Act.

BC's New Mine Allowance encourages the development of new mines and significant mine expansions by allowing operators to claim an additional 33% for eligible capital expenditures on their mineral tax returns. Eligible capital expenditures include those incurred for the purpose of bringing a mine or mine expansion into commercial production. For a mine expansion to be eligible, it must increase the mine's designed production capacity by at least 25%.

Under the BC Mineral Tax Act, mine operators are required to pay a minimum 2% tax from operating profits generated by the mine until they have recovered all eligible capital expenditures. Once these expenditures have been recovered, the mine operator is required to pay a 13% tax. The New Mine Allowance essentially delays the time it takes a mine to move from the 2% to the 13% tax tier by allowing operators to claim additional capital expenditures (i.e. 33% of actual expenditures) incurred prior to their mine being brought into commercial production. This allowance is currently set to expire on January 1, 2020.

RESOURCES + TIMELINES

2019/20 BUDGET CYCLE

COST: NO IMMEDIATE FISCAL IMPACTS

IMPLEMENTATION NOTES

- This allowance is currently in place and part of the Province's fiscal plan.

BENEFITS:

- Making this program permanent will provide certainty to proponents and encourage the development of new mines and eligible expansion projects, creating new, good jobs in the province.
- It will create an attractive fiscal framework for developers and operators by creating a meaningful and well-understood incentive program to support mine development.

III. MEANINGFUL AND WELL-UNDERSTOOD INCENTIVE PROGRAMS TO SUPPORT MINERAL EXPLORATION

Since 2014, BC's share of Canada's total mineral exploration has been falling steadily. In 2017, 12% of mineral exploration expenditures were made in BC compared to 22% in 2014. Some of this variance can be explained by falling commodity prices for metallurgical coal and copper, which represent BC's top two commodities in terms of production value. However, Canada has seen a significant increase in expenditures for precious metal exploration, from $849M in 2015 to an estimated $1.4B in 2017, and BC's share of those expenditures has been declining relative to other jurisdictions. For example, in the past three years, Quebec has seen its Canadian share of precious metal exploration expenditures go from 14.1% to 26.8%, whereas BC saw its share fall from 17.2% to 12.9%.

Over the past 10 years, BC's average annual share of Canada's total exploration expenditures has been 16.07%. In 2017, BC's share was 12.2%. Assuming Canada's 2018 exploration expenditures remain the same as in 2017, BC would see an increase of $81.75M in exploration expenditures if the province was able to achieve a share of Canada's total exploration expenditures equal to its 10-year average. BC now has the opportunity to realize this potential surge in exploration dollars by implementing a suite of actions to make the province the most attractive jurisdiction in Canada for investment.

TABLE 6: BC's share of Canadian mineral exploration

	CANADIAN EXPLORATION AND DEPOSIT APPRAISAL EXPENDITURES		
PROVINCE/TERRITORY	**2016**	**2017**	**2018***
British Columbia	14%	12%	13%
Northwest Territories	5%	4%	4%
Nunavut	13%	8%	5%
Ontario	24%	25%	27%
Quebec	19%	27%	30%
Saskatchewan	14%	9%	8%

*Expected. Source: Natural Resources Canada

Quebec is a strong example of the influence that a robust suite of incentives can have on exploration activity. In 2012 and 2014 the Quebec government reduced tax credits for mineral exploration. This resulted in Quebec's share of Canadian mineral exploration reducing from 20% in 2011 to 14% in 2015. In 2016, Quebec restored many of the incentives and its share of Canadian mineral exploration rebounded rapidly to 27% in 2017 and an estimated 29% in 2018. While these changes cannot be attributed solely to incentives, they are a key part of the impact.

ACTION: Make permanent the BC Mining Flow-Through Share program at a rate of 20% and increase the rate to 35% for a three-year trial period.

Flow-through shares are generally common shares issued by a corporation to an investor, pursuant to an agreement in writing under which the corporation agrees to incur exploration expenses in an amount equal to the consideration received for the shares issued. Under this agreement, the corporation renounces qualifying Canadian Exploration Expenses (CEE) to the investors who can then deduct that CEE from income for tax purposes. The program encourages exploration by reducing the amount of funds the investor has at risk.

Since 2001, the Province has provided a 20% non-refundable tax credit to investors who invested in flow-through shares offered by a company conducting grassroots mineral exploration in British Columbia. The program has been renewed on an annual basis, creating uncertainty in longer term planning and increasing the risk of stranded investments for the investment community.

The federal government also offers a non-refundable, 15% tax credit for grassroots exploration expenses pursuant to a Flow-Through Share Agreement. This credit was recently renewed (November 2018) for five years based on the advice of industry. The BC Mining Flow-Through Share (MFTS) tax credit is completely harmonized with the federal tax credit, and if raised to 35%, would make the after-tax cost of flow-through share-financed grassroots exploration expenditures in BC the lowest in Canada.

RESOURCES + TIMELINES

TRIAL TIMELINE 2019 - 2022

COST:
NO COST TO THE PERMANENCY OF THE INITIAL 20%.

THE TRIAL INCREASE IS ESTIMATED AT AN ADDITIONAL $4 MILLION PER YEAR.

IMPLEMENTATION NOTES

- To take effect in 2019.
- Over the last ten years, the MFTS tax credit program has cost the Province an estimated $9.4 million per year.

BENEFITS:

- This action will create an attractive fiscal framework for developers and operators by expanding a meaningful and well-understood incentive program to support mineral exploration.
- This is a proven and effective tool to support exploration and keep investment funds in BC (from 2011-2017, 68% of Canadian exploration investment involved flow-through shares).
- Finance Canada has estimated that every dollar of flow-through financing generates $2.60 of exploration expenditures in Canada.
- When taken with the federal investment tax credit, this action will position BC as the best "super flow-through" tax credit in Canada, exceeding the credits available in Manitoba and Quebec.
- This action will increase BC's share of Canadian mineral exploration, support investment during low points in the commodity cycle, provide investment certainty and allow for multi-year investments.

ACTION: Make permanent the BC Mineral Exploration Tax Credit (BC METC) at 20% and increase the rate to 30% for a three-year trial period.

Corporations that conduct grassroots exploration in BC may be eligible to receive a refundable tax credit equal to 20% of non-flow-through funded, eligible mineral exploration expenditures incurred after July 31, 1998, and before January 1, 2020. An enhanced rate of 30% is available for grassroots exploration undertaken in prescribed Mountain Pine Beetle affected areas.

Exploration companies and investors depend on some level of certainty to finance not only the current year of their exploration programs, but also any subsequent exploration necessary to fully scope the mineral potential of a particular property.

Mineral exploration expenditures which are eligible for the Mining Exploration Tax Credit Program (METC) include those incurred for determining the existence, location, extent or quality of a mineral resource. A recent amendment to BC's Income Tax Act has expanded eligible exploration expenditures to include those incurred after February 28, 2015 for conducting environmental studies and community consultations undertaken to obtain a right, license or privilege for the purpose of grassroots exploration.

Making the BC METC permanent will provide stability for exploration companies, increasing the opportunity for multi-year exploration program funding and allowing for longer-term planning. This is vital for exploration programs, as mineral deposits are carried out in stages over an extended period of time. Exploration companies and investors depend on some level of certainty to finance not only the current year of their exploration programs, but also any subsequent exploration necessary to fully scope the mineral potential of a particular property.

RESOURCES + TIMELINES

TRIAL TIMELINE 2019 - 2022

COST:
NO COST TO THE PERMANENCY OF THE INITIAL 20%.

THE TRIAL INCREASE IS ESTIMATED AT AN ADDITIONAL $4 MILLION PER YEAR.

IMPLEMENTATION NOTES

- To take effect in 2019 fiscal year.
- Over the last ten years, the Mining Exploration Tax Credit program has cost the Province an estimated $34.8 million per year.

BENEFITS:

- This action will meet or exceed Quebec's rate of 28-31% for non-operating companies, improving BC's competitive position in Canada. This action will increase BC's share of Canadian mineral exploration and attract investment to the province.
- This action will create an attractive fiscal framework for developers and operators by creating a meaningful and well understood incentive programs to support mineral exploration.
- This action will increase BC's share of Canadian mineral exploration, support investment during low points in the commodity cycle, provide investment certainty and allow for multi-year investments.

Page 199 of 479 EMP-2020-05126

ACTION: Provide funding for the continuation and expansion of the BC Regional Mining Alliance to collaboratively promote BC as a leading jurisdiction for mineral development.

Established as a pilot project in early 2018 and currently focused on northwestern BC, the BC Regional Mining Alliance (BCRMA) coordinates with Indigenous governments and industry to promote BC as the leading mining jurisdiction in Canada in which to invest. As a team, the BCRMA currently promotes the many advantages of BC through a collective presence aimed at international investment. Early indications are that the BCRMA has been successful in generating interest in BC's mineral development sector and the partnership opportunities available in the province.

The BCRMA currently promotes the many advantages of BC through collective presence aimed at international investment.

The BCRMA is currently focused on the "Golden Triangle", a region richly endowed with mineral resources located in northwestern BC within the traditional territory of the Tahltan Nation and the Nass Area of the Nisga'a Treaty. Accordingly, partnership with the Nisga'a Lisims Government (NLG) and the Tahltan Central Government (TCG) has been critical to the success of this initiative. These governments, along with the Province of British Columbia and the Association for Mineral Exploration (AME), currently govern the program as partners.

An opportunity now exists for the Province to fund the continuation and expansion of this initiative. Expansion could include growing the BCRMA to include mine operators, larger regions and additional Indigenous governments. BC has many success stories that span the province and the phases of the mining industry and now the BCRMA has an exciting opportunity to share these stories further with a global investment audience.

RESOURCES + TIMELINES

TIMELINE 2019 - 2022

COST: $1 MILLION

IMPLEMENTATION NOTES

- BCRMA budget is currently supported by funds from industry partners and in-kind work.

BENEFITS:

- Promotes BC's world class geology, collaborative and experienced people and companies, and successful operating mines, and reinforces the stable, sustainable and collaborative approach that BC takes in the industry.
- Increases interest in and awareness of BC among investors and highlights the positive leadership role Indigenous governments play in the exploration and extractive sectors.
- Supports long-term economic development and community sustainability.
- Builds meaningful and productive relationships between strategic partners and key external players.
- Creates broader awareness of Indigenous groups' role in resource development thereby contributing to reconciliation.
- Enhances the BC 'brand'.

ACTION: Fund a time-bound study to examine the potential for an investment fund with a mandate of investing in companies that carry out mineral exploration activities in British Columbia.

Early-stage mineral exploration provides the foundation upon which a healthy mining industry is built. Exploration creates jobs and economic activity in rural areas, and longer term, adds to the pipeline of projects that may become mines. A robust project pipeline requires an active and diversified exploration sector approach as many projects will fail, yet a few will succeed spectacularly. Unfortunately, BC lags significantly behind Quebec and Ontario for mineral exploration spending.

This lag is due, in part, to a lack of capital flowing to the exploration sector. The trend from active investing to passive has negatively impacted junior mining companies' ability to raise exploration dollars, and the traditional sources of capital for exploration, such as mining-focused mutual funds and hedge funds, are dwindling in both number and size. To address this gap, there may be an opportunity for government to stimulate exploration spending in the province through the creation of a private sector-managed investment fund targeting early-stage mineral exploration projects, similar to the current BCTECH Fund and Quebec's SIDEX program.

Suitability of this model to the BC context needs to be comprehensively vetted. The Task Force has identified the BC Venture Capital Research Project, which provided the justification for the BCTECHFund, as a model for assessing this concept. A time-bound study will examine the concept of a new mineral exploration investment fund with a mandate of providing funding to mineral exploration companies that carry out exploration activities in British Columbia. This study should examine:

Early-stage mineral exploration provides the foundation upon which a healthy mining industry is built.

SIDEX

SIDEX is a Government of Québec created fund created to invest in companies involved in exploration in the province. First launched in 2001, initial capital funding was $50 million over five years. To date, SIDEX has invested $70 million in the Québec mining industry with the goal of:

- Diversifying Québec's mineral base;
- Encouraging new exploration models;
- Stimulating investment in exploration for new commodities;
- Opening new territories with strong discovery potential.

- Why capital is not flowing to mineral exploration in BC sector and the causes of this problem.
- The applicability of a fund to the BC exploration sector and projected impact on attracting investment and creating jobs in the BC mineral exploration sector.
- The size of fund most applicable to BC and projected return on investment.
- What fund governance structure would best assist BC with realizing goals of transportation, appropriate risk, partnership and reconciliation with Indigenous groups, stakeholder input and economic value.
- How the fund can be modeled to support projects that contribute to sustainability and promote world leading innovation.
- Opportunities for the funds profits to be re-invested in Indigenous priorities, jobs and potentially address historic issues of the industry such as abandoned sites.
- The experience of SIDEX and other similar programs in jurisdictions comparable to BC.

RESOURCES + TIMELINES

BEGINNING IN 2019

COST: $300,000

IMPLEMENTATION NOTES

- This study should produce a recommendation within 8 months.

BENEFITS:

This study will assess the suitability of this model to BC. If determined to be feasible, a mining investment fund would:

- Increase exploration spending and leverage investment from other Canadian and international sources by being the 'lead investor'. (SIDEX takes 10-15% of the investment generating up to 90% of new investment dollars).
- Stimulate exploration activity that could lead to the discovery of new mineral deposits or expand known deposits that lead to new mines.
- Stimulate economic activity that creates jobs and supports rural communities.
- Buffer investment and jobs during low commodity cycles by being a key source of investment when traditional sources are difficult to access.
- Create an attractive fiscal framework to investors and signals to the global investment community that BC supports the mineral exploration and mining industry.
- Promote projects with the attributes valued by Indigenous and non-Indigenous British Columbians.



Page 302 of 479 MMIP-2020-05126

IV. A COORDINATED APPROACH TO GEOSCIENCE

ACTION: Pursue a coordinated and adequately resourced geoscience strategy that supports growth of the provincial mineral exploration industry, considers future market demands and complements a lower-carbon future.

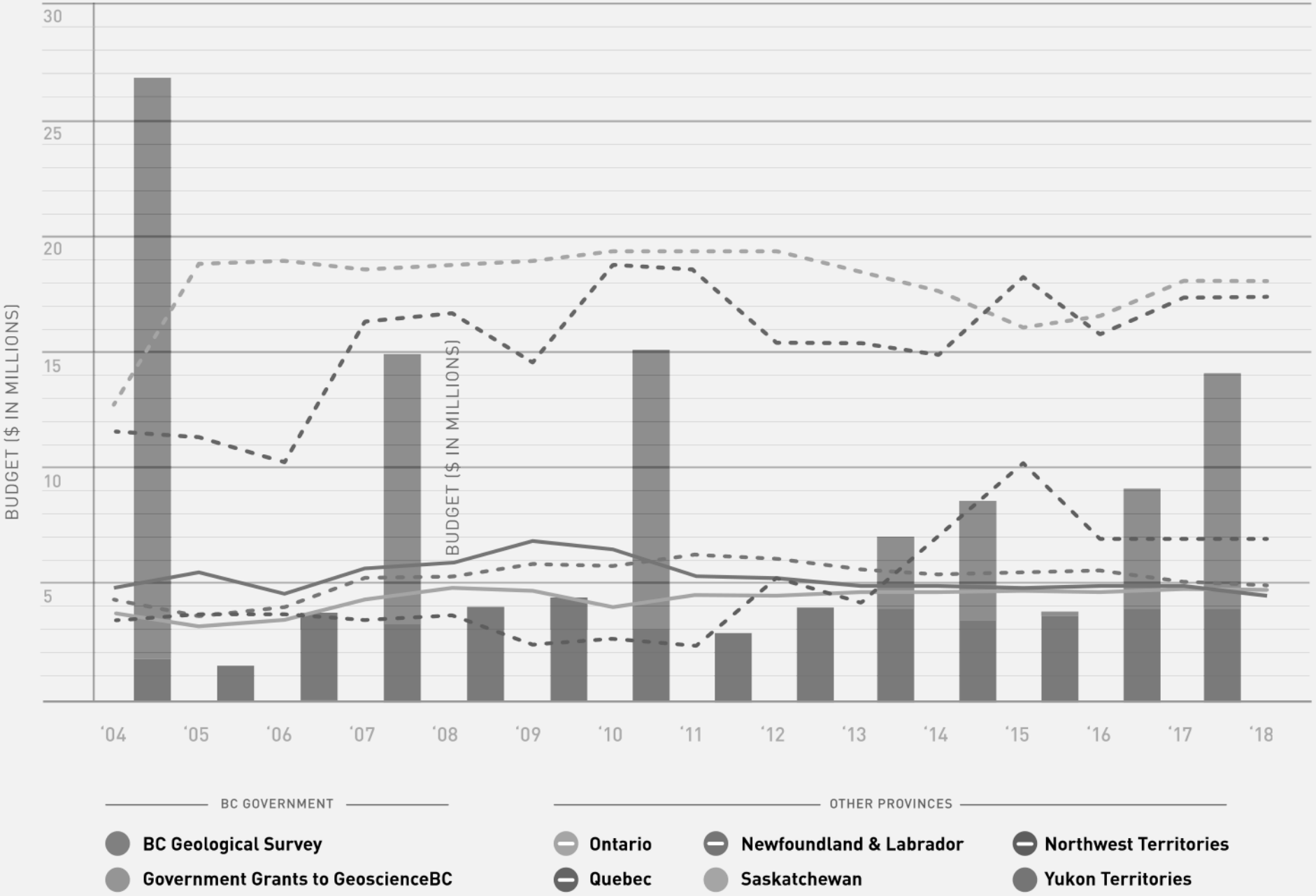
The mining sector is an important economic driver in BC that creates good jobs and supports the economy. However, mines are not possible without significant early-stage work prior to operation. Public geoscience information is one of the principal enablers of grassroots mineral exploration – the first stage in the mining life-cycle.

In BC, public geoscience to support mineral exploration is primarily delivered by two organizations – the BC Geological Survey (BCGS) and Geoscience BC (GBC). This two-pronged approach is unique in the world. Overall public geoscience in BC is rated highly, with analysis by the Fraser Institute and others rating BC well in this area.

However, public geoscience spending in BC is significantly behind that of competing jurisdictions in Canada. Core funding for BCGS averaged $3.7 million annually over the past five years. Provincial surveys in BC's rival jurisdictions of Ontario and Quebec averaged $17.7 million and $15.8 million annually over the past five years, respectively. BC is spending significantly less per capita on geoscience to support mineral exploration. This deficit is reflected in provincial exploration expenditures – In 2017 BC received less than 50% of the expenditures of Ontario and Quebec.



TABLE 7: Geoscience Survey Expenditures (2004-2018)



In addition to funding levels, observers both on the Task Force and independent have raised questions as to the efficacy of the two-organization delivery model that BC currently employs for public geoscience to support mineral exploration. Created with an initial 5-year, $25 million grant in 2005, GBC generates valuable earth science programs across the province. While initially focused on projects to support mineral exploration, their mandate has since expanded to include other earth science disciplines such as oil and gas and water projects. After 13 years of operation, the time is right for a review of this dual-organization delivery structure.

This evaluation must inform the development of a coordinated provincial approach to public geoscience, including assessing BC's competitiveness relative to other jurisdictions, and review of the structure, resource allocation and tools used to generate public geoscience that effectively supports mineral exploration and provides the best value to British Columbians.

This new, coordinated approach to geoscience should be informed by a review assessing:

- What is an appropriate amount to be spending on geoscience annually?
- What should the delivery method(s) be, assuming the values of collaboration, transparency, efficiency, effectiveness, quality and transparency?
- Is the BC geoscience framework adequate to support mineral exploration in BC?
- How does BC's public geoscience delivery systems to support mineral exploration (BCGS/GBC), their perceived effectiveness, roles and responsibilities, and funding levels sit in comparison to competing jurisdictions?
- What new or expanded geoscience related and/or taxation programs should BC consider implementing?

RESOURCES + TIMELINES

TO BE COMPLETED IN 2019

COST:
GEOSCIENCE REVIEW TO BE COMPLETED WITH EXISTING RESOURCES.

$5 MILLION IN BRIDGE FUNDING FOR GBC

IMPLEMENTATION NOTES

- This review will inform the 2020 budget.
- Explore potential industry partnerships and alignment with federal funding opportunities
- One year of bridge funding, longer-term funding direction should be determined by the geoscience review.

BENEFITS:

- Providing public geoscience to accurately inform public policy and evidence-based land use decisions.
- Implementing principles of UNDRIP and furthering reconciliation.
- Supporting a more competitive mineral exploration and mining sector.
- Attracting new investment to BC.



4. Fostering innovation

Expectations for responsible and progressive environmental best practices are now the norm, and BC's exploration and mining sector is taking the lead in developing innovative technologies and new approaches that will minimize the environmental impacts of their operations and enhance operational competitiveness. The EY report highlighted this as an exciting growth opportunity for the sector and an area where BC can become a global leader.

The provincial government has the opportunity to invest in a tailored-for-BC research, development and innovation strategy that will aim to accelerate innovative solutions to challenges and opportunities facing the BC mining industry. Once proven, these solutions can be exported to larger global markets. Through a 'BC Mining Innovation Roadmap', the province can become Canada's leader in mining innovation, commercialization and adoption of step-change innovation to attract investment, create new jobs, and position BC for the mining industry of the future.

The time is right for BC to drive the development of a forward-looking innovation strategy. Vancouver is already a global mining hub and base of over 1,000 mining companies, service providers and suppliers, in addition to world-class universities, all with a strong tradition of research, development and innovation. In parallel, industries increasingly linked to mining, such as the tech sector, are thriving in BC. Supported by cross-sector initiatives like the Digital Supercluster, CleanBC Plan, Low Carbon Industrial Strategy and others, there is opportunity to leverage the funding, expertise and experience present in the province to build momentum and set a new path forward on innovation for the mining industry of the future.

While this section focuses explicitly on innovation, the innovation theme inhabits all actions contained within this report. Government must invest in supporting regulatory agility to enable innovative technologies and tools, training strategies must anticipate the rapid pace of technological change and industry and academia must work to develop new technology to enhance productivity and develop new deposits. The breadth of issues that innovation touches on reflects the interconnected nature of mining and the need for coordinated investment by all actors to develop the innovative tools and technologies necessary to create a cleaner and more competitive sector.

BC INNOVATION

Made in BC solutions are driving a global shift toward a cleaner, more efficient mining sector. MineSense, a pioneer BC technology company, is creating digital mining solutions that provide real-time, sensor-based ore sorting for large-scale mines. They concentrate ore through superior ore-waste classification to increase revenue from higher recoveries and reduce costs spent on processing waste. MineSense was recently named to the Global Cleantech 100 and has offices and field personnel in South America, Australia and Africa and works with mining customers around the world.

ACTION: Fund the development of a BC Mining Innovation Roadmap.

The mining sector is amidst a rapid transformation driven by digitization, automation, workforce transformation, enhanced environmental stewardship and the transition to a lower-carbon future. Exciting work in these areas is being driven by industry and academic institutions across BC, but a new Mining Innovation Roadmap is needed to coordinate and accelerate this effort. Other jurisdictions and sectors currently have better models for coordinating efforts and accessing innovation capital. A coordinated BC mining innovation sector has the potential to be more efficient and leverage collective effort to address industry challenges and develop competitive advantages.

By outlining a clear path for growth, innovation and a desired future state, a Mining Innovation Roadmap will build on BC's leading expertise to create a global hub for research and innovation. This Roadmap will not only address issues in BC, but develop cutting-edge services for export worldwide. This strategy should be created through a ground up process, starting with the formation of a committee with a composition similar to the Mining Jobs Task Force. The roadmap will be grounded in, supported by, and leverage funding from existing provincial and federal programming projected to include:

- **CleanBC Plan**
- **Low Carbon Industrial Strategy**
- **Innovative Clean Energy (ICE) Fund**
- **Green Mining Innovation Program**
- **Digital Supercluster ($153M)**
- **Sustainable Development Technology Fund ($400M / five years)**
- **Cleantech Impact Program ($75M / five years)**
- **Low Carbon Economy Fund ($1.4B)**
- **Strategic Innovation Fund ($1.26B funding envelope)**
- **Innovative Solutions Canada ($100M fund)**
- **Clean Growth in the Natural Resources Program ($155M / four years)**



Page 207 of 479 EMP-2020-05126

These programs support BC's goals and strategy on innovation investments that make industry more competitive by reducing comparable net costs, cutting GHGs and creating quality jobs.

This roadmap should be designed in collaboration with industry and post-secondary institutions (colleges, technical institutes for applied research and universities for academic research) to harmonize with existing and future training programs and research initiatives. This will ensure research and innovation funding contributes to hands-on experiences for students and apprentices, attracts underrepresented and diverse candidates, ensures graduate readiness for employment and supports greater academic advances relevant to industry through collaborative research at post-secondary institutions.

The creation of this roadmap the will require investment and coordination by the Province, in partnership with industry, Indigenous communities active in mining, academia and other levels of government, to develop the innovative tools and technologies necessary to create a cleaner and more competitive sector for the future. Support will also be needed to ensure this innovation is accessible and can transition smoothly through the regulatory framework.

An agile regulatory regime is required to support the implementation of innovative practices and tools that enhance competitiveness and environmental performance.

RESOURCES + TIMELINES

STARTING IN 2019

COST: $1 MILLION

IMPLEMENTATION NOTES

- This level of funding will support the development, implementation and ongoing evolution of the Roadmap. Additional funding will be leveraged through existing initiatives.

BENEFITS:

- Drives innovation and leading practices in the BC mining sector, developing new tools that enhance competitiveness and environmental performance, leveraging emerging research, best practices and evidence to support the continued transformation of the sector.
- Supports a healthy and diverse workforce through training programs that support the skills of today and tomorrow.
- Creates collaborative funding models that support partnerships in research, development and innovation, and leverage funding from outside the province.

MINING AND THE DIGITAL SUPERCLUSTER

In February 2018, the BC-based Digital Technology Supercluster was awarded $153 million in funding from the Government of Canada.

Comprised of a consortium of 250 members, including Vancouver miner Teck Resources, TELUS, Microsoft, and all 25 BC post-secondary institutes, the supercluster's initiatives include collaboration between the mining and tech sectors and post-secondary institutions to unleash new innovation and address sustainability and productivity opportunities and challenges.

5. Building awareness of mining's role in a prosperous BC

Mining has played a significant role in British Columbia's history. Many communities across the province were founded in connection with mineral discoveries, and Indigenous mineral discoveries and production prior to colonization are documented in many regions of the province. Mining also plays an essential role in clean energy development. Materials acquired through mining are essential to increase the global supply of solar panels, wind turbines, smart grids, LED light bulbs and electric cars. In addition, quarry materials such as sand, gravel and rock are vital to the construction of buildings, roads and other physical infrastructure that British Columbians use every day.

A 2017 survey found that 87% of Australians surveyed accept mining to some degree. The same survey also reported a high degree of public literacy on the industry's role in job creation, positive effect on regional communities and improvement of transport infrastructure. In BC, mining has not traditionally held similar levels of understanding and support, but high operational standards, low carbon footprint and significant contribution to the economy provide the building blocks for the sector to improve public perception while growing a responsible, competitive and productive industry.

Government, industry and labour have an important role to play in fostering a greater understanding of the essential role mining has in clean energy, highlighting the use of minerals in the everyday life of British Columbians, communicating the important role of the sector in supporting rural and urban economies and sharing the story of the collaborative partnerships between industry and Indigenous groups that are advancing reconciliation throughout the province.

ACTION: Host a multi-stakeholder forum to build understanding, awareness and support for responsible market standards and systems that would advance responsible metals market objectives for BC.

With growing awareness and demand for ecologically and socially-responsible products, jewelers, electronics businesses, auto makers and others are increasingly seeking assurances that the raw materials they purchase are mined responsibly. Most consumer product producers do not buy directly from mines – the supply chain of mined materials is long and often complicated – so leading companies now look to global certification programs to provide confidence to their customers that raw materials used in their products have been ethically produced and procured.

RESPONSIBLE SOURCING, IRMA, BUY-IN FROM MICROSOFT AND OTHER MULTINATIONALS

Developed by the Initiative for Responsible Mining Assurance (IRMA), the Standard for Responsible Mining reflects the input from over 100 companies, organizations and individuals worldwide and has support from leading companies like Anglo American, ArcelorMittal, Microsoft and Tiffany & Co.

IRMA's approach to responsible mining is to certify social and environmental performance at mine sites globally. Impartial, credible certification addresses purchaser demand for greater options in mined materials and civil society's desire for transparency and truthfulness about whether a mine is taking steps to reduce potential harm and make continuous improvement.

The BC mining sector's high operational standards, low carbon footprint and commitment to reconciliation with Indigenous people provides opportunity to capitalize on this global movement. A BC-led multi-stakeholder forum on responsible market standards will capitalize on this potential to bring together key actors including industry, metals buyers, civil society, Indigenous organizations, labour and policy makers to build a collective understanding and develop action plans that would advance responsible metals market objectives.

RESOURCES + TIMELINES

BEFORE THE END OF 2020

COST: $200,000

IMPLEMENTATION NOTES

- Development of this forum should take place throughout 2019, targeting a mid-2020 date.

BENEFITS:

- Bringing buyers from electronics, steel, automotive, renewable energy supply chains to BC to discuss their needs and market drivers would help BC understand where the markets are trending and what we need to do to adapt to these trends.
- Enhances BC's global reputation and competitiveness while considering environmentally progressive approaches and practices.
- Positions BC for leadership in the emerging clean and ethical economies.
- Enhances BC's global competitiveness by opening the provincial industry to new and emerging markets.
- Key findings will inform long-term branding and public awareness strategy for BC industry.

ACTION: Coordinate mine sector branding with low-carbon economy strategies and opening of new markets through jointly developed action plans.

As a major producer of many of the crucial minerals needed for renewable energy systems, BC is well positioned to take advantage of a global shift to a lower-carbon economy. BC is Canada's largest producer of copper used in electric cars and Canada's largest exporter of the steelmaking coal needed to build wind turbines and light rail transport systems. The province is Canada's only producer of molybdenum, used in the steelmaking process, and BC smelters are among the lowest carbon footprint producers in the world.

BC's mines also have high operational standards and low carbon footprints compared to global competitors. These exciting stories now have the potential to contribute to an innovative mine sector branding strategy that will open new markets and enable preferred access for BC products. The Task Force recommends the development of a forward-looking mining sector branding and marketing strategy to emphasize the linkages between the mining industry, clean energy and clean and ethical production to enhance market awareness and access for BC products. This branding strategy will be enhanced by leveraging the momentum of the recently launched CleanBC Plan, which has earmarked resources dedicated to enhancing and marketing a clean BC brand internationally.

This approach should be refined through dialogue with industry, metals buyers, civil society, Indigenous organizations, labour and policy makers. This dialogue can begin through the CleanBC framework and be enhanced by convening a multi-stakeholder forum (see above)

Page 210 of 479 EMP-2020-05126

to guide strategic direction and next steps. Outcome of this forum will provide long-term direction to government and industry on an innovative and inclusive mine sector branding strategy.

RESOURCES + TIMELINES

WILL LAUNCH IN 2019

COST: $200,000

IMPLEMENTATION NOTES

- To involve coordination with industry, metals buyers, civil society, Indigenous groups and policy makers.

BENEFITS:

- Leveraging the CleanBC program, this branding initiative would position BC industry as modern and forward-looking by drawing explicit connections between the raw materials used to manufacture clean energy technology and the 'clean energy' itself.
- The development and implementation of this branding initiative would open new markets enable preferred access for BC products.
- Collaboration and partnerships between the mining and clean energy sectors could allow for greater reach, impact and enhanced knowledge-sharing.
- This initiative would contribute to the development of a "Destination BC" style BC brand strategy that will allow government and industry to speak about low-carbon exports and investment opportunities with a united voice.

ACTION: Support implementation of a coordinated communications and education strategy that informs British Columbians of the foundational importance of the mining sector to the province and their everyday lives.

Despite the exciting good news stories that mining in the province generates, many British Columbians are unaware of the continued importance of the modern mining industry and the ways in which mining continues to positively shape BC today and into the future. Collaborative relationships between Indigenous groups, industry, labour and government receive limited publicity, and there is a persistent disconnect in public consciousness between technological advancements and the raw materials used to construct them. Moreover, there is a lack of understanding regarding the role that BC's mining industry continues to play in supporting both rural and urban economies – including through exploration, mining and mining services, primary processing, downstream manufacturing, and legal and financial activities – and the exciting career opportunities available throughout the sector.

The Task Force has identified an opportunity to develop a coordinated communications and education strategy to inform British Columbians of the foundational importance of the mining sector – both to the province, and to their everyday lives. This strategy should be led by Mining Association of BC and the Association for Mineral Exploration in partnership with civil society, Indigenous organizations and commu-

Many British Columbians are unaware of the continued importance of the modern mining industry and the ways in which mining continues to positively shape BC today and into the future.

nities, and involve collaboration with sectors that have linkages to mining (i.e. clean energy, construction).

A broader communications strategy should be underpinned by an educational component that would engage with K-12 students to improve basic literacy around the mining industry and provide pathways to careers in the mining sector, building on the existing work of the successful MineralsEd program. Engaging early with children and youth is key to opening the sector to a more diverse range of participants and getting young people (particularly those from underrepresented groups) excited about the innovative, high-tech careers that will build the mining sector of the future.

RESOURCES + TIMELINES

WILL LAUNCH IN 2019

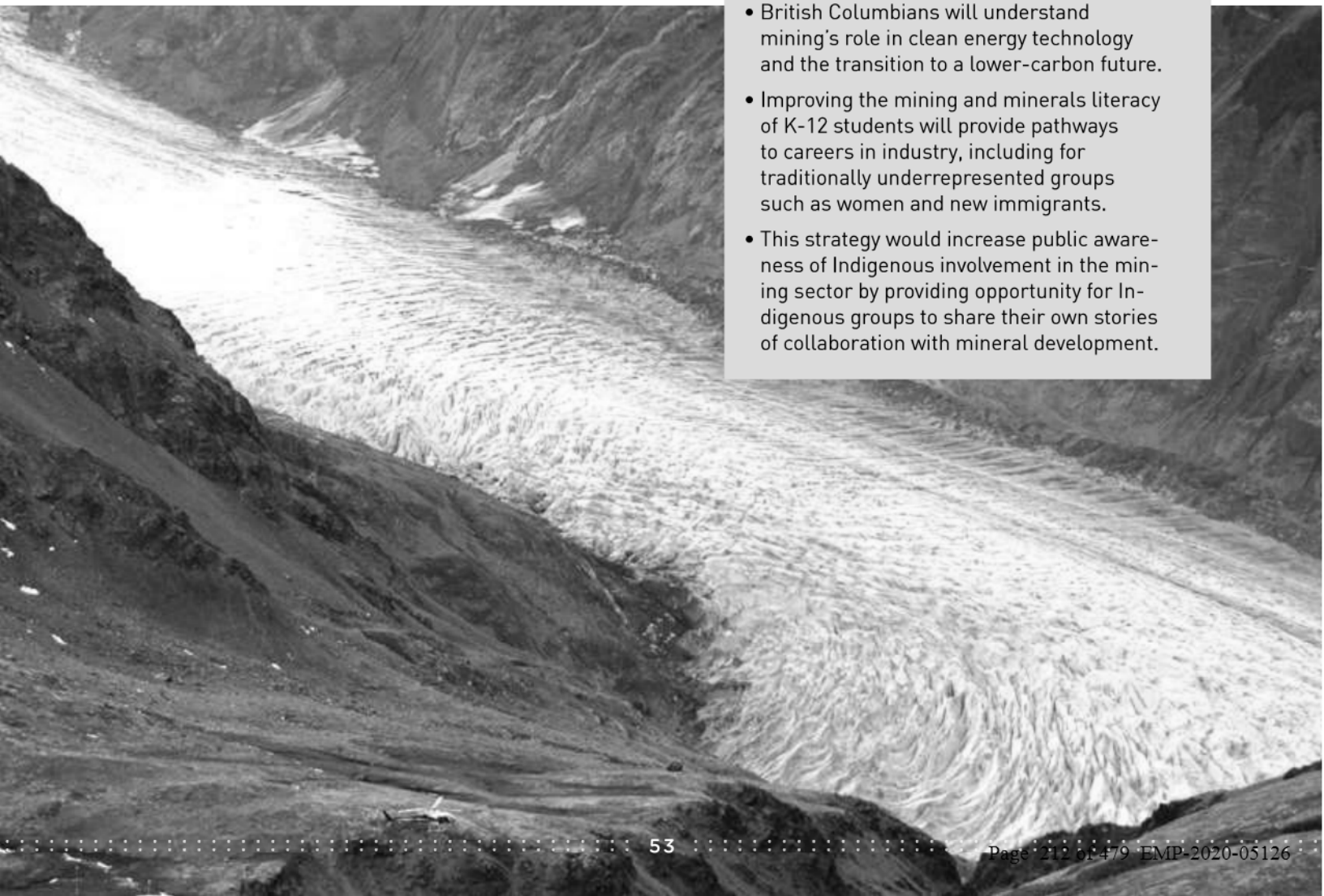
COST: NO COST TO GOVERNMENT

IMPLEMENTATION NOTES

- To be led by industry, in collaboration with civil society, Indigenous groups organizations and policy makers.

BENEFITS:

- This strategy will communicate the ongoing role of the mining sector in growing a strong provincial economy, providing good jobs and supporting healthy communities across BC.
- Increasing public understanding of the world leading best practices employed by BC's mining sector will improve public confidence in the industry.
- British Columbians will understand mining's role in clean energy technology and the transition to a lower-carbon future.
- Improving the mining and minerals literacy of K-12 students will provide pathways to careers in industry, including for traditionally underrepresented groups such as women and new immigrants.
- This strategy would increase public awareness of Indigenous involvement in the mining sector by providing opportunity for Indigenous groups to share their own stories of collaboration with mineral development.



NEXT STEPS

The BC Mining Jobs Task Force report contains a spectrum of actions to bring more certainty to the mining sector, advance reconciliation and create good jobs for British Columbians now and in the future. Actions are wide-ranging and deeply interconnected, representing the diversity of the constituencies, communities and segments of industry that make up BC's mining landscape. Together, these actions will support a healthy, innovative and progressive sector that provides the foundation for strong, sustainable and inclusive economic growth in the province.

This Task Force represented a diversity of constituents unprecedented in reviews of the mining sector to this point and has set a high bar for future reviews in this and other industries. This diverse group brought unique perspectives and ideas to the table, but all Task Force members were united and committed to identifying actions to support the long-term growth of mining jobs in BC. Given the consensus-based nature of this process, the Task Force feels these actions will be valuable across government and to all constituents represented. To reach this broad audience and have maximum impact, the Task Force recommends government plan a roll-out of the report at Roundup 2019 to communicate Task Force findings to constituents, stakeholders and the public.

1. Implementation timeline

To drive mining in BC toward the desired future state – *British Columbians are proud of our growing mining industry as the backbone of an inclusive, progressive and low carbon economy* – the Task Force's actions are designed to be implemented in stages. The Task Force has identified immediate actions that are crucial to creating a competitive business environment to encourage investment, project development and job growth, while other actions are designed to support longer-term growth, participation and innovation throughout the sector. This approach was conceived to ensure there is continuous improvement seen in the sector through the short, medium and long-term, to ensure there is appropriate time to design and solicit further input on certain programs, and to spread out the fiscal impacts of recommended actions.

2. Ongoing monitoring and evaluation

At their first meeting in early 2018, the Task Force identified a strong desire to develop actions that are not only implementable, but advance achievable targets with the ability to measure and report on progress. To support this goal, the Task Force has created an additional action, outside the initial scope, to support ongoing implementation and evaluation of Task Force actions.

ACTION: Create a committee to support ongoing monitoring, evaluation and refocusing of actions resulting from the BC Mining Jobs Task Force.

The Task Force has collectively communicated a strong desire to see all actions from this report adopted by government and implemented to support a healthy, sustainable and competitive mining industry in BC into the future. Anecdotal reports suggest uptake from studies authored by previous Task Forces was limited and that may have been influenced by the absence of an ongoing monitoring and evaluation function that would have supported implementation.

Page 213 of 479 EMP-2020-05126

A committee on the implementation of these actions along with an evaluation of their effectiveness would provide an opportunity to continue the constructive, collaborative dialogue between a diverse group of constituencies on growing jobs in BC's mining sector. This group would guide ongoing monitoring, evaluation and refocusing of actions resulting from the Task Force report in addition to developing key performance indicators and reporting mechanisms that can inform a better understanding of the industry in the future. This groups could also be proactive in developing new actions in response to the rapid pace of change seen throughout the industry.

This body should remain committed to the guiding principles developed by this Task Force:

- Our decisions and actions support advancing reconciliation with Indigenous people;
- We actively seek to enhance B.C.'s global competitiveness while considering environmentally progressive approaches and practices;
- We are fair and transparent with our decisions and actions;
- We are innovative, leveraging emerging research, best practices and evidence to support the continued transformation of the sector.

RESOURCES + TIMELINES

STARTING IN 2019/2020 BUDGET CYCLE

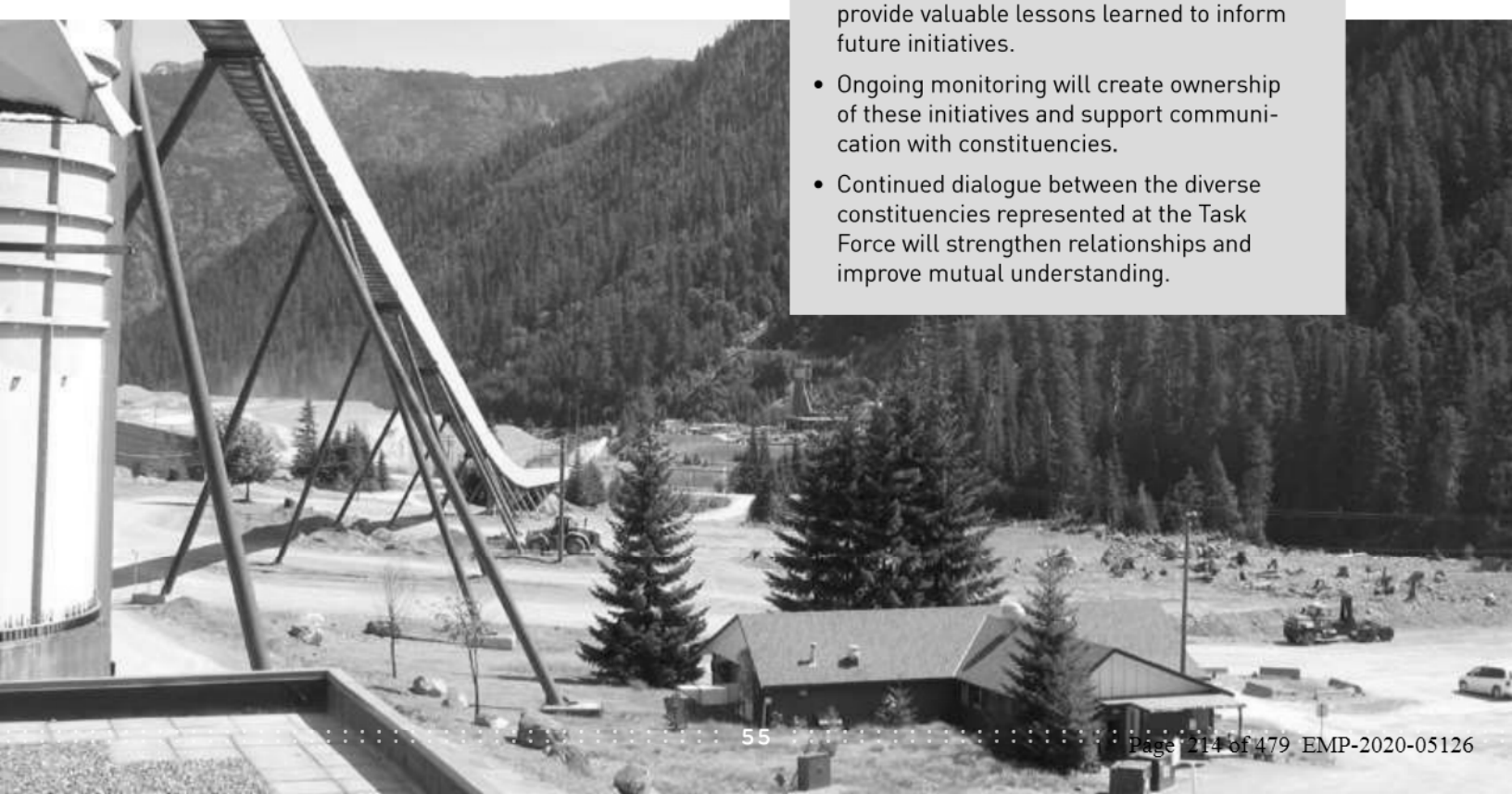
COST: $50,000 PER YEAR

IMPLEMENTATION NOTES

- This committee should be formed after close of the Task Force and hold quarterly meetings on an ongoing basis.
- This committee will mirror the composition of the Task Force to ensure all constituencies remain represented and engaged.

BENEFITS:

- This body will ensure actions from the Task Force are implemented and evaluated.
- Evaluation of Task Force actions will provide valuable lessons learned to inform future initiatives.
- Ongoing monitoring will create ownership of these initiatives and support communication with constituencies.
- Continued dialogue between the diverse constituencies represented at the Task Force will strengthen relationships and improve mutual understanding.





IN CONCLUSION

The Task Force is thankful for the opportunity to provide input into the future of BC's mining sector and commends the Minister for the foresight to assemble such a diverse Task Force who could bring the unique experiences and perspectives of their constituencies to the table. Together, all members of the Task Force are committed to supporting a competitive, safe and socially and environmentally responsible mining industry that grows a strong, sustainable, innovative economy supporting people and communities in all areas of the province.

There remains significant work ahead to realize the desired future state identified by the Task Force. But through the collaborative development of this report, the Task Force has identified a powerful, innovative and inclusive suite of actions to drive the long-term health, growth and competitiveness of BC's mining sector.

If these actions are taken, the future is bright for the mining industry in British Columbia.



Page 213 of 479 EMP-2020-05128

Attachment 1: Mining Jobs Task Force Actions Status

MJTF Action	Completed/on-track	Not on track to be fully implemented	Notes
Introduce an Integrated Indigenous Mine Training Program	Contract to study concept delivered Feb., 2020		
Action plan to attract and retain women in mining careers	Study on leading practices delivered Feb., 2020		
Develop a Mine Sector Training Roadmap	In development with AEST		Project initiation delayed due to COVID-19, but on-track to begin in 2020.
Create and support an accessible worker database	EMPR working with CITZ & LBR on options study		
Create a Standing Code Review Committee	In place		
Examine options for revenue sharing with Indigenous communities		MIRR mandate. No progress communicated to EMPR.	
Explore opportunities to support Indigenous equity ownership in major projects	Collaboration with JEDC, MIRR on analysis is ongoing		
Enable the development of community trusts for multiple First Nations	EMPR working with JEDC, MIRR on discussion paper		
Support plan to fund Indigenous Stewardship and Monitoring Initiatives	FLNR is advancing this policy area		
Establish world-leading community health and well-being best practices	Contract to study practices is completed		
Increased resourcing for regulatory excellence	In place		
Support government's Low Carbon Industrial Strategy	Underway, led by JEDC		
Eliminate PST on Production Machinery and Equipment and mine infrastructure		Budget 2020 removed location restrictions on pollution control and waste management equipment from PST.	PST restrictions still apply to production machinery and equipment. EMPR will reassess business case for further changes and consider resubmitting to FIN for Budget 2021.
Make the Electricity Cost Deferral Program permanent	Work underway, led by EMPR's EAED Division		

Make the New Mine Allowance permanent		Budget 2020 extended the credit for five years,	The credit was not made permanent. EMPR will reevaluate the case for making the credit permanent near date of program expiry.
Make permanent the BC Mining Flow-Through Share program at a rate of 20% and increase the rate to 35% for a three-year trial period.		Made permanent in Budget 2019.	Budget 2020 did not provide a trial increase. AME has advocated for an increase in METC rates (60% for one year beginning June 2020 followed by a three-year increase to 30% beginning in 2021/22) to support industry's recovery from COVID-19. This proposal is under evaluation.
Make permanent the BC Mining Exploration Tax Credit at 20% and increase the rate to 30% for a three-year trial period.		Made permanent in Budget 2019.	Budget 2020 did not provide a trial increase. AME has advocated for an increase in METC rates (60% for one year beginning June 2020 followed by a three-year increase to 35% beginning in 2021/22) to support industry's recovery from COVID-19. This proposal is under evaluation.
Expand the BC Regional Mining Alliance	$1 million grant to AME		
Study the potential for an Exploration Investment Fund	Study delivered Nov. 2020		
Develop a coordinated geoscience strategy	In development by EMPR		
Mining Innovation Roadmap	$1 million grant to MABC to develop roadmap		
Multi-Stakeholder forum on responsible market standards		Scheduled for March 26, 2020	Postponed due to COVID-19. EMPR evaluating options for rescheduling in early June.
Coordinated mine sector branding	Outcomes of forum to inform approach		
Coordinated communications and education strategy	EMPR/GCPE has engaged with MABC, AME.		EMPR supporting AME in development of minerals literacy campaign.
Committee to monitor MJTF implementation	In place		

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Placer Jade Mining in Northern BC

Revised: June 9, 2020

Issue: Issues with placer jade mining in Northern BC

Response:

- The environmental impacts of placer jade mining in Northern BC is a clear and expressed concern from Indigenous Nations in the region.
- The Ministry of Energy, Mines and Petroleum Resources (EMPR) is working on policy initiatives to address these concerns and mitigate the environmental impact of placer mining.
- An Order In Council (OIC) was issued under section 7 of the *Environment and Land Use Act* on May 11 2020, deferring permitting on jade-placer operations in Northern BC for a period of 24 months.
- The OIC creates space for EMPR to continue to work closely with Indigenous Nations and jade placer operators to develop higher operational and reclamation standards.

Background/Status:

- The environmental impacts of placer jade mining in Northern BC are exacerbating long-standing concerns of Indigenous Nations and pose a risk to BC's efforts to advance a Comprehensive Reconciliation Agreement with Tahltan Central Government (TCG).
- Tahltan Territory overlaps the most valuable mineral region in BC known as the "Golden Triangle". TCG works constructively with mineral exploration and mining companies but feel placer jade operations do not respect Tahltan cultural and community values.
- EMPR is advancing policy initiatives to address concerns from TCG that the placer jade sector does not provide economic benefits to balance the environmental impacts, and that current operating and reclamation standards are insufficient.

Placer Jade Mining Operations:

- EMPR is considering a range of options to address concerns expressed by Indigenous Nations specific to jade placer mining operations in Northern BC.
- An OIC was issued under section 7 of the *Environment and Land Use Act* on May 11 2020, deferring permitting on jade-placer operations in Northern BC for a period of 24 months.

- This approach was developed through engagement with Indigenous Nations and the Association for Mineral Exploration.
- The OIC will create space to work closely with Indigenous Nations and jade placer operators to develop higher operational and reclamation standards in the placer jade sector during the 24-month period of the order.
- Maintaining a positive relationship with the Tahltan Nation will foster a more constructive relationship for projects in their territory, and is a key goal for EMPR. There are three operating major mines and several advanced projects within Tahltan traditional territory.

Policy for Revenues:

- Indigenous Nations have expressed concerns that the economic benefits do not balance the industry's environmental impacts.
- Direct revenue to government from permits or royalties is negligible. Government does receive indirect revenues through payroll taxes and PST on supplies and services; the exact amount has not been quantified, although anecdotal evidence suggests it is quite low.
- Placer jade is subject to the *Mineral Tax Act*. While recovering the capital invested in a mine, operators pay 2% tax on the mine's net current proceeds. Once capital invested in the mine has been recovered, they are subject to a 13% Net Revenue Tax.
- Jade mining provides almost no direct revenue to the Province (approximately $18,000 in royalties in 2016) which does not seem to reflect the value being extracted from the land.
- EMPR is exploring options for an updated revenue model that would better balance environmental impact with economic return. This is part of a broader initiative from EMPR to improve the overall operating standards of the sector while the ELUA OIC is in effect.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: COVID-19 Impacts on Mining in British Columbia

Revised: June 16, 2020

Issue: Summary of economic impact on BC's mining industry and relief measures

Response:

- The economic disruption resulting from the COVID-19 pandemic has impacted BC's mining sector.
- Government has taken steps quickly to address concerns from industry and help continue operations with nearly full staffing levels, including cutting the School Tax, extending payment deadlines for the Employer Health Tax, putting the planned carbon tax increase on hold, and allowing eligible industrial customers to defer 50% of their electricity bill payments.
- Government is allowing for the extension of tenures and mineral exploration permits to December 31, 2021.
- Industry associations continue to advocate for short- and medium-term relief measures to ensure the sector can contribute to BC's economic recovery.

Background/Status:

Economic Impact:

- The COVID-19 pandemic has depressed prices for BC's key commodities since the start of the year. From January to June 1, copper prices have fallen 12.9% and metallurgical coal has fallen 23.9%.
- According to the Mining Association of BC (MABC), the sector faces challenges maintaining liquidity and cash flow as access to markets for goods and services, as well as BC's mineral products, has been disrupted. Despite these challenges, companies did not lay off staff. Employment is near pre-pandemic levels.
- The Association for Mineral Exploration of BC (AME BC) and Natural Resources Canada have noted significant challenges in accessing capital to finance mineral exploration activities in the field.
    - From April 2019 to April 2020, Canadian flow-through share issuances fell by over 90% (from $36.3 million to $2 million). Junior exploration financing in April 2020 was $23.4 million (9% of 2019 levels).
    - A survey of AME BC members found that only 70% of exploration firms believe they will be able to get in the field this year, and nearly half of these companies have not yet been able to finance their work programs.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Both MABC and AME BC are prioritizing immediate tax relief items that will provide their members with increased liquidity, certainty and flexibility during the pandemic. Short- and medium-term recommendations include further tax deferrals and temporary increases to the BC Mining Flow-Through Share Tax Credit and the Mining Exploration Tax Credit (METC).
- The BC Stone, Sand and Gravel Association has indicated that their members are ready to work on shovel-ready projects to support BC's economic recovery and is advocating for provincial support for infrastructure.

Actions Taken:

- Mining and mineral exploration have been designated essential services in BC, along with smelters, aggregate operations and service and supply companies.
- BC's COVID-19 Action Plan included several supports that directly benefit the mining sector, including deferred Employer Health Tax payments to September 30, 2020, a 50% reduction in the School Tax for businesses and delayed incremental carbon tax increase.
- On March 27, 2020, the Chief Gold Commissioner issued an order under the *Mineral Tenure Act* extending all mineral and coal claims to December 31, 2021. This order also extended the deadline for 2020 and 2021 licence and lease annual rental payments to December 31, 2021.
- Allowing for the extension of mineral and coal exploration permits to December 31, 2021 to help those who will not be able to get out in the field during the 2020 season or will be undertaking a reduced field program.
- BC Hydro has introduced a deferral of 50% of electricity costs for mines and industrial producers in BC on a three-month basis, in addition to the existing MCPP. A three-month extension of the deferral is under consideration.
- BC has extended the transitional provisions of the CleanBC Industrial Incentive Program, ensuring companies will receive a minimum rebate of 75% of their above $30 Carbon Taxes. BC is also providing early partial (40%) payment of CIIP rebates.
- BC is working with the Canada Revenue Agency to ensure Mineral Exploration Tax Credit rebates are provided to companies in a timely manner. On May 14, 2020, Honourable Ralston sent a letter to federal counterparts highlighting the importance of this issue.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: COVID-19 Guidance, Inspections and Industry Support

Revised: June 12, 2020

Issue: Ministry of Energy, Mines and Petroleum Resources' approach to supporting both industry and Provincial Health Officer's direction during provincial COVID-19 response

Response:

- The Provincial Health Officer (PHO) has issued orders and guidelines to assist industrial camps in their response to COVID-19.
- Ministry of Energy, Mines and Petroleum Resources' (EMPR) is supporting industry and essential services in following the advice of the PHO to keep the provincial economy open while working to prevent the spread of COVID-19 to communities and the workforce at industrial sites.
- Industrial camps and worksites are taking the necessary steps to ensure their sites remain compliant with COVID-19 guidance and direction. EMPR inspectors have undertaken camp and worksite inspections relating to COVID-19 protocols under delegated authority of the PHO in order to verify compliance.

Background/Status:

- Since the declaration of a provincial state of emergency on March 17, 2020, the PHO has issued numerous orders and guidelines to support essential services in continuing their operations during the pandemic, while ensuring the prevention of COVID-19 at industrial sites.
- In response to the PHO direction and in an abundance of caution, some mine sites temporarily reduced their workforces by up to 50%. Fly In/Fly Out operations were changed to incorporate sufficient isolation periods (2 weeks or more cycles) at the beginning of April as provinces grappled with COVID-19 measures and the Canada/US border closed.
- EMPR has provided guidance and direction to industry to support the PHO's orders and guidelines and has worked tirelessly with industry to ensure appropriate measures are in place across sites.
- Additional measures EMPR has put in place to support industry in these unprecedented times include: relief of annual maintenance and dues associated with tenures, relief of annual in-person examinations, and flexibility in annual reporting requirements. EMPR is also working to extend the expiry date of

exploration permits on an individual basis and in consultation with First Nations (FNs).

- Industrial sites cautiously and thoughtfully began on May 14, 2020 to bring operations back up to pre-COVID-19 numbers on site. This slow 'ramp-up' to full site capacity continues in close collaboration with EMPR, PHO and regional health authorities to ensure any increase in numbers at site do not compromise existing measures across the sites.
- EMPR has worked with Emergency Management BC (EMBC) to host and coordinate 6 sessions across the province that have focused on delivering a cohesive, coordinated message from EMBC, Ministry of Health, Regional Health Authorities, and local industrial sites on the measures in place and prevention of COVID-19. These sessions were attended by local governments, council, regional districts and Chief and Council from local FNs. An additional session was hosted by EMBC with the First Nations Leadership Council. These sessions were broadly supported and were recognized as being highly effective in addressing local community and FNs' concerns regarding industrial camps and activities during the COVID-19 pandemic.
- Industrial sites continue to explore additional tools in their efforts to prevent COVID-19 at their sites, this includes ongoing discussion and review of possible testing approaches to their workforces.

Inspections and PHO Order for Industrial Camps:

- As delegated by the PHO Order for Industrial Camps issued April 23, 2020, the mines inspectors within EMPR has undertaken worksite and camp inspections to verify that sites have developed appropriate COVID-19 protocols, and plans.
- Inspectors work with Infection Prevention and Control Coordinators at site to review the site, accommodation and protocol. Any areas for improvement are flagged and followed-up. Authority for enforcement resides with the regional health authority.
- Major industrial sites have demonstrated a high level of compliance with critical elements of COVID-19 prevention, including physical distancing, hand hygiene and sanitization, engineered controls, and administrative controls.

Cases of COVID-19 at Industrial Sites

- To date, no cases of COVID-19 have presented at any industrial sites within EMPR's mandate. One employee from Kemess mine, one from Mount Milligan, and one from LNG Canada were infected while on time off or while travelling home from the site. Timelines and contacts were established with the assistance of Northern Health.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Industrial sites and regional health authorities took swift action to place ill employees in isolation without further incidence of COVID-19 within the community or within the workforce.

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Willow Creek Mine Curtailment of Operations

Issue: Willow Creek Mine intends to announce a two-month curtailment of coal mining operations on June 17, 2020

Response:

- We are aware that Willow Creek Mine located in the Peace River region announced a two-month curtailment of operations on June 17, 2020.
- We know the COVID-19 pandemic and sustained low commodity prices are having severe impacts on the global economy.
- Operating mines are important to our economic resiliency.
- We are working with the Mining Association of BC to provide support and relief to companies impacted by the challenges facing our economy.
- Our government has announced a package of supports for British Columbians whose income and employment have been impacted by COVID-19.

Background/Status:

On June 17, 2020, Conuma Coal Resources Ltd (Conuma) announced a two-month curtailment of operations at the Willow Creek Mine due to sustained low coal prices, which are 45% lower than they were one year ago. It is unknown if continuing low commodity prices may extend the temporary Willow Creek closure.

Before the curtailment, Willow Creek employed 301 workers and most workers have been impacted by the closure. The temporary closure will also have a financial impact on First Nations (West Moberly, Saulteau and Halfway River First Nations) including loss of direct employment and mineral tax revenues flowing to their communities.

Conuma purchased Willow Creek Mine along with nearby Brule and Wolverine mines from Walter Energy Canada in 2016. Willow Creek is approximately 45 km southwest of Chetwynd, BC and produces 1.2 million tonnes of clean metallurgical coal per year. Based on current reserve estimates and production rates, mining could be conducted up to 2026.

Conuma is seeking a *Mines Act* amendment and Environmental Assessment Office authorization for their Wolverine Mine to expand operations and indicate timely authorizations are linked to continuous employment at the Wolverine Mine.

While Conuma's planned two-month curtailment is attributed to low coal prices, the provincial mining sector is also facing challenges maintaining liquidity and cash flow as

access to markets has been disrupted due to COVID-19. Government has recognized the significant challenges facing businesses, and in response announced a COVID-19 Action Plan to provide support and relief. These include:

- Designating the mining sector as an essential service;
- Delaying the planned incremental Carbon Tax increase;
- Cutting the School Tax in half;
- Extending filing and payment due dates for the Employee Health Tax;
- Deferring Tenure Maintenance Fees for 6 months without penalty;
- Issuing a blanket Time Extension Order for all claims and leases until December 31, 2021;
- Charging zero interest on outstanding mineral tax royalty balances for companies that cannot afford to make payments;
- Extending the transitional framework for the CleanBC Industrial Incentive; Program (CIIP) and providing early partial payment (40%) of CIIP rebates; and
- BC Hydro's introduction of a 50% electricity cost deferral for mines and industrial producers in BC for three months.

Additional actions taken by government include:

- Working to include Conuma mines for eligibility under another BC Hydro program (Mining Customer Payment Plan) that allows participating mines to defer up to 75% of their electricity bill during periods of low commodity prices;
- The Chief Inspector of Mines provided guidance documents to mining operations to ensure health and safety during the pandemic; and
- The allocation of $1.5 billion for economic recovery and striking an Economic Recovery Task Force to ensure that BC's economic response to COVID-19 is effective and responsive to the needs of British Columbians.

Government has a range of supports for individuals in need of relief during the pandemic including financial support, tax relief and assistance with bills. More information can be found on the government website:
https://www2.gov.bc.ca/gov/content/employment-business/covid-19-financial-supports

Contact:

Peter Robb	ADM	MCAD	250-812-7392

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Mining Oversight

Revised: June 3, 2020

Issue: Ministry actions to improve mining oversight.

Response:

- Restructuring and investment announced in Budget 2019 are now in place and continues to be supported by Budget 2020.
- Ongoing actions that demonstrate the commitment to a competitive mining sector while focussing on strong regulatory oversight were informed by engagement with labour, Indigenous representatives and industry through the Mining Jobs Task Force, best practice in other jurisdictions, recommendations of the Office of the Auditor General, and lessons learned from the Mount Polley mine disaster.
- Proposed amendments to the *Mines Act* will further clarify, strengthen and modernize mining oversight in BC.
- If passed, the amendments will create a new Chief Permitting Officer, distinct from the Chief Inspector of Mines. This separation of regulatory functions provides a focus on permitting efficiency, without compromising focus on worker health, safety, and enforcement.
- A new Mine Audits and Effectiveness Unit will conduct audits to ensure that mining regulation in BC remains effective and aligned with global best practice.
- A formal progress report to address the 17 recommendations by the Office of the Auditor General was provided to the Select Standing Committee on Public Accounts in February 2020 in collaboration with the Ministry of Environment and Climate Change Strategy. Work continues to ensure the recommendations are being appropriately addressed.

BACKGROUND:

- The Ministry received a $20 million budget increase between 2019 and 2022 (up to 65 FTEs) to support strengthened oversight and restructuring of the mining team to align with other provincial regulators, by separating into two divisions: Mines Competitiveness and Authorizations Division (MCAD), and Mines Health, Safety and Enforcement Division (MHSE).
- New resources have resulted in 38 staff hired to date: 15 in MCAD and 23 in MHSE; 22 of which are mines inspectors or auditors.
- In 2019 there was a 30% increase in mine inspections compared to 2018, reflecting increase in mines inspectors in the field at mining operations around the province.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Additional precautions are in place for field-based inspections during COVID-19 to ensure inspectors and mine employees are protected.
- Proposed *Mines Act* amendments support robust mining oversight and a competitive sector by:
    - creating the new Chief Permitting Officer as a role distinct from the Chief Inspector of Mines and responsible to make permitting decisions and improve the mine permitting process and competitiveness;
    - modernizing, strengthening and enhancing compliance and enforcement provisions to ensure we have the tools required to hold mines accountable;
    - formalizing the Mine Audits and Effectiveness Unit to create an authority separate from day-to-day regulatory oversight and ensure that mining regulation in BC remains effective and aligned with global best practice; and
    - supporting efforts to increase Indigenous engagement in compliance by introducing the authority for inspectors to bring representatives of Indigenous Nations with them on inspection.
- Additional actions and improvements to improve mining oversight include:
    - new accountability for ensuring the mine permitting process is efficient and effective;
    - a standing Code Review Committee is in place, with representatives from labour, industry and Indigenous communities, to ensure that mining regulation is kept up to date;
    - implementation of administrative monetary penalties program that allows EMPR to impose financial penalties on mines for non-compliance with the *Mines Act*, and issuance of the first three administrative monetary penalties under the program;
    - establishment of the Mine Investigation Unit within EMPR resulting in the first successful prosecutions in two decades;
    - major changes to the management and oversight of tailings storage facilities; and
    - increase in the amount of reclamation security held by EMPR. As of December 31, 2019, EMPR held $1,868,775,812.
- Significant work continues in a number of areas including innovation and competitiveness, policy and training, and developing digital system improvements to allow effective planning, reporting, follow-up and trend analysis.

Contact:

Nathaniel Amann-Blake	ADM	Mines Health, Safety & Enforcement Division	s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Standing Review of the Health, Safety and Reclamation Code

Revised: June 10, 2020

Issue: Update on the Standing Code Review Committee progress

Response:

- The Health, Safety and Reclamation Code for Mines in BC (Code) provides the detailed regulation for all aspects of mining in BC.
- With funding provided in Budget 2019 Minister Mungall appointed a Standing Code Review Committee (Committee) comprised of equal representation from labour unions, Indigenous Nations, and industry.
- A standing review of the Code ensures that the mining industry remains relevant and is able to address the changing needs of the industry, the environment, Indigenous Nations, and all British Columbians.
- The Committee had a successful first year and has developed eight recommended changes to the Code. These changes are being brought forward to the Minister with unanimous support.
- The Committee has set its priority topics for review in 2020, including establishing a sub-committee on Emerging Technology and Automation.
- Due to COVID-19 the Committee is meeting virtually.

Background/Status:

- To review the Code, the Minister appoints members to the Committee under section 34 of the *Mines Act.* The Chief Inspector of Mines (or delegate) chairs the Committee and is responsible for making recommendations for amendments to the Minister. The *Mines Act* is unique in setting a committee process to create and amend the Code.
- The last Code review was undertaken following the breach of the Mount Polley tailings storage facility and involved targeted changes to address the recommendations of the Mount Polley Independent Expert Engineering Panel as well as specific health and safety issues. This review was completed in 2017.
- Mine management, labour unions, and Indigenous Nations expressed a strong interest in continuing the review of the Code and the funding to establish an ongoing review of the Code was provided in Budget 2019.
- A standing review of the Code ensures that the mining industry remains relevant and is able to address the changing needs of the industry, the environment, Indigenous Nations and all British Columbians.
- Recruitment for membership to the Committee started in fall 2018 with letters sent out to interested parties inviting nominations. Thirty letters asking for

candidate submissions were sent to Indigenous Nations with mining within their traditional territories, along with a request sent directly to the First Nations Energy and Mining Council. Letters were also sent directly to labour unions involved in mining and industry associations such as the Mining Association of BC, the Association of Mineral Exploration and the BC Stone, Sand and Gravel Association.

- The Committee consists of four representatives each from labour unions, Indigenous Nations and industry for a total of 12 members.
- The Code Review Committee is recommending eight revisions that are being brought forward to the Minister for consideration.
- As the Code is technical in nature and broad in scope, the Committee relies on the advice and technical expertise provided by sub-committees and working groups. These sub-committees can be struck to address a specific focus once the priority topic review schedule has been determined by the Code Review Committee.
- The first of several sub-committees for ongoing technical work has been established on Emerging Technology and Automation. The first sub-committee meeting was held in January 2020.

	Code Review Committee Members
Labour	Rob Foskett, Union of Operating Engineers (previously Brett Chapman to March 2020)
	Steve Hunt, United Steelworkers Union
	Dean Lott, United Steelworkers Union
	Dave Williams, UniFor, Myra Falls
Indigenous Nations	Charlie Allison, Upper Similkameen Indian Band, Copper Mountain Mine
	Nalaine Morin, Tahltan First Nation, Arrowblade Consulting
	Kyle Penner, Tahltan First Nation, BCIT mining engineering student
	Jennifer Swarbrick, Red River Metis, Highland Valley Copper
Exploration	Rob Stevens, Association for Mineral Exploration
Sand and Gravel	Dani Miller, Mainland Construction
Major Mines	Eric Dell, Copper Mountain Mine (previously Richard Tremblay to Oct 2019)
	Don Sander, Elkview Coal Operations (previously Ian Anderson to Sept 2019)

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Contact:

Nathaniel Amann-Blake	ADM	Mines Health, Safety & Enforcement Division	s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Health and Safety of BC Mines

Revised: June 01, 2020

Issue: Government is committed to ensuring BC is a leader in mining health and safety regulation.

Response:

- Mining is one of the safest heavy industries in BC through the co-operative efforts of mine employees, mine management, unions and the regulator.
- Investments in Budget 2019 allowed the establishment of three specialized groups within the Health and Safety Branch and hiring of 8 additional inspectors across the province in 2019/20 for major mine health and safety oversight.
- Health and Safety Inspectors take a variety of actions to ensure safety on mine sites including inspections, compliance promotion, training, certifications, and support for Mines Rescue competitions to promote emergency readiness.
- The Ministry closely monitored the evolving COVID-19 situation and provided continuous guidance to the industry, labour and inspectorate, in line with the Orders from the Provincial Health Officer. The Chief Inspector of Mines worked closely with local health authorities in any cases of suspected COVID-19 related to mines.

Background/Status:

- British Columbia has a diverse mining industry, ranging from small-scale placer and gravel operations, to world-class surface mines, and underground metal and precious metal mines. Energy, Mines and Petroleum Resources (EMPR) Health and Safety Inspectors are involved in all aspects of the mining cycle; from the exploration phase, to operations, and final reclamation. This is to ensure the health and safety of workers, and compliance with the Health, Safety and Reclamation Code for Mines.
- The fatality rates at BC mines have remained relatively low over the past two decades, notably with zero fatalities in 2016, 2017 and 2019.

Year	Fatalities		Year	Fatalities		Year	Fatalities
1998	4		2006	5		2014	3
1999	1		2007	4		2015	1
2000	1		2008	2		2016	0
2001	0		2009	1		2017	0
2002	2		2010	0		2018	3
2003	1		2011	0		2019	0
2004	1		2012	1			
2005	2		2013	0			

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The injury statistics below includes placer and quarry operations, in addition to open pit coal, metal and underground operations. In 2018 (latest figures available from WorkSafeBC), major mines, quarries and sand and gravel operations experienced an estimated injury rate of approximately 1.3 injury claims per 100 person years worked. The injury rate at BC mines continued to compare favorably against the injury rates of other BC heavy industries.

Industry	Injury Rate		Industry	Injury Rate
Mining (Metal, Coal & Quarries)	1.3		Oil and Gas or Mineral Resources	1.3
Heavy Construction	3.1		Road Construction	2.8
Forestry	4.6		Wood and Paper	2.8
General Construction	4.1			

- EMPR achieves mine health and safety objectives through inspections, serious accident and fatality investigations, and mentoring and training programs. In 2019, 1,733 inspections were conducted across the province.

Year	Inspections		Year	Inspections		Year	Inspections
2005	511		2010	810		2015	1,203
2006	614		2011	494		2016	1,339
2007	723		2012	874		2017	1,308
2008	673		2013	904		2018	1,359
2009	797		2014	1,228		2019	1,733

Note: inspections do not include investigations, meetings, training or other mine site activities conducted by mine inspectors.

- In 2019 EMPR continued the development of Mines Inspector training programs to ensure industry competencies in new hires and continued development of existing staff.
- EMPR also sponsors the Mine Safety Awards, held annually for the past 58 years. The awards are handed out to mining operations that had zero fatalities and the lowest injury rates in their respective operation categories for the past year. The Chief Inspector of Mines (CIM) also honors individuals or small groups for outstanding achievements in health and safety including zero fatalities and the lowest injury rates. The CIM is currently working with industry associations to explore a new category recognizing "leading indicators" to encourage BC mines to be at the forefront of preventative safety practices.

Contact:

Nathaniel Amann-Blake ADM Mines Health, Safety & Enforcement Division s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Orphaned and Abandoned Mines

Revised: June 4, 2020

Issue: Ministry of Energy, Mines and Petroleum Resources (EMPR) has established the Orphaned and Abandoned Mine Program to address safety and environmental concerns at orphaned and abandoned mines.

Response:

- EMPR has established the Orphaned and Abandoned Mines Program (Program) to address public safety and environmental concerns at orphaned and abandoned mines in the Province.
- These mines are the result of past mining activities for which the owner cannot be found or is unable to carry out site rehabilitation.
- Many of these mines are older mines that predate reclamation legislation and may pose a risk to public safety and the environment.
- The Program is developing a systematic approach to assessing and mitigating the potential public hazards at these sites.
- In developing this Program, EMPR is working closely with the Crown Contaminated Sites Program (CCSP) under the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) to ensure effective and coordinated use of resources when dealing with contamination issues at historic mines.

Background/Status:

- Mining has been central to the provincial economy for well over 100 years as an important source of jobs, revenues, and regional development. While the regulation of the mining industry has evolved and improved over time, the long history of mining in the Province has resulted in a number of mine sites that have been abandoned without adequate closure procedures being completed.
- In 1969, reclamation legislation was enacted in BC that required mine owners to properly reclaim their properties and make their mines safe for closure.
- The Orphaned and Abandoned Mines Program is new to BC, while Ontario, Quebec, Saskatchewan, Manitoba, Yukon, Nova Scotia, and Newfoundland have established programs.
- EMPR staff have been involved in the National Orphaned and Abandoned Mines Initiative since its initiation in 2003 and have participated in developing a national inventory of abandoned mine sites and studying various issues in the implementation of remediation programs across Canada.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The Program is being developed with the aim of reducing the risk to public safety and will work closely with the CCSP in FLNRORD that focuses primarily on environmental clean-up to reduce the potential risks to human health from exposure of contaminants. The CCSP do not specifically assess or mitigate public safety issues related to mines.
- The Program is also responsible for the oversight and maintenance of tailings storage facilities where no responsible party has been identified. Compliance obligations under the Health, Safety and Reclamation Code (Code) require ongoing inspections and site maintenance to ensure these facilities are safe.
- The abandoned tailings facilities at the Lawyers, Red Mountain (Rossland), Northair, and Copeland mines are inspected annually by contract geotechnical engineers and are up to date with Code requirements. Essential maintenance work aimed at alleviating flooding concerns was completed in 2019 at the Lawyers mine.
- The Program also undertook a number of smaller remediation projects in 2019/20 including:
    - A historic adit located under a popular public road near Sandon, collapsed leaving the road impassable. The old adit was exposed, refilled and the road recontoured to improve safety.
    - Also, in the Sandon area, the Program supported the closing of an old adit which the public were entering. A specially designed bat gate was installed to allow for bats to use the adit but prevent the public from being able to access the adit.
- Funding for the program comes through various streams:
    1. confiscated security deposits (if applicable);
    2. liability account (which is funded from prior year operating funds); and
    3. current year Ministry operating funding (Voted Appropriation).

Contact:

Nathaniel Amann-Blake	ADM	Mines Health, Safety & Enforcement Division	s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Mine Audits and Effectiveness Unit

Revised: June 1, 2020

Issue: Compliance Audits and Effectiveness Monitoring

Response:

- The Mine Audits and Effectiveness Unit (Audit Unit) conducts audits to evaluate the effectiveness of the regulatory system in protecting workers, the public and the environment.
- Each audit will focus on a specific aspect of mining regulated by the Ministry of Energy, Mines and Petroleum Resources.
- The Audit Unit determines the effectiveness of regulation based on an assessment of industry performance and trends, Ministry policies and actions, and current regulatory requirements.
- Every audit will generate a public report outlining audit conclusions and recommendations for the Ministry to ensure mining regulation in B.C. remains effective and aligned with global best practice.
- The Audit Unit will release an annual audit plan outlining the audit topics it will prioritize each fiscal year. The Audit Unit currently has two audits underway:
    - requirements for tailings storage facilities introduced in the Health, Safety and Reclamation Code for Mines in B.C. in 2016; and
    - the regulatory framework for protecting workers in mobile equipment cabs at mines.

Background/Status:

- The Audit Unit was established in 2019 as a dedicated team in the Mines Health, Safety and Enforcement Division that is separate and independent from other regulatory functions for mining, including permitting, compliance and enforcement.
- Government is proposing amendments to the *Mines Act* to formalize the creation of the Audit Unit. Specifically, the amendments bring into law the position of Chief Auditor, who will lead the Audit Unit independently of the Ministry's other regulatory functions.
- In developing its policies, procedures, and organizational structure, the Audit Unit has worked closely with staff from the Office of the Auditor General and other audit professionals to ensure the Audit Unit is able to maintain its independence and align with audit best practice.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The mandate of the Audit Unit is to conduct audits to determine the effectiveness of the regulatory system for mining in B.C. in protecting the public, workers and the environment.
- While visiting mines during an audit, auditors will also have the authority to issue orders to address immediate, serious threats to persons, property or the environment. This sets the Audit Unit apart from other auditing functions (e.g., Forest Practices Board) and provides additional "boots on the ground" oversight to ensure mining safety.
- Each audit currently focuses on a specific area of mining that is regulated by the Ministry (e.g., tailings storage facilities). Each audit assesses the effectiveness of mining regulation in this area based on an assessment of mining sector compliance, safety and environmental performance; Ministry policies, programs practices and actions; and current regulatory requirements.
- Every audit will generate a public report outlining audit conclusions and recommendations for the Ministry to ensure mining regulation remains effective and aligned with global best practice.
- The Ministry will also provide the Audit Unit with an action plan and regular progress updates indicating how they will address the recommendations.
- The Audit Unit will publish an annual Audit Plan outlining the audit topics it will prioritize each fiscal year. The Audit Plan will be informed by industry trends, past audit findings and suggestions from stakeholders and Indigenous partners.
- The Audit Unit is currently conducting two audits, as released in the Audit Plan for 2019/2020:
    - requirements for tailings storage facilities introduced in the Health, Safety and Reclamation Code for Mines in B.C. in 2016; and
    - the regulatory framework for protecting workers in mobile equipment operator cabs at mines.
- The Audit Unit has started the annual planning process for 2020/2021, with the intention of releasing its next Annual Plan in fall 2020.
- To date, the Ministry has hired ten staff for the Audit Unit, including a director, auditors from different mining-related disciplines and policy support staff.

Contact:

Nathaniel Amann-Blake	ADM	Mines Health, Safety & Enforcement Division	s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Mines Investigations

Revised: June 8, 2020

Issue: Overview activities of the Ministry of Energy, Mines and Petroleum Resources (EMPR) Mines Investigation Unit

Response:

- Formed in 2017, the Mines Investigation Unit (MIU) is a small team of specialized investigative professionals in the Mines Health, Safety and Enforcement Division.
- The MIU undertakes investigations into serious incidents and alleged breaches of the *Mines Act*, Health, Safety and Reclamation Code and permit conditions.
- Three of the cases investigated by the MIU have resulted in prosecutions under the Mines Act. Each of these cases resulted in a conviction.

Background/Status:

- Following recommendations from the Chief Inspector of Mines Mount Polley Investigation Report and Office of the Auditor General, the Mines Investigation unit (MIU) was formed in 2017 as a team of seven specialized investigative professionals led by a Sr Director of Investigations.
- The MIU undertakes investigations pursuant to Section 7 of the *Mines Act* on behalf of the Chief Inspector or Mines as well as other investigations in relation to non-compliances with the *Mines Act*, Health Safety and Reclamation Code and permit conditions.
- In fatality and serious injury cases the MIU is the point of operational liaison with police, other enforcement groups and with Crown Counsel.
- The purpose of MIU investigations is always to determine: what happened; why an incident happened; and, how other incidents can be prevented.
- The results of investigations may be presented to:
    - the Chief Inspector of Mines with recommendations for prevention of similar incidents;
    - a delegate of the Chief Inspector for consideration for Administrative Monetary Penalty; and
    - the Crown Counsel for consideration of *Mines Act* charges.

- The MIU also provides assistance to mines inspectors as required and provides training to all EMPR staff on compliance and enforcement skill sets.
- Recommendations from MIU have resulted in issuance of three administrative monetary penalties totaling $40,075. A number of other recommendations are in process at this time.
- Since inception MIU have referred five cases to provincial Crown Counsel. Each case met the standard for charge approval.
- Four cases have proceeded through the court system while one was discontinued due to the death of the accused.
    - On March 06, 2019 the court decided the evidence did not support the conviction of a mine manager accused of obstructing an inspector and acquitted the accused. This was in relation to the Banks Island Gold Mine.
    - On March 13, 2019 the court awarded a $20,000 fine and requirement for a $50,000 donation for *Mines Act* charges in relation to the 2014 double fatality at the Swansea Quarry, outside Cranbrook. This represented the first successful prosecution under the *Mines Act* in over two decades.
    - On September 6, 2019 the court awarded a fine of $20 000 (and considered the donation of $50 000 to the deceased's family) for *Mines Act* charges in relation to a 2015 fatality that occurred at the Polar Jade Mine which is located east of Dease Lake.
    - On March 13, 2019 the court awarded a fine of $7,500 in relation to a 2016 injury sustained by an underage worker at the Big Nugget mine site located northeast of Hixon.
- Administrative penalty decisions and summaries of court decisions are made public on the B.C. Mine Information website.
- The Covid19 Pandemic had a very limited impact upon the MIU operations. Witness interviews and other investigative work have been successfully conducted telephonically or by video conferencing and productivity was not adversely impacted.

Contact:

Nathaniel Amann-Blake	ADM	Mines Health, Safety & Enforcement Division	s.17

Page 240 of 479

Withheld pursuant to/removed as

s.14; s.17; s.13

Page 241 of 479

Withheld pursuant to/removed as

s.14; s.13; s.17

Page 242 of 479

Withheld pursuant to/removed as

s.13; s.14

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Petroleum and Natural Gas Tenure and Disposition

Revised: June 15, 2020

Issue: Petroleum and Natural Gas issuance and management of Crown-owned sub-surface resources

Response:

- Government owns most of the petroleum and natural gas (PNG) resources in British Columbia and grants rights to use these resources through issuance of PNG tenure under the *Petroleum and Natural Gas Act* (PNG Act).
- There are two types of PNG tenure that are routinely issued by the Ministry of Energy, Mines and Petroleum Resources (Ministry). They are leases and drilling licences.
- PNG tenure is acquired by industry through Crown dispositions, which are monthly scheduled competitive sealed-bid public tender auctions.
- All requests for posting of tenure at Crown dispositions are subject to a pre-tenure review that may result in some tenure not being put forward, being reconfigured, or deferred for possible disposition at another time.
- The Ministry has the right to reject any and all bids received.
- The Ministry is responsible for the ongoing management of active tenures, including annual rent collection, lease selection from drilling licences, applications for term extensions, and management of a geological zone designation system.

Background/Status:

- A PNG tenure grants rights to Crown-owned subsurface resources under certain terms.
- The Ministry is responsible for issuing and managing PNG tenures on behalf of the Province, ensuring that Crown-owned PNG resources are managed sustainably for the benefit of all British Columbians.
- Once tenure has been issued, the tenure holder does not have immediate authority to conduct any activities on the land (e.g., well drilling). Instead, the tenure holder has the exclusive right to the subsurface resource and the right to apply to the BC Oil and Gas Commission (Commission) for well-drilling permits and other surface activities related to the exploration and development of PNG resources.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Types of Tenure

- There are two types of tenure that are routinely issued by the Ministry under the PNG Act.
- 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:
    - **Leases** provide the exclusive right to produce PNG and a right to dispose or store natural gas, water and other substances associated with oil and gas activities. They are acquired by the successful bidder at a Crown disposition or selected from drilling licences. Lease terms are five or ten years depending on geographic location.
    - **Drilling licences** provide the exclusive right to explore for PNG by drilling wells. They are acquired by the successful bidder at a Crown disposition. Drilling licence terms are three, four or five years depending on the tenure location.
- Occasionally, PNG tenure is issued by the Minister under special terms and for the price approved by the Lieutenant Governor in Council (LGIC).
- This process is used for unique situations where different tenure terms are needed or where a competitive public tender process is not appropriate.
- s.16; s.21

Tenure by the Numbers

- As of June 2020, there are 12,066 active leases and 272 active drilling licences, covering approximately 6.5 million hectares.
- British Columbia's natural gas production occurs from the Western Canada Sedimentary Basin that underlies the northeastern part of the Province. Natural gas, not oil, is British Columbia's predominant form of hydrocarbon resource.

Attachments: Appendix 1 – PNG tenure disposition and management processes

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

Appendix 1

PNG tenure disposition and management processes

Tenure Disposition Process

- **Posting request/pre-referral review:** An oil and gas company sends the Ministry a legal description of a tenure they would like posted in an upcoming Crown disposition. The Ministry runs a comprehensive initial check to determine:
  - if there is pre-existing tenure in the posting requested;
  - if the posting has already been requested;
  - if there are known issues with the surface lands that would prevent or limit surface access to the tenure, e.g., provincial parks; or
  - if there is overlap with lands that have existing First Nations issues, such as treaty land entitlement claims.

  If a posting request passes this review, it proceeds to the next step in the disposition process.

- **Pre-tenure referral:** Before posting a tenure for disposition, the Ministry consults with First Nations, local governments and other provincial ministries to identify any concerns that these groups may have with the proposed disposition.

- **Finalization and assessment:** Once the pre-tenure referral process has been concluded, the Ministry analyzes the comments it has received on the requested tenure and decides whether:
  - to post the tenure for disposition;
  - to post the tenure for disposition with caveats affixed to the tenure to address concerns raised by First Nations and other governments;
  - to defer disposition of the tenure until further consultations have taken place; or
  - not to offer the tenure for disposition.

  Once the tenure has been selected to be offered for sale, the Ministry will:
  - publish (electronically) a notice describing the tenure to support the upcoming monthly sale; and
  - conduct an assessment on each tenure included in the upcoming monthly sale to estimate the potential revenue expected from the sale to inform the disposition adjudication.

- **Monthly rights disposition:** Once per month, the Ministry conducts a disposition of PNG tenure. Sealed bids are received by the Ministry up until noon on the day of the disposition. The bids are reviewed to determine the successful bid for each tenure requested. The Ministry may choose not to dispose of a tenure if the bids received for a tenure are not consistent with current or historic bidding trends or do not represent good value to the Province given the geological potential of the tenure.

  Accepted bids are deposited into the Province's Consolidated Revenue Fund on the day of the disposition (see note on deferred revenue for additional information on treatment of bonus bid revenues).

- **Tenure issuance:** On the day following the monthly disposition, the successful bidder for each tenure is issued a tenure for the PNG rights in the location described in the public disposition notice.

Tenure Management Process

- **Annual rent collection:** The Province charges a per-hectare annual rent for tenures. The Ministry manages collection of this rent (along with cancellation of tenure in cases of non-payment).
- **Tenure management:** Tenure holders routinely buy, sell or trade tenure amongst themselves. The Ministry keeps up-to-date records of which company holds which tenures. These records are publicly available. Tenure holders often borrow money to finance their operations using their PNG tenures as collateral. On request, the Ministry may record certain types of financial instruments as an encumbrance against a PNG tenure – improving liquidity for tenure holders and providing some security for creditors.
- **Lease selection from drilling licences:** To gain the right to produce from a drilling licence, drilling licence holders must drill earning wells, which provide credits that can be used to select leases. Production is not allowed from drilling licences. The Ministry assesses lease selection applications made by tenure holders to:
  - ensure that the wells drilled qualify as earning wells;
  - verify the lease-validation credits earned by the wells; and
  - track which rights are transferred to the new lease and which remain with the drilling licence.
- **Applications for term extensions:** A variety of term-extension opportunities exist for tenure holders. The Ministry receives applications for term extensions from tenure holders. Some extensions of tenure term are available automatically with the payment of a higher level of rent at the end of the tenure's term. Some applications require the Ministry to verify the tenure holder's eligibility for an automatic extension (e.g., to complete drilling a well over the expiry of a tenure), while others are at the discretion of the Ministry (e.g., extension of a tenure where activities have been delayed due to a recognized planning process).
- **Lease continuation applications:** In order to administer PNG tenure, the province is divided into a rectangular geographic grid of "spacing areas", each of which is approximately 259 hectares or one square mile, more or less, for natural gas tenure administration and smaller for petroleum tenure administration. At the end of the term of a lease, the tenure holder may apply to have eligible spacing areas continued. The Ministry reviews lease continuation applications to determine whether the tenure holder has met the requirements set out under the PNG Act to have their lease continued past its primary term. The review can include analysis and interpretation of geological information provided by the tenure holder and other information held by the Ministry.

In some cases, a lease continuation application is not successful. When this happens, a company will often seek to negotiate a program of work with the Ministry which would result in a subsequent lease continuation.

- **Management of the Crown Reserve:** The Ministry is responsible for the management of the Crown's PNG resources. This includes the designation of geological zones and surface spacing areas that form the spatial basis for management of PNG tenures. It also includes tracking which rights are currently available for tenure and managing the return of tenured rights to the Crown. This can happen at the expiry or cancellation of tenure, at the point of conversion from a drilling licence to a lease, or with the application of zone-specific retention at the end of a lease's primary term.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Petroleum and Natural Gas Tenure Revenue

Revised: June 12, 2020

Issue: Petroleum and Natural Gas subsurface tenuring revenue update and forecast.

Response:

- The Ministry of Energy, Mines and Petroleum Resources (Ministry) manages subsurface petroleum and natural gas (PNG) tenures and the associated revenue.
- PNG tenure is issued at the request of industry through a monthly disposition, where the Ministry receives sealed bids and awards tenures based on the highest acceptable bids.
- In order to achieve the highest acceptable bid, industry clients offer a "bonus bid", over and above the expected annual fees and rentals.
- Bonus bids, annual fees and rentals are accounted for in the public accounts, using a deferred method, i.e., deferred revenue of previous years is brought forward.
- The current deferral period for the bonus bids is ten years which is meant to represent the average lifespan of a tenure.

Background/Status:

On an annual basis, the Ministry publishes the amount of area sold, total bonus bids received and average price on a per hectare basis (Appendix 1, Table 1).

- The total bonus bids (actual) received in 2019/20 was $12.78 million (Appendix 1, Table 1).
- Most First Nations and local government offices have been closed or functioning at minimal capacity during the COVID-19 pandemic, which limits the Ministry's ability to meaningfully engage and consult on PNG tenure dispositions. As a result, in February 2020, the Ministry put a pause on disposing PNG tenure; no bonus bid revenue has been generated yet for 2020/21.
- Recognition of subsurface revenue, using deferral accounting, allows for better financial planning and streamlines the Public Accounts by spreading revenue across several years to avoid spikes in the revenue stream (Appendix 1, Table 2).
- A comprehensive analysis is done at the end of every fiscal year to justify the bonus bid deferral period. This analysis is reviewed by both the Auditor Generals' Office (OAG) and the Office of the Comptroller General (OCG).

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Discussions occur between the OAG and the OCG each year to determine if the deferral period should change. The deferral period was changed from nine years to ten years effective 2018/19.
- The Public Accounts reports Provincial sale bonus bid revenue on an actual, deferred and forecasted basis.
- Although the actual revenues from bonus bids received in fiscal 2019/20 was $12.78 million, on a deferred basis it was approximately $175 million (Appendix 1, Table 2). Fees and rentals received in fiscal 2019/20 totalled approximately $48 million (Appendix 1, Table 2).
- Bonus bids, fees and rentals payments are expected to decline over the next five years (Appendix 1, Table 2).

Attachments: Appendix 1

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

Appendix 1

Table 1: Bonus bid revenue for each fiscal year from 1999-2000 to 2020-2021.

Fiscal Year	Total Area Sold (ha)	Total Bonus Bid ($)	Average Price ($/ha)
1999-2000	809,775	$206,928,360.11	$255.54
2000-2001	907,335	$418,006,044.29	$460.70
2001-2002	686,413	$312,170,642.18	$454.79
2002-2003	828,144	$279,945,821.89	$338.04
2003-2004	705,519	$625,662,664.63	$886.81
2004-2005	552,151	$280,184,531.50	$507.44
2005-2006	605,984	$555,643,094.49	$916.93
2006-2007	616,740	$607,070,149.31	$984.32
2007-2008	655,897	$1,222,303,262.97	$1,863.56
2008-2009	653,509	$2,424,577,402.13	$3,710.09
2009-2010	379,077	$896,436,856.41	$2,364.79
2010-2011	376,431	$817,954,200.86	$2,172.92
2011-2012	216,768	$286,611,897.52	$1,322.21
2012-2013	104,281	$115,240,077.25	$1,105.09
2013-2014	118,588	$220,535,910.71	$1,859.68
2014-2015	131,597	$334,804,215.11	$2,544.16
2015-2016	58,735	$15,930,804.57	$271.23
2016-2017	112,107	$61,229,320.02	$546.17
2017-2018	103,292	$140,930,898.56	$1,364.39
2018-2019	25,786	$50,331,994.69	$1,951.91
2019-2020	20,330	$12,779,852	$628.62
2020-2021 (as of 08/06/2020)	0	$0	$0
5 yr. avg.	75,308	$102,667,847.33	$1,217.75
10 yr. avg.	149,727	$268,435,093.34	$1,466.47
15 yr. avg.	295,705	$502,660,279.20	$1,507.09
20 yr. avg.	412,784	$470,727,523.82	$1,262.35

Table 2: Ministry Five Year Revenue Forecast 2020/21 – 2025/26 (values in millions)

	Actual	**Current Forecast**					
Year	19/20	20/21	21/22	22/23	23/24	24/25	25/26
Bonus Bid (cash)	13	0	7	7	6	6	4
Bonus Bid (deferred)	175	115	92	82	62	31	29
Fees and Rentals (deferred)	48	50	50	49	49	49	49

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: First Nations Engagement and Consultation

Revised: June 16, 2020

Issue: The Status of First Nations engagement and consultation pertaining to the disposition of petroleum and natural gas tenure.

Response:

- The Ministry of Energy, Mines and Petroleum Resources (Ministry) engages and consults with Treaty 8 and non-treaty First Nations regarding the disposition of petroleum and natural gas (PNG) tenure.
- Consultation follows the process set out in Consultation Process Agreements (CPAs) with First Nations and guidance provided by the Ministry of Indigenous Relations and Reconciliation.
- The CPAs can come in the form of Oil and Gas Consultation Agreements (OGCAs), Strategic Engagement Agreements and Long-Term Oil and Gas Agreements (LTOGAs).

Background/Status:

- The Ministry has a legal obligation to consult with First Nations regarding statutory decisions to dispose PNG tenure.
- The legal obligations to consult are structured under a process and often captured under CPAs.
- CPAs have been in place with Treaty 8 First Nations since 1998 with re-negotiations occurring as CPAs expire.
- CPAs provide certainty to the Ministry, the Oil and Gas Commission (Commission), First Nations and proponents regarding process, timelines, level of consultation (e.g., simple vs complex) and capacity funding, including defining an area where consultation is triggered.
- The Ministry has OGCAs with McLeod Lake Indian Band (2012), Halfway River First Nation (2013) and Saulteau First Nations (2016), and a joint LTOGA with West Moberly First Nations and Prophet River First Nation (2010).
- There are presently no agreements with Blueberry River First Nations, Fort Nelson First Nation and Doig River First Nation.s.16
  s.16
-

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- In the absence of a formal CPA, the Ministry will use existing CPAs as guidance, including procedures and guidance provided by the Ministry of Indigenous Relations and Reconciliation to support the Ministry's legal obligations to consult First Nations.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Caribou Recovery Planning

Revised: March 16, 2020

Issue: The Ministry of Energy, Mines and Petroleum Resources participation in caribou recovery planning initiatives.

Response:

- The Ministry of Energy, Mines and Petroleum Resources (Ministry) provides technical and policy advice that is intended to support lead agencies in their efforts to recover caribou populations.
- The Ministry may also act to support caribou recovery initiatives by designating areas or establishing regulations and policies that minimize and/or avoid impacts to caribou and their habitat from petroleum and natural gas (PNG) activities.
- The Ministry of Environment and Climate Change Strategy (ENV) and Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNR) lead the management and recovery of caribou populations.
- In February 2020, the Province, the federal Ministry of Environment and Climate Change Canada (ECCC), West Moberly First Nations and Saulteau First Nations signed an Inter-Governmental Partnership Agreement ("Partnership Agreement") for the conservation of central mountain caribou herds.
- The Ministry participated in the development of the Partnership Agreement.

Background/Status:

General

- The Ministry has supported ENV and FLNR in their efforts to recover caribou. For example, the Ministry has established approximately 2 million hectares of caribou habitat in British Columbia as a resource review area (RRA).
- An RRA is a policy land designation tool used by the Ministry to inform industry that the Ministry will not accept industry requests to dispose PNG tenure.
- By not disposing PNG tenure within RRAs, the Ministry can minimize and avoid potential impacts to caribou habitat.
- RRA's have been put in place to support the management and recovery of boreal caribou and central mountain caribou, which both occur in the Peace region of northeast British Columbia (BC).
- In BC, there are four extant populations of caribou: boreal caribou, northern mountain caribou, central mountain caribou and southern mountain caribou.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Partnership Agreement

- The Partnership Agreement is focused on the recovery of central mountain caribou population.
- Within the Partnership Agreement area, temporary and longer-term protection zones have been identified to support recovery efforts of the central mountain caribou population.
- The Partnership Agreement has been structured to allow existing and potentially new oil and gas activities (e.g. Coastal GasLink pipeline), as well as mining interests to continue.
- Under the Partnership Agreement, the Ministry will not dispose PNG tenure over approximately 700,000 hectares of identified caribou habitat.
- The amount of existing PNG tenure within the area under the Partnership Agreement is relatively low.
- The PNG resources identified under the Partnership Agreement area is mostly comprised of dry gas, which is currently not economic to develop.
- The Ministry doesn't expect any PNG tenure development to occur in this area for many years given more economic opportunities elsewhere in the Peace region, e.g., Montney Shale Gas Basin.
- Addressing social and economic drivers and reconciling with First Nations with the protection and recovery of caribou within BC remains a key focus of the Province.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Treaty Land Entitlement

Revised: June 17, 2020

Issue: The status of the Treaty Land Entitlement claims and the affects on tenuring in British Columbia.

Response:

- The Province and five Treaty 8 First Nations are negotiating final settlement of Treaty Land Entitlement (TLE) claims in northeast BC.
- TLE claims are expected to impact some petroleum and natural gas (PNG) companies that have existing PNG tenure.
- s.16; s.17

- The Ministry of Indigenous Relationships and Reconciliation (IRR) is the lead agency negotiating TLE claims and has been engaging natural resource agencies to discuss specific encumbrances and possible solutions.
- The Ministry of Energy, Mines and Petroleum Resources (Ministry) and IRR continue to engage with Indian Oil and Gas Canada to ensure there is an efficient and predictable process in place to manage existing and future PNG tenures following TLE claim settlement and transfer for federal reserve establishment.

Background/Status:

Current State

- TLE claims are being brought forward against Canada and the Province to settle a historical land debt.
- Five First Nations have unresolved TLE claims in northeast BC. They are:
    - Doig River First Nation;
    - Blueberry River First Nations;
    - West Moberly First Nations;
    - Halfway River First Nation; and
    - Saulteau First Nations.

s.13; s.14; s.16; s.17

-

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Negotiations are ongoing, and in various stages of advancement with joint claims for Halfway River-West Moberly and Doig River-Blueberry River farthest advance.
- Saulteau First Nations are at an earlier stage in negotiations and stakeholder engagement.

TLE Lands

- s.16

  s.16 with the expectation that the Province provides the shortfall land to support its transfer to Canada for federal reserve establishment.
- The Province is also providing additional lands as a reconciliation measure that will be made available for purchase by the First Nations, at fair market value.
- TLE claims for the five First Nations are comprised of approximately 8,000 hectares of shortfall lands and approximately 36,000 hectares of additional lands.
- Shortfall lands will include the transfer of Provincial jurisdiction over both surface and subsurface lands to Canada for federal reserve establishment.
- The additional lands will include the purchase and transfer of Provincial jurisdiction over surface lands only, either as fee simple (private) or on a case by case basis under Canada's addition to reserve policies.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Regional Strategic Environmental Assessment

Revised: March 16, 2020

Issue: Ministry participation in the design and implementation of a Regional Strategic Environmental Assessment in northeast BC

Response:

- The Ministry of Energy, Mines and Petroleum Resources (Ministry) is participating in the design and implementation of a Regional Strategic Environmental Assessment (RSEA) in northeast British Columbia (BC).
- The goal of RSEA is to assess the cumulative effects of natural resource development activities on values associated with the practice of Treaty rights that have been jointly identified by the Province and participating Treaty 8 First Nations.
- RSEA is one of four demonstration projects under the Province's Environmental Stewardship Initiative (ESI).

Background/Status:

RSEA

- The Ministry is co-leading the design and implementation of RSEA with the Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNR).
- Seven Treaty 8 First Nations are collaborating with the Province on RSEA. The First Nations are: West Moberly First Nations, Saulteau First Nations, Halfway River First Nation, Doig River First Nation, Prophet River First Nation, Blueberry River First Nations and McLeod Lake Indian Band. Other provincial natural resource agencies are also participating, including the BC Oil and Gas Commission.
- The oil and gas and forestry sectors are participating, but only as observers, as RSEA is a government to government forum.
- The goal of RSEA is to assess the cumulative effects of natural resource development activities on environmental, social, economic and cultural values, that are associated with the practice of Treaty rights and have been jointly identified by the Province and participating Treaty 8 First Nations.
- RSEA is also responsible for making management recommendations to government based on the outcomes of the RSEA process.
- The outcomes of the RSEA process are expected to inform the Provincial Cumulative Effects Framework, modernized land use planning, caribou recovery and other strategic land use initiatives currently being implemented in northeast BC.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- RSEA is in its last phase of implementation and is expected to be completed by spring 2021.
- Overall First Nations are pleased with the RSEA process but have raised some concerns that there is not enough funding to complete all the work.
- Staff co-leading RSEA are working internally to manage within RSEA's allocated budget and looking for other sources of funding if required.

ESI

- In 2014/15, the Province announced the ESI as a new form of collaboration among the Province, First Nations and industry.
- The goals of the ESI are to develop a new, collaborative approach to establishing environmental legacies and to generate high quality, accessible and trusted environmental information. The scope of the ESI includes four key areas:
  - ecosystem assessment and monitoring;
  - ecosystem restoration and enhancement;
  - ecosystem research and knowledge exchange; and
  - stewardship education and training.
- The Province committed $30 million to support ESI implementation across four regions or demonstration projects in BC. The four demonstration projects are in the following regions of BC:
  - North Coast;
  - Skeena;
  - Northeast; and
  - Omineca.
- s.16; s.17
- In 2018, ESI was amended to continue for an additional three years with an expected completion date by spring 2021.
- First Nations are supportive of ESI and recognise it as a new form of collaborating with the Province on potential decisions supporting natural resource development.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Farmers' Information Service

Revised: June 15, 2020

Issue: The Farmers' Information Service; a new program replacing the prior Farmers' Advocacy Office.

Response:

- In February 2020, the Ministry of Energy, Mines and Petroleum Resources (Ministry), Ministry of Agriculture (AGRI) and the Peace River Regional District (PRRD) signed a Memorandum of Understanding (MOU) to establish and implement the Farmers' Information Service (FIS) in northeast BC.
- The FIS is a new program, building on the learnings from the previous services provided by the Farmers' Advocacy Office (FAO).
- The FIS is designed to better assist farmers and other landowners in their understanding of petroleum and natural gas (PNG) development on their lands to reduce conflicts and maximize benefits of both parties.
- The FIS is expected to be up and running in mid to late summer 2020.

Background/Status:

FIS

- The purpose of the FIS is to assist farmers and other landowners in their understanding of PNG development through problem identification, education, information sharing, and communicating to government and government agencies.
- The delivery of the FIS will be implemented by an independent contractor overseen by a FIS management committee that has representation from the Ministry, AGRI and PRRD.
- The FIS will:
    - Gather and disseminate information relevant to a landowner's negotiation of surface access agreements with resource companies, including information about legal obligations, the regulatory framework, and other implications of oil and gas development on the landowner's land.
    - Gather and disseminate land valuation information from existing surface lease and other access agreements for landowners to review for comparison purposes.
    - Work to ensure residents have a full understanding of relevant information and promote proactive pre-planning by residents to allow them to optimize their economic opportunities.

  - Provide an effective, independent, "gateway" to existing regulatory, legislated and other services that address the concerns of rural landowners about PNG developments.
- The FIS will also identify other services that are available to address the concerns of rural landowners with PNG development, including mediation services offered through the BC Oil and Gas Commission (Commission), other mediation services, and the Surface Rights Board.
- s.16; s.17

FAO

- In 2009, the Ministry, AGRI and the PRRD initiated a pilot project to provide landowners with information to help them understand surface leases and rights of way with the intention of improving the relationship between rural residents and the PNG sector.
- In 2010, the FAO was opened in Dawson Creek under the pilot project and subsequently reviewed in 2012.
- In 2012, it was determined that the FAO would continue under a MOU with the Ministry and PRRD for an additional five years.
- The Ministry and PRRD funded the management and implementation of the FAO under a cost sharing agreement s.16; s.17
  s.16; s.17
- The MOU and cost sharing arrangement terminated in June 2018 and the Ministry and AGRI requested an independent audit of the FAO before deciding to provide additional funding under a new MOU.
- Between June 2018 and March 31, 2019, the PRRD funded the FAO while the audit was conducted.
- After March 31, 2019, the Ministry and AGRI funded the FAO for an additional three months to allow time to review the outcomes of the independent audit and decide on whether a new FAO-like service model was beneficial in northeast BC.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- In July 2019, the FAO closed, and the Ministry, AGRI and PRRD agreed shortly thereafter to design, fund and implement a new service model known as the FIS.
- Currently, the Ministry, AGRI and PRRD are assessing qualified vendors to support the management and implementation of the FIS.
- The FIS will report to a Management Committee established by the Ministry, AGRI and PRRD. The Management Committee will provide oversight of the FIS once it is up and running mid to later summer 2020.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Agricultural Land Reserve and Agricultural Land Commission

Revised: June 15, 2020

Issue: **Managing the imbalance of oil and gas development and agriculture in British Columbia's Agricultural Land Reserve through the development of a Deputy Minister level task force.**

Response:

- The Ministry of Energy, Mines and Petroleum Resources (Ministry) is acting to address the imbalance between oil and gas development and agriculture in British Columbia's (BC) Agricultural Land Reserve (ALR) in northeast BC.
- This action includes the formation of a Deputy Minister-level Task Force that is charged with developing a northeast ALR Strategy and establishing an increased Agricultural Land Commission (ALC) presence to support farmers and ranchers in BC's northeast ALR.
- The Ministry has a long history of working with the Ministry of Agriculture (AGRI) and local governments in providing services that are focused on educating farmers about oil and gas development on their lands.

Background/Status:

- In northeast BC, it is believed that there is an imbalance between the amount of oil and gas development and agriculture use within the ALR.
- In January 2018, AGRI tasked an Independent Advisory Committee (Advisory Committee) to revitalize the ALR and the ALC by leading a province-wide engagement process and providing strategic advice through recommendations for consideration by Government.
- The Advisory Committee travelled to nine communities, met with local governments and more than 170 agriculture stakeholders, and received opinions by survey from over 2300 British Columbians, all of which informed a final report that included 33 recommendations and actions.
- In December 2019, the Advisory Committee submitted a final report with the recommendations for the Minister of AGRI's consideration, including Recommendation 25, which is specific to the interaction of oil and gas development and agricultural land use in northeast BC.
- Recommendation 25 states: Immediately work to address the imbalance between oil and gas development and agriculture in BC's northeast ALR:
    - Form a Deputy Minister-level, multi-agency, multi-jurisdictional Task Force to develop a northeast ALR Strategy; and,

  - Establish an increased ALC presence to support farmers and ranchers in BC's northeast ALR.
- In February 2020, a Deputy Minister Task Force was established (see the attached Terms of Reference) to consider Recommendation 25. The Task Force is comprised of:
  - Deputy Minister of AGRI;
  - Deputy Minister of the Ministry;
  - Chief Executive Officer, ALC; and
  - Commissioner and Chief Executive Officer, BC Oil and Gas Commission.
- To consider Recommendation 25, the Task Force will first develop a comprehensive and factual public facing report that will provide:
  - the history and current context in northeast BC with respect to oil and gas and agricultural land use; and
  - an examination of the existing policy and regulatory frameworks for both sectors.
- If appropriate, the Task Force will develop recommendations and initiate actions where necessary in providing Government's response to the Advisory Committee's final report and Recommendation 25.
- The Task Force's work is expected to be completed by mid to late summer 2020.
- The Terms of Reference, including additional information, has been posted to AGRI's website.

Agricultural Land Reserve

- The ALR is a provincial designation in which agriculture is recognized as the priority use. Farming is encouraged and non-agricultural uses are restricted. The ALR protects approximately 4.6 million hectares of agriculturally suitable land across BC.
- The ALC is an independent administrative tribunal dedicated to preserving agricultural land and encouraging farming in BC. The purposes of the ALC are set out in Section 6 of the *Agricultural Land Commission Act*.

Supporting Farmers

- Between 2012 - 2018, the Ministry and the Peace River Regional District (PRRD) cost-shared the establishment and implementation of the Farmer's Advocacy Office (FAO).
- The purpose of the FAO was to provide services to farmers that were aimed at providing a better understanding of oil and gas development on their lands.
- In February 2020, the Ministry, AGRI and the PRRD signed a memorandum of understanding to establish and implement the Farmer's Information Service (FIS).
- The FIS is a new program that builds on the learnings from the previous services

provided by the FAO; it is expected to improve the services for farmers and the understanding of oil and gas development on their lands.

- The FIS is expected to be up and running by mid to late summer 2020.

Attachments: Appendix 1 – Terms of Reference: Deputy Minister Task Force – Agriculture and Oil & Gas in Northeast British Columbia

Cross Reference: Estimates Note entitled 'Farmers' Information Service'

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

Terms of Reference
Deputy Minister Task Force
Agriculture and Oil & Gas in Northeast British Columbia

Preamble: In January 2018, the Minister of Agriculture tasked an Independent Revitalization Committee to revitalize the Agricultural Land Reserve (ALR) and the Agricultural Land Commission (ALC) by leading a province-wide engagement process and providing strategic advice through recommendations for consideration by Government. The Revitalization Committee submitted final recommendations for the Minister's consideration including Recommendation 25[1] specific to the interaction of oil and gas development and agricultural land use in Northeast BC (NEBC). From the Revitalization Committee's report:

Immediately work to address the imbalance between oil and gas development and agriculture in BC's Northeast ALR:

1. *Form a Deputy Minister-level, multi-agency, multi-jurisdictional Task Force to develop a Northeast ALR Strategy; and,*
2. *Establish an increased ALC presence to support farmers and ranchers in BC's Northeast ALR.*

Committee: A Deputy Minister/Commissioner level Task Force (Task Force) is established to consider Recommendation 25 from the Revitalization Report. The DM Task Force is comprised of:

- Deputy Minister of Agriculture;
- Deputy Minister of Energy, Mines and Petroleum Resources;
- Chief Executive Officer, Agricultural Land Commission; and
- Commissioner and Chief Executive Officer, BC Oil and Gas Commission.

Accountability: The Task Force will examine the findings and recommendations from the Revitalization Report and, where and if appropriate, develop recommendations and initiate actions as may be necessary in providing Government's response to the Report.

The Task Force will begin its work by developing a comprehensive and factual public facing report which will provide:

- the history and current context in NEBC with respect to oil and gas and agricultural land use; and
- an examination of the existing policy and regulatory frameworks for both sectors.

The report will guide additional work as identified by the Task Force including:

- Determination of any regulatory or legislative enhancements which may be warranted;

[1] See Appendix 1 for the full recommendation

- Consideration of all available information the Task Force deems appropriate including information from the recent Farmington Landowners Group trials and the Peace River Regional District, local Farmers/Ranchers; and
- Consultation as appropriate and/or as required with Indigenous Communities, landowners, local governments, industry and others.

Support: To support the work of the Task Force, an Executive Committee is formed comprised of:

- Assistant Deputy Minister, Ministry of Agriculture
- Assistant Deputy Minister, Oil and Gas Division, Ministry of Energy, Mines and Petroleum Resources
- Director, Agricultural Land Commission; and
- Executive Vice President/Chief Operating Officer, BC Oil and Gas Commission.

Roles: The Task Force will:

- Adopt these Terms of Reference;
- Meet as required to provide direction on analysis, reporting and other work to be done by the Executive Committee;
- Provide the appropriate linkage between Ministries and Cabinet/ELUC;
- Manage any concerns or disputes arising from the work; and
- Ensure the work of the Member Ministries and Commissions is aligned and coordinated.

The Executive Committee will:

- Review the recommendations and actions as outlined in the Revitalization Committee final report related to oil and gas and agriculture interactions and provide the outcome of the review and any further considerations to the Task Force, including:
    - Developing a public facing comprehensive report on Agricultural and Oil and Gas land use within the ALR in NEBC;
    - Responding to direction from the Task Force;
    - Identifying challenges and opportunities to be addressed;
    - Undertaking a review of the existing data/information available to assist in informing the Task Force; and
    - Making recommendations on next steps.

Relationships: The Task Force will provide any findings or recommendations arising from their work to the Deputy Minister Committee for Natural Resources (DMCNR) for review and discussion prior to advancing any recommendations to Government. Any such recommendations should be advanced utilizing the existing committee structures provided by the Assistant Deputy Minister Committee on Natural Resources (ADMCNR) and the DMCNR.

Principles: The Task Force and the Executive Committee will:

- Develop fact based information and background on all matters before the Task Force;
- Provide a balanced and reasoned approach, mindful of divergent views, and supported by staff and subject matter experts; and
- Seek consensus directions and recommendations, or where consensus is not possible, document the reasons for lack of consensus and possible paths forward.

Expenses: Individual Ministries and Commissions are responsible for their respective travel costs, subject to government travel guidelines and requirements.

Appendix 1

From the Revitalization Report
Recommendation 25 and Associated Actions:
Need for a Deputy-Minister Task Force and Strategy

Actions:

1. *Establish a Deputy Minister- level task force with internal and external agriculture partners and stakeholders from the natural resource sector. Direct the Task Force to:*
    - *Develop a strategy to address the significant resource extraction issues impacting the ALR and its farmers and ranchers in BCs Peace River Region*
    - *Review, among other considerations, the following issues and take actions as required:*
        - *How to balance surface rights of the farmer/rancher with sub-surface rights of the extractor*
        - *How the farmer/rancher will be given authority to influence negotiations on the farm and location of oil and gas facilities and infrastructure.*
        - *How the comments made to the task force by the farmers/ranchers will be accommodated in the balance process*
        - *Whether the delegation agreement between the ALC and the BC Oil and Gas Commission is the correct approach or if there is an alternative approach that would better protect the agricultural interest and restore confidence in the regulatory system over the long term*
        - *Complete a fulsome impact assessment of oil and gas activity with the ALR*
        - *Determine how farmers can access ongoing professional independent support*
2. *Build a memorandum of understanding and operational agreement between the ALC and the BC Oil and Gas Commission for sharing impact assessments and other information so they can work more effectively together.*
3. *Consider whether/what portion of royalties from oil and gas development in the ALR should be directed to a regional agriculture development fund.*

Need for Increased ALC and Ministry Presence

Actions:

1. *The Committee recommends the Ministry of Agriculture work with other natural resource ministries to ensure the ALC and the Ministry are sufficiently resourced to increase presence and support for the ALR protection and for farmers and ranchers in BC's Northeast ALR.*

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Royalty Programs

Revised: June 16, 2020

Issue: **Royalty Credit Programs reduce royalties owed to government to incentivize exploration and continued development of natural gas within the province.**

Response:

- Royalty programs incentivise exploration and continued development of natural gas within the Province.
- The Province has offered many royalty incentive programs in the past; seven are currently active. Royalty programs can take the form of credits which can be applied to reduce royalties payable, or reductions which reduce the rate of royalty applied to production.
- Cost allowances (such as Producer Cost of Service and Gas Cost Allowance) that compensate a producer for the cost of transporting or processing the Crown's royalty share are not considered royalty programs.
- Royalty reductions associated with deep well credits, deep well re-entry credits and infrastructure royalty credit programs for 2018/19 were $498.2 million ($343.8 million in 2017/18).
- Royalty reductions associated with low productivity, marginal and ultramarginal wells were estimated at $14.2 million in 2018/19 ($13.7 million in 2017/18).
- Remaining deep well credits on government accounts for 2019/20 were s.13; s.17 ($2.62 billion in 2018/19 and $2.59 billion in 2017/18) which could reduce future natural gas royalties payable. This does not include deep well credits on abandoned and suspended wells ($0.47 billion), amongst others, as they have been excluded from government accounts.
- Royalty reductions and credits reduce royalties owing when production occurs. That is, the government must be owed royalties before royalty reductions or credits can be used.

Background/Status:

- The Province offers royalty programs which are meant to incentivise exploration and continued development of natural gas within BC.
- Three royalty credit programs currently exist:
  - Clean growth infrastructure royalty program;
  - Deep-well royalty credit program; and

  - Natural gas deep-well re-entry credit program.
- Four royalty reduction programs currently exist:
  - Low productivity well royalty reduction;
  - Marginal well royalty reduction;
  - Ultramarginal well royalty reduction; and
  - Net profit royalty program.

Royalty credits for infrastructure development

- The Clean Growth Infrastructure Royalty Program (CGIRP) is modeled on the previous Infrastructure Royalty Credit Program (IRCP) and Clean Infrastructure Royalty Credit Program (CIRCP), and provides royalty deductions for infrastructure projects related to electrification, emissions reductions, roads and pipelines. Companies can apply for a deduction to the royalties they would otherwise pay to the Province under a competitive Request for Applications process. This deduction can be as much as 50 percent of the cost incurred for projects under the program.
- CGIRP was successfully run for the first time in 2019, and 2020 is the second year of the program. The Province has allocated up to $150 million in royalty deductions to be competed for by industry in the 2020 Program, with two categories of projects: Growth projects (roads and pipelines) and Sustainability projects (electrification and emissions reduction infrastructure).

Deep well royalty credit program

- This program provides royalty credits to companies when they drill deep wells. The credits cover a portion of the drilling and completion costs for these wells and can be used to reduce the royalties payable for a producing well. These credits can only be applied to royalties payable from the well to which they are issued.
- The deep well royalty credit program covers two tiers of wells:
  - Tier 1 wells are shallower with long horizontal segments.
    - Royalty credits available to Tier 1 deep wells range from a minimum of $445,000 (for a well with a deep well depth of 2,500 metres) to a maximum of $2.81 million (for wells 5,500 metres or deeper).
    - Deep well credits applied to reduce royalties owing are subject to a 6 percent minimum to ensure the Province receives some base royalty for the resource extraction.

- Tier 2 targets deeper wells than Tier 1 and offers a higher maximum royalty credit.
- Qualifying criteria depends on whether the well is vertical (has a completion point deeper than 2,500 metres) or horizontal (has a completion point deeper than 1,900 metres).
- Royalty credits available to Tier 2 deep wells vary based on the location of the well (whether it is "east" or "west") and the concentration of Hydrogen Sulfide (H2S) in the gas produced from the well (identifies the well as either "sweet" or "sour").
- Royalty credits available to Tier 2 deep wells could be as high as $4.72 million (for horizontal sour wells located within the west).
- Deep well credits applied to reduce royalties owing under Tier 2 are subject to a 3 percent minimum to ensure the Province receives some base royalty for the resource extraction.

- Total deep well credits awarded to wells since the inception of the program (2003) to 2019/20 is $6.5 billion. $3.1 billion have been used to reduce royalties payable to the Crown. $3.4 billion may be used to offset future royalties (as of March 31, 2020). Of the $3.4 billion, $2.92 billion are on wells that are currently producing.

Natural gas deep well re-entry credit

- When a previously drilled well is drilled deeper to maximise the development of known resources, qualifying wells will receive a credit on their monthly royalty invoice if they are actively producing.
- The credit is applied to the net royalties payable for all deep well events within the same well. However, if the net royalty amount would be zero in a production month, a minimum royalty amount is payable. The credit balance will continue to be reduced by the monthly royalties (minus the minimum amount payable) until the full amount of the credit has been used.
- Only one credit type (deep well or deep re-entry well) can be used to reduce royalties on a well event. If a deep re-entry well event is in the same zone as a deep well event, the deep re-entry credit will displace any unused balance of the deep well credit.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Low productivity well royalty reduction

- Gas well events that on average produce less than 5,000 m^3 of natural gas per day in a calendar month automatically qualify for the low productivity well royalty reduction. Once qualified, base royalty rates are reduced by a factor that depends on the average daily production volume.
- Wells that qualify for low productivity well royalty reduction cannot also qualify for marginal or ultramarginal well royalty reductions.
- This reduction is intended to maximise the recovery of Crown resources from wells that would reach the end of their economic lives if full royalties were payable.

Marginal well royalty reduction

- Gas well events that have an average daily production of less than 23 m^3 of natural gas per metre of well depth automatically qualify for the marginal well royalty reduction. Wells must produce for 12 months before they qualify for this reduction after which a royalty recalculation is applied to qualifying wells in months where production dropped below 25,000 m^3.
- Wells that qualify for marginal well royalty reduction cannot also qualify for low productivity or ultramarginal well royalty reductions.

Ultramarginal well royalty reduction

- Shallow gas well events that meet stringent low productivity and depth requirements automatically qualify for the ultramarginal well royalty reduction. Wells must produce for 12 months before they qualify for this reduction after which a royalty recalculation is applied to qualifying wells in months where production dropped below 60,000 m^3.
- Wells that qualify for ultramarginal well royalty reduction cannot also qualify for low productivity or marginal well royalty reductions. ultramarginal wells are also excluded from receiving any deep-well credit deductions.

Net profit royalty program

- The Net Profit Royalty Program was introduced to promote the development of high complexity, technically novel oil and natural gas resources that were otherwise unlikely to be developed.
- The program allows producers to pay lower royalty rates in the initial stages of a project in exchange for higher royalty rates once the producers have recovered their capital costs
- New Net Profit applications are not being accepted at this time. Approved net profit programs from prior periods continue to receive royalty reductions.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Attachments: Appendix 1 – Royalty Program Usage

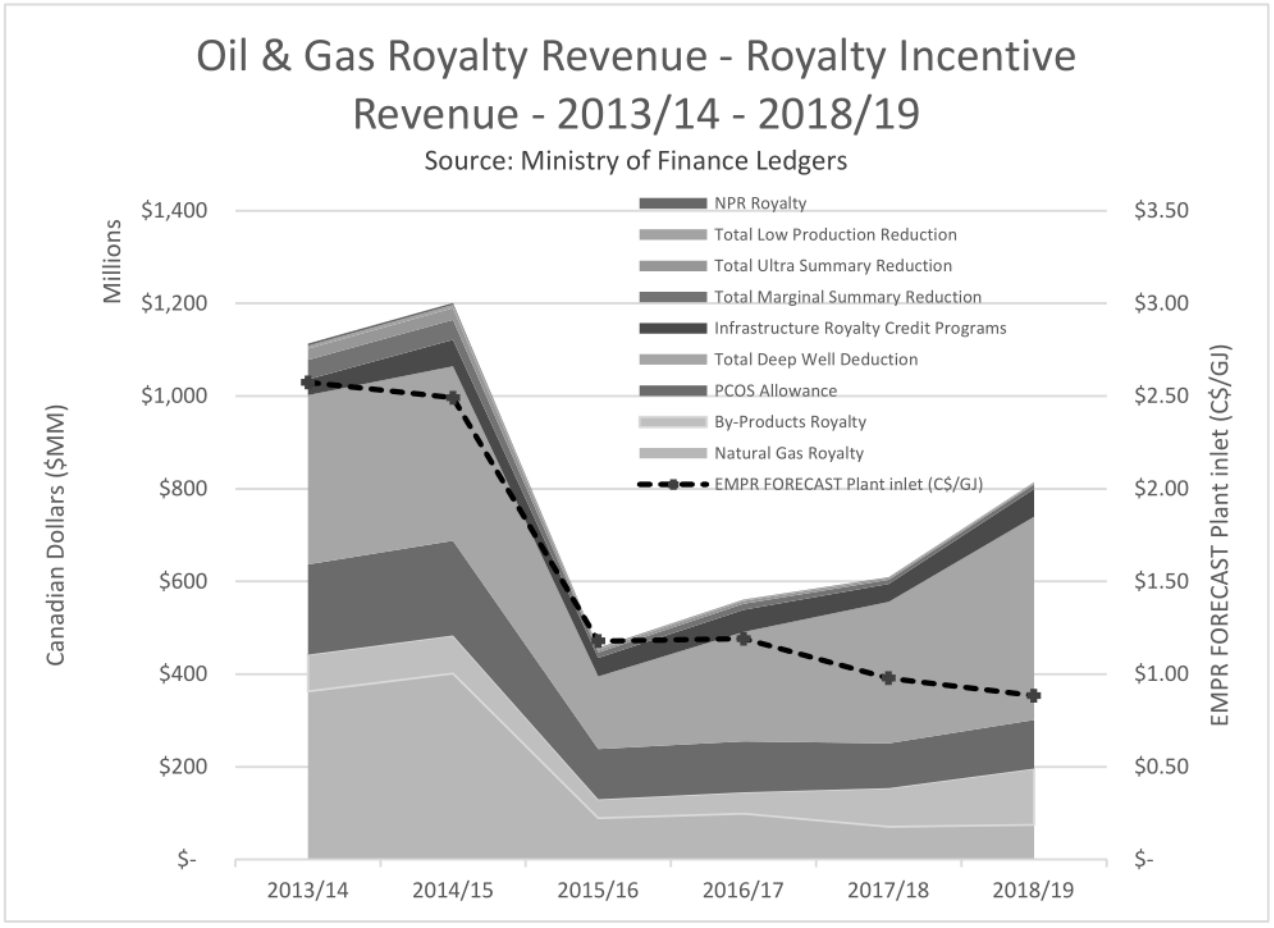
Cross Reference: **Deep Well Royalty Credit**

Clean Growth Infrastructure Royalty Program

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

Appendix 1: Royalty Credit Program Usage



2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Deep Well Royalty Credit

Revised: June 11, 2020

Issue: The Deep Well Royalty Credit Program reduces royalties owed to government by oil and gas producers.

Response:

- The Deep Well Royalty Credit Program (Program) is integral to the competitiveness of British Columbia's royalty regime.
- Deep well royalty credits are not paid or owed by the government to natural gas producers – they reduce royalties owing when production occurs.
- The government still receives a minimum royalty after deep well royalty credits have been used.
- Deep well royalty credits reduce royalties owing from a well to a minimum percentage of the value of production in a month (3 percent or 6 percent, depending on the well type). This ensures the Province receives some royalty revenue, even in poor market conditions.
- Deep well royalty credits are administered on a well-by-well basis – they are only used if the well that qualified for the credit produces gas and generates royalties.
- Remaining deep well credits on government accounts for 2019/20 were s.13; s.17 ($2.62 billion in 2018/19 and $2.59 billion in 2017/18) which could reduce future natural gas royalties payable. This does not include deep well credits on abandoned and suspended wells ($0.47 billion), amongst others, as they have been excluded from government accounts.
- The accumulation of deep well credits over time reflects continued investment by industry in drilling wells at at time of persistently low commodity prices in recent years.

Background/Status:

- The Program was introduced for wells with an initial drilling date (spud date) after January 1, 2003.
- The Program offsets the higher cost of drilling natural gas wells in areas where prospective natural gas pools are deeper underground or require longer wells to be drilled.
- Tier 1 (shallower than 1900 m) wells can use credits to a well's royalties to a minimum of 6 percent on gas revenue (since April 2014) and Tier 2 (deeper than 1900 m) wells can use credits to a well's royalties to a minimum of 3 percent on gas revenue (since March 2013), protecting government against low prices.

2020/21 Estimates Note
Advice to the Minister

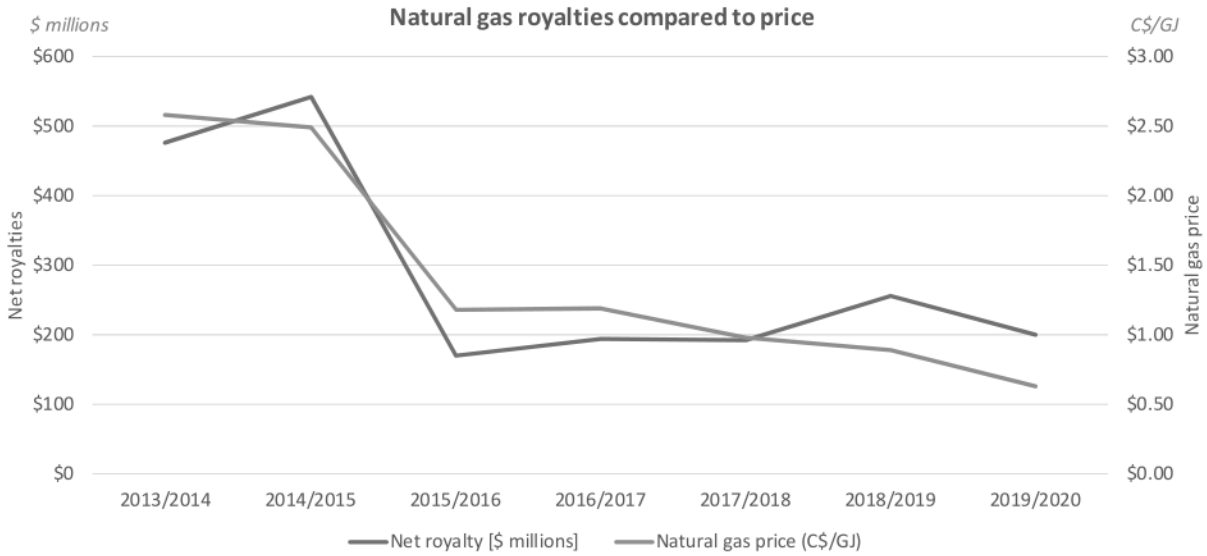
Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The following table highlights deep-well credits and related activities associated with the oil and gas industry over time, as of March 31, 2020:

Fiscal year	Deep wells [#]	Total deep well credits awarded [$ millions]	Remaining deep well credits [$ millions]	Net royalty [$ millions]	Tender bonuses [$ millions]	Capital expenditures [$ millions]	Natural gas price [C$/GJ]	Oil and condensate price [US$/bbl]
2003/04	17	6.1	0.2	1,230.0	625.7	3,786.6	5.06	N/A
2004/05	81	35.2	3.4	1,439.2	281.7	3,897.4	5.61	N/A
2005/06	150	62.2	5.1	1,921.3	555.6	4,933.5	7.58	59.90
2006/07	202	82.5	12.5	1,207.4	607.1	6,094.4	5.36	64.70
2007/08	142	69.9	5.8	1,132.1	1,222.3	5,501.8	5.47	82.28
2008/09	220	109.2	20.9	1,314.0	2,424.6	7,879.6	6.34	85.82
2009/10	236	205.9	49.7	406.5	896.4	5,173.3	2.97	70.59
2010/11	399	470.4	165.7	313.2	818.0	7,073.2	2.61	83.12
2011/12	377	551.7	254.6	338.7	286.8	6,681.7	2.14	97.21
2012/13	315	477.7	194.8	167.6	115.2	5,236.6	1.51	91.98
2013/14	322	518.4	234.3	476.7	220.5	5,742.8	2.57	99.01
2014/15	516	752.8	439.2	542.3	334.8	7,311.2	2.49	80.71
2015/16	457	673.4	448.2	170.6	15.9	4,943.6	1.18	44.85
2016/17	289	440.7	245.5	194.2	61.2	2,709.0	1.19	47.79
2017/18	545	795.3	439.2	192.2	126.4	4,011.5	0.98	53.66
2018/19	436	621.3	341.9	256.4	50.3	3,884.0	0.88	62.92
2019/20	373	627.5	529.8	200.0	12.8	N/A	0.63	54.72
Total	**5,077**	**6,500.1**	**3,390.8**	**11,502.3**	**8,655.5**	**84,860.2**		

  - In the table, the column associated with deep wells represent the number of deep wells drilled within the particular fiscal year.
  - Total deep well credits awarded include all credits issued to qualifying deep wells for that year (based on well characteristics).
  - Remaining deep well credits include unused credits for all wells, based on their most recent active status, as of the March 31, 2020.
  - Net royalties are collected after application of production, deep and infrastructure incentives, as well as allowances for Crown-related production costs (such as producer cost of service).
  - Tender bonuses represent money collected from tenure sales during the year.
  - Capital expenditures are estimates of overall industry spending on oil and gas exploration and development within British Columbia (source: CAPP).
- Total deep well credits awarded to wells since the inception of the program (2003) to 2019/20 is $6.5 billion. $3.1 billion have been used to reduce royalties payable to the Crown.
- $3.4 billion may be used to offset future royalties (as of March 31, 2020). Of the $3.4 billion, $2.92 billion are on wells that are currently producing.

- Natural gas net royalties are driven by the price of natural gas. Recent trends have shown an interest in drilling for natural gas liquids (NGLs), especially condensate, as the price of gas remains low.



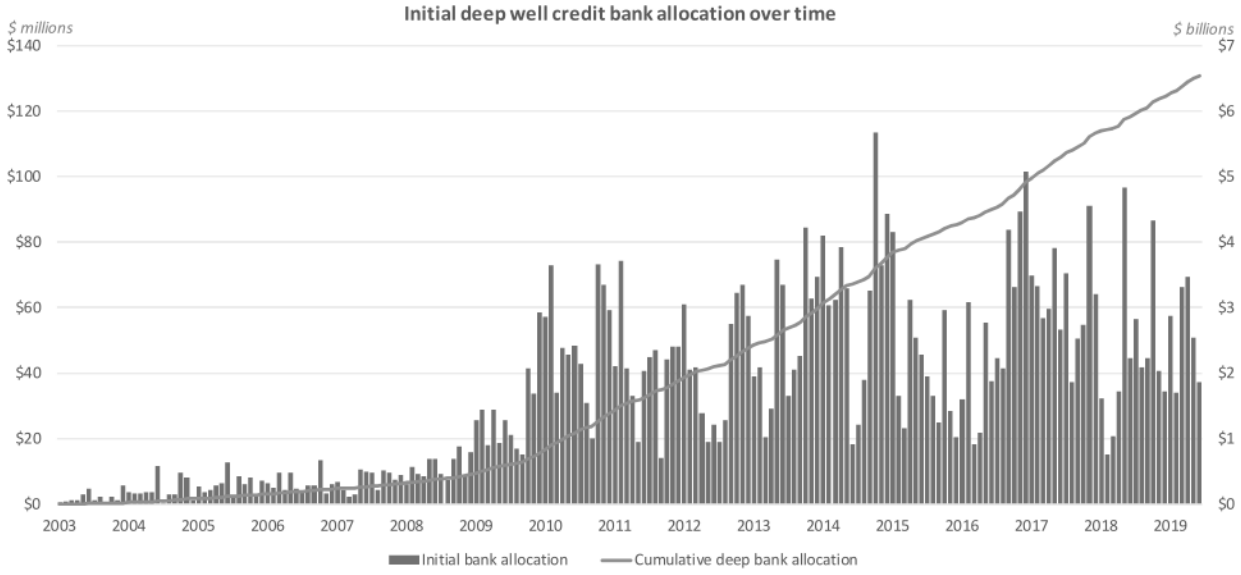
- The following table estimates a breakout of the remaining deep well credit bank by the most recent active status of the deep well (at March 31, 2020):

Well vintage	Remaining deep-well credits [$ millions]	Active wells [$ millions]	Inactive wells [$ millions]	Suspended wells [$ millions]	Abandoned wells [$ millions]	Net profit wells [$ millions]
2003/04	0.2	0.0	0.0	0.1	0.1	0.0
2004/05	3.4	0.8	0.0	0.9	1.7	0.0
2005/06	5.1	0.1	0.0	4.6	0.4	0.0
2006/07	12.5	2.5	0.0	7.7	2.2	0.0
2007/08	5.8	0.4	0.0	3.0	0.8	1.6
2008/09	20.9	6.9	0.0	3.0	2.8	8.3
2009/10	49.7	19.8	0.0	12.4	1.0	16.0
2010/11	165.7	80.5	1.5	22.5	1.5	59.7
2011/12	254.6	175.0	0.0	29.1	5.9	44.6
2012/13	194.8	149.6	0.0	18.3	4.2	22.7
2013/14	234.3	205.5	2.7	9.2	2.7	14.1
2014/15	439.2	409.6	1.0	13.7	0.0	15.0
2015/16	448.2	429.9	0.0	17.4	0.9	0.0
2016/17	245.5	241.6	0.0	3.9	0.0	0.0
2017/18	439.2	433.0	1.2	5.0	0.0	0.0
2018/19	341.9	336.7	2.7	2.4	0.0	0.0
2019/20	529.8	528.6	1.3	0.0	0.0	0.0
Total	**3,390.8**	**3,020.6**	**10.4**	**153.1**	**24.2**	**182.5**

  - Totals may not add due to rounding.

- Wells are considered inactive based on their well status (if a well has not reported production for a number of months).
- Wells drilled within a Net Profit Royalty Project may be awarded deep well status and therefore receive deep well credits. The credits cannot be used to offset royalties payable to the Crown while they remain in the Net Profit Royalty Program.

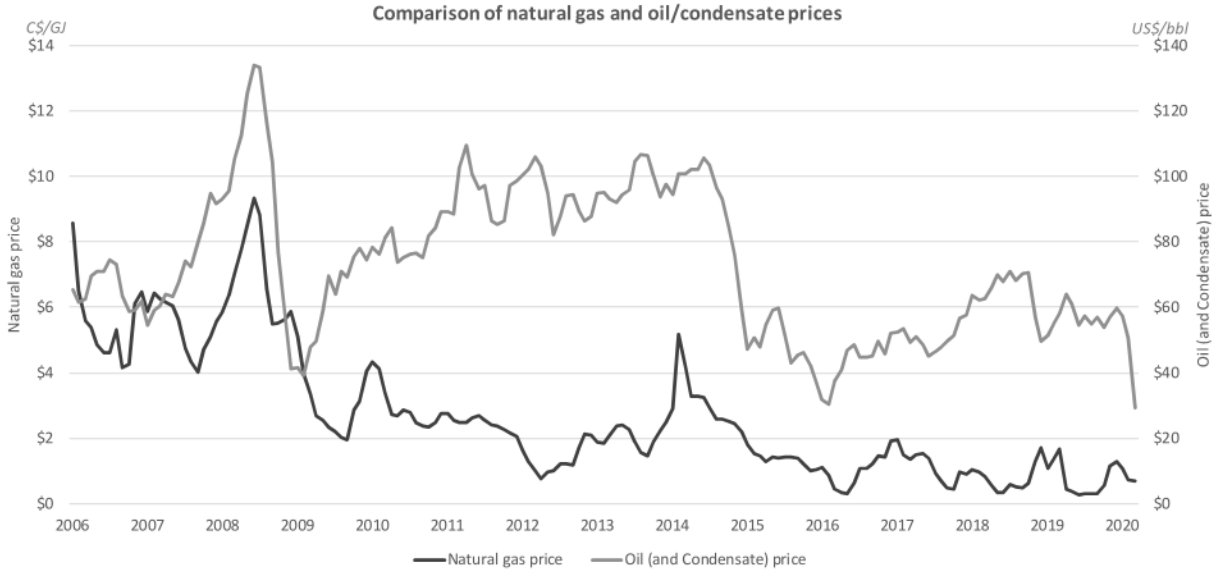
- As of March 2020, 4,199 active wells had remaining deep well credits – an average of approximately $0.7 million per well.



- The accumulation (even with deductions) has, in part, been the result of persistently low commodity prices in recent years combined with continued exploration and development activities by industry.

2020/21 Estimates Note
Advice to the Minister

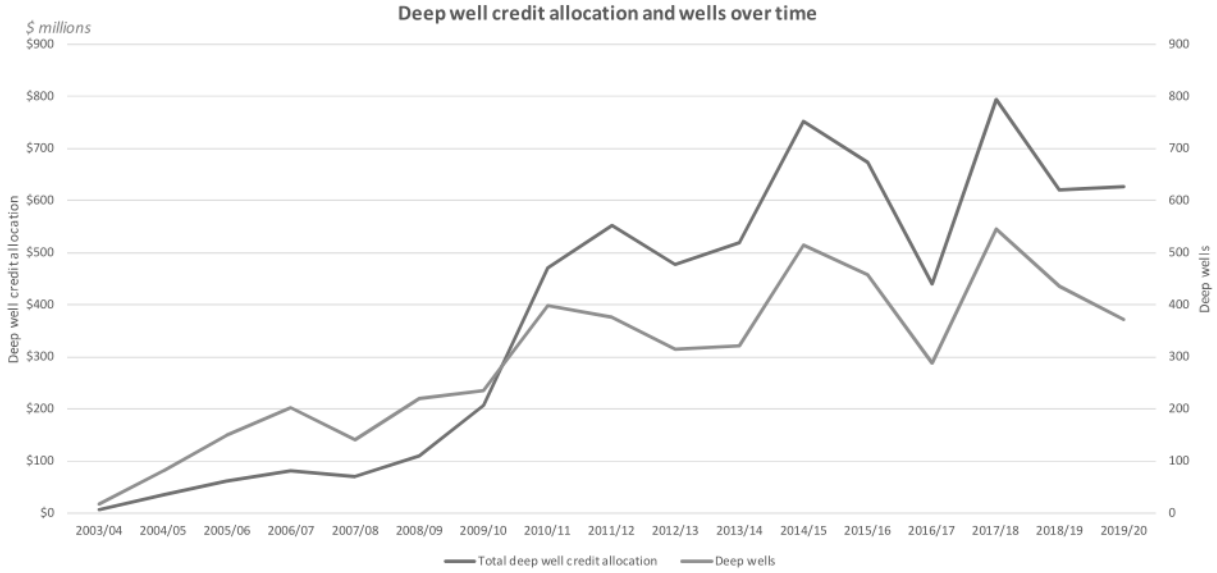
Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**



- The price of condensate has been much more stable than natural gas, tracking closely with the price of oil. This has led to a shift in focus to produce liquids-rich wells and increase condensate production (which has a universal 20 percent royalty rate attached to it s.13 . Wells that primarily target condensate have used their deep well royalty credits more quickly. However, recent months have seen a decline in the value of condensate, reducing the consumption of deep well credit banks for these wells.
- Almost all gas wells drilled today are deep wells. This reflects current industry development trends (towards deeper wells, with longer horizontal segments).
- New wells drilled in British Columbia in 2019/20 qualified for a total of ~$627 million of deep well royalty credits – these credits will be used over the productive lives of the new wells.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**



- s.13; s.17

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Royalty Revenues

Revised: June 15, 2020

Issue: Royalty Revenues; their current status and projections.

Response:

- Provincial net natural gas royalties (including natural gas by-products royalties) have declined alongside commodity prices.
- Despite low natural gas prices, provincial production has been growing due to drilling activity that is sustained by impressive well productivity, as well as high prices for natural gas by-products.
- Total Budget 2020 estimates for net natural gas royalties for 2020/21 and 2021/22 fiscal years are $206.5 million and $217.7 million respectively, compared to $120.2 million in 2019/20. About 76 percent of the total gross natural gas royalties can be attributed to natural gas by-products during both 2020/21 and 2021/22.
- The royalty revenue estimates are expected to be revised downwards to reflect impacts from COVID-19 during the 2020/21 Q1 Budget Update.
- Crude oil and condensate prices have fallen significantly since the beginning of 2020, largely driven by the economic contraction caused by COVID-19. Currently, crude oil prices have rapidly recovered from its unprecedented drop to -$40/bbl on April 20, 2020. But as mitigation and reopening efforts related to COVID-19 continue to evolve, the market remains subject to a heightened level of uncertainty.
- Natural gas prices have been relatively stable since the beginning of 2020. Production in the U.S. is expected to decrease by 2.8% and 4.8% in 2020/21 and 2021/22 respectively, while U.S. natural gas consumption is expected to also decrease by 3.6% and 3.9% during the same period, due to impacts from COVID-19.
- Net natural gas and by-products royalty revenues are expected to remain relatively flat between 2023/24 and 2024/25 as royalty credits (from infrastructure projects and new wells in the Montney play) are expected to offset the higher gross natural gas and by-products revenues.

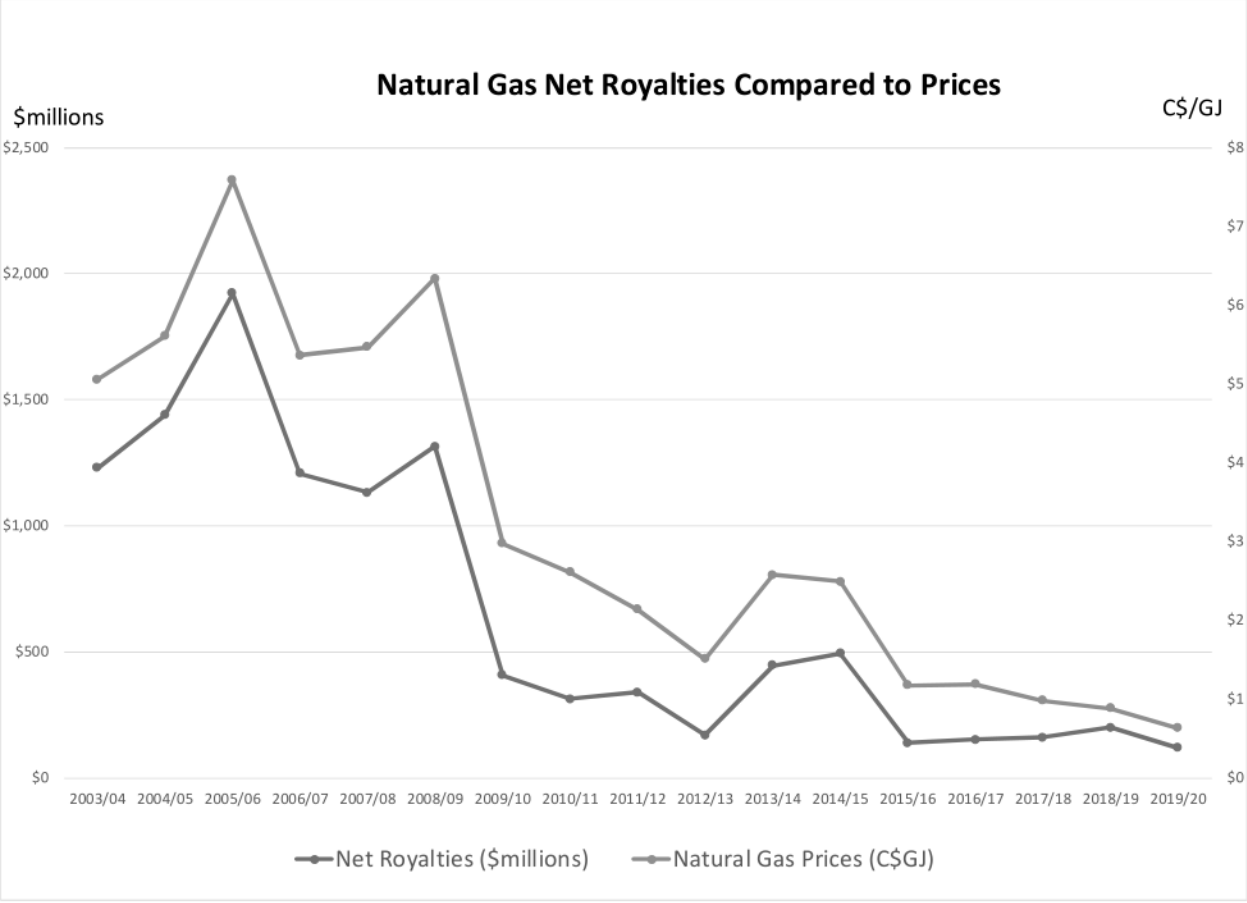
Background/Status:

- Royalties revenues are the monetization of the Crown's share of production (Royalty share):
  Royalties = Production × Commodity Price × Royalty Rate - Deductions

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Royalties are dependent on production volumes and price and are also influenced by the amount of deductions including deep wells credits, Producer Cost of Service (PCOS) Allowance, Gas Cost Allowance (GCA), and infrastructure credits.

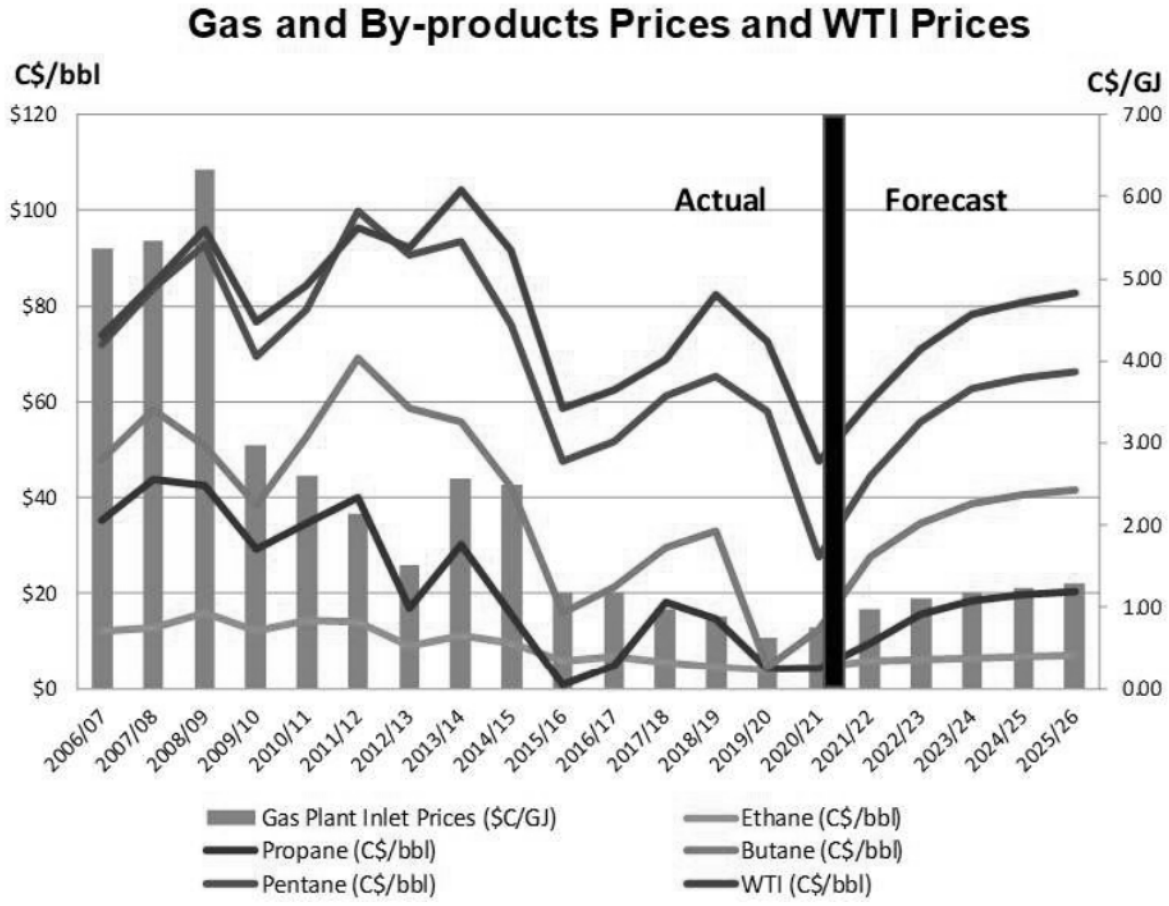
- The market price for natural gas has been trending downward over the last decade due to rapid growth in shale gas development as a result of rich discoveries and technological advancement in North America. The low natural gas prices in all major North American gas trading hubs since 2008/09 have negatively impacted British Columbia natural gas royalties and are expected to continue to do so until at least 2024/25.



2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Commodity prices are expected to gradually increase in the next five years.



Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Gasoline Prices

Revised: June 17, 2020

Issue: BC Gasoline Prices, British Columbia Utilities Commission Inquiry into Gasoline and Diesel Prices, and the *Fuel Price Transparency Act*

Response:

- After reaching record high prices BC in 2019, Government requested the British Columbia Utilities Commission (BCUC) perform an inquiry into gasoline and diesel prices to examine what factors contribute to the price.
- The report found wholesale margins in southern BC have a 10-13 cents per litre (cpl) difference compared to the US Pacific Northwest (PNW) that cannot be explained by economic theory or differences in the cost of producing and delivering the product.
- The retail market does not show any signs of collusion. High price volatility suggests it is a competitive market, however it causes significant consumer frustration.
- As a result of these findings, Government introduced and passed the Fuel Price Transparency Act (Act) to further understand the gasoline and diesel market, and to support competitiveness in the fuel market and address British Columbians' concern over transportation fuel prices.
- Government is currently considering additional steps to implement the Act.

Background/Status:

- Gasoline prices across Canada vary due to several factors, including world oil prices, inventory levels, refinery and retail margins, transportation costs, the Canada/US exchange rate, as well as taxes.
- On May 21, 2019 the Lieutenant Governor in Council requested the BCUC perform an inquiry to explore factors that may be influencing gasoline and diesel prices in BC since 2015 including: differences in any refining and retail margins compared to other jurisdictions in Canada, factors that contribute to both retail and wholesale price fluctuations, how competition impacts pricing, and what other jurisdictions are doing to enhance fuel price transparency.
- On August 30, 2019 the BCUC issued its final report on its inquiry. The report's findings included: an unexplained difference in wholesale price ranging from 6 cpl in northern BC to 13 cpl in southern BC when compared to the PNW; the wholesale market for gasoline in BC is not truly competitive; no evidence of collusion in the retail market; regulation could potentially reduce margins to

similar levels as in comparable jurisdictions and that further investigation would be needed to determine if it be of benefit to BC.

- Bill 42 (the Act) was introduced on November 18, 2019 and passed on November 27, 2019. The Act intends to improve transparency on the factors that impact retail prices at fuel pumps in BC, create greater competitiveness in the fuel market, and provide more detailed fuel market data and information for consumers. The Act enables the collection and publication of information about the fuel market in BC. The Act also enables the Lieutenant Governor in Council to make regulations that require periodic submissions of information about the gasoline and diesel market by certain people or companies who process, refine, store, transport, market or supply gasoline, diesel or other prescribed fuel.
- On March 4, 2020, the BCUC was designated the Administrator of the Act. As the Administrator, the BCUC has the authority to collect information within the scope of the Act and publish information that will, in its opinion, improve the competitiveness of the fuel market and improve public confidence in its competitiveness.
- A Consultation Paper was used to gather input from industry stakeholders on the implementation of the Act. The paper gathered feedback for three weeks. This feedback will be used to determine what fuel data will be required, and how frequently it will be collected by the BCUC.
- The BCUC has created a public facing website to display currently available price information before reporting under the Act begins. Once reporting begins, the website will display information gathered under the Act.

Further findings from the BCUC inquiry into :

Wholesale Market Pricing:

- The wholesale price differential between Vancouver and Western Canada rose to around 20 cpl in early 2019. Further analysis was unable to explain the price difference of 6 cpl in northern BC and 13 cpl in southern BC.
- The primary determinant of Vancouver wholesale prices is the PNW spot price, but only 5 percent of gasoline sold in BC is imported from the PNW.
- The Vancouver wholesale price and PNW spot price are highly correlated, tracking up and down together at the same time supporting the evidence that wholesale prices are set based on the PNW price.

Wholesale Market Concentration:

- Based on the four firms concentration test, the wholesale market is considered an oligopoly.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The control of the distribution infrastructure gives the wholesale gasoline market characteristics of a natural monopoly.
- Barriers to entry into the market are high, making entry into the market unlikely and giving market power to current wholesale suppliers.

Retail Market:

- There is no evidence that market control is being exerted at the retail level.
- Reported retail margins are higher in BC than in the rest of Canada. However, issues related to calculation of the retail margin result in it not being possible to accurately quantify the gap.
- Higher market volatility can be an indicator of a functioning competitive market. However, it can also be a major irritant to consumers, engendering feelings of frustration and unfairness if they feel powerless to control when and where they purchase.
- The evidence based on letters of comment from consumers indicates that there is dissatisfaction and frustration caused by the retail price volatility in BC.
- A more fulsome understanding of customer concerns is required to better understand whether some type of regulatory model is appropriate or whether price volatility is best endured because of a competitive market.
- The value of land is not a direct driver of gasoline prices but in certain markets can be used to justify a higher retail margin.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Global Oil Prices

Revised: June 10, 2019

Issue: Global Oil Prices in the wake of the OPEC-Russia price war and the global COVID-19 pandemic; current status, projections, and impact on royalty revenues

Response:

- This spring, global oil markets were severely disrupted by both a price and market share war between OPEC, Russia and the United States as well as the global pandemic.
- Natural gas markets are showing signs of resilience; however, capital investments in upstream exploration and production have largely been put on hold.
- While BC primarily produces natural gas, natural gas byproducts are also an important source of revenues for industry and government. The prices for these products have declined in step with oil prices.
- Provincial natural gas royalties (including natural gas by-products royalties) have declined alongside commodity prices.
- British Columbia will continue to be impacted as the oil market evolves.

Background/Status:

- In March 2020, the Organization of Petroleum Exporting Countries and Russia (OPEC+) hiked oil output, effectively entering into a global oil price war against North American shale producers in an attempt to boost market share.
- At the same time, the global COVID-19 pandemic forced several countries into lockdown and reduced economic output resulting in a substantial decline in demand for oil.
- Global oil markets faced an unprecedented double shock (increased supply and dramatic demand decline) where oil prices dropped to lows not seen in nearly 20 years.
- Western Canadian Select – the primary grade of oil produced in western Canada – traded at and below $10 per barrel, well below the price required for companies to cover operating costs or justify investments in upstream exploration and production.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- On April 12, 2020 OPEC+ reached an historic agreement to cut global oil production by 9.7 mb/d, approximately 10% of the world's normal oil supply, in an effort to stabilize the oil market in the short term.
- The agreement expires in April 2022, where oil production cuts will taper and return to normal production levels.
- While the agreement provided some relief to a precarious market, many analysts believe this to be a temporary ceasefire in what could be a prolonged price and market share war between OPEC, Russia and the United States.
- In the period following the agreement leading up to the planned production cuts, prices fell to historic lows as oil storage was pushed to capacity; oil futures traded at negative.
- The production cuts took effect May 1, 2020, and oil market conditions have since improved after a period of drawing down the excess supply that was being stored in the latter half of April.
- However, prices have not recovered to the levels seen prior to the price war and global pandemic.
- While demand is showing signs of recovering in China, the US and Europe as the countries emerge from lockdown, analysts predict a great deal of uncertainty and risk, among those the pace of global economic recovery, potential for prolonged or second waves of COVID-19, and the threat of an ongoing oil price and market share war.
- Sustained low oil prices will threaten the financial stability of oil producers as well as B.C. natural gas producers, as many natural gas companies rely on revenue from natural gas by-products (which are linked to the price of oil).
- s.13

Cross Reference: Royalty Revenues

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Government's Four Conditions for LNG

Revised: March 3, 2020

Issue: **Government's Four Conditions for LNG development and LNG Canada**

Response:

- The Province is supportive of the development of liquefied natural gas (LNG) and will ensure that British Columbians benefit from LNG projects by requiring that proposals meet our four stated conditions:
  - Proposals must include express guarantees of jobs and training opportunities for British Columbians;
  - Proposals must provide a fair return for our resource;
  - Proposals must respect and make partners of First Nations; and
  - Proposals must protect our air, land and water, including living up to our climate commitments.
- The conditions provide a road map for successfully developing an LNG project in BC.
- LNG Canada has satisfied each of these conditions.

Background/Status:

- While the onus remains on individual projects to demonstrate how they have satisfied all four conditions, the Province has worked hard to establish a solid framework that will allow this to happen.
- With LNG Canada's Final Investment Decision on October 2, 2018, the Premier stated that he was of the view that LNG Canada and the Coastal GasLink pipeline met the four conditions:
  - On jobs and training:
    - LNG Canada is investing in building capacity and skills of British Columbians through targeted workforce development programs.
    - LNG Canada has committed to a hierarchy of hiring preferences: 1) hire local, 2) hire from British Columbia, 3) hire from Canada, and 4) if no appropriately skilled worker, apply for Temporary Foreign Workers.
    - LNG Canada will employ approximately 7000 people at peak of construction, and Coastal GasLink will employ between 2000 – 2500

during construction. 950 permanent positions will be created after construction.

- According to LNG Canada, as of last September, of the 1000 people employed on the project, 520 were from the Terrace-Kitimat region or from a First Nations Community.
- To date, $1 billion in contracts and procurement have gone to BC companies, more than half of which – $558 million – has gone to firms and First Nations in the immediate region.

- On fair return on our resources:
  - The LNG Canada project is estimated to generate $23 billion in public revenue over 40 years. This does not include any secondary multiplier effects from taxes on economic activity that results from workers and businesses spending their earnings in British Columbia.
  - Revenues will be from taxes, royalties and revenues flowing to BC Hydro.
- On partnering with First Nations:
  - LNG Canada has entered into agreements with impacted First Nations: Haisla, Kitselas, Gitga'at, Gixaala and Kitsumkalum.
  - Coastal GasLink has agreements with all 20 elected First Nations along the pipeline route.
- On protecting air, land, and water including climate commitments:
  - LNG Canada's facility is expected to have the lowest greenhouse gas emissions intensity of any major LNG facility in the world. The resulting emissions from the project will be accommodated with emissions targets that were announced in Fall 2018.
  - Analysis by the Ministry of Environment and Climate Change Strategy found that the first phase of LNG Canada could increase emissions by up to 3.45 megatonnes per annum – including associated upstream emissions.
  - These emisisons have already been factored into CleanBC.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Government Action on LNG Competitiveness

Revised: March 6, 2020

Issue: Measures implemented by government to improve the competitiveness of LNG projects in BC.

Response:

- Our LNG Investment Fiscal Framework is about raising the standard of living for all British Columbians.
- Our goal is to encourage industries that:
  - Provide healthy government revenues to invest in people,
  - Create high-paying jobs,
  - Generate reconciliation opportunities with First Nations, and
  - Look after the environment and are less GHG-intensive than counterparts in the rest of the world and help the world reduce overall GHG emissions.
- We removed impediments to major investment:
  - The previous LNG Income Tax created uncertainty and risk to investors
  - Access to the BC Hydro's industrial electricity rate (instead of the much higher LNG rate) now treats large investments more fairly.
- We kept the natural gas tax credit to encourage companies to report income and pay corporate income taxes in BC rather than other jurisdictions.
- We are targeting programs for all large investments by:
  - Replacing upfront PST obligation with future performance payments
  - Allowing CleanBC Incentives to ensure world class emissions intensity and fair competition with other jurisdictions.
- We are encouraging investment without giving subsidies or imposing significant costs on future generations.
- Legislation was passed to help us fulfil our commitment to attract $40 billion of new investment and $23 billion in new revenues over 40 years – prosperity that will help pay for services that people depend on.

Background:

LNG Fiscal Framework: Four Measures

- In March 2018, the Province made a commitment to implement a fiscal framework including four measures intended to help improve the Project's competitive position.
- Implementation of the four measures was subject to receiving LNG Canada's (LNGC) notice of positive final investment decision (FID) by November 30, 2018.
- On October 1, 2018, LNGC announced a positive FID for Phase 1 of development.

- All four measures are now in place through legislation, regulations and policy.

Measure 1: Access to BC Hydro's industrial electricity rate

- Regulation changes made effective October 2, 2018
- Provides BC Hydro industrial (instead of LNG) electricity rates and some related transmission infrastructure consistent with other industries

Measure 2: Provincial Sales Tax (PST) relief

- PST exemption for the construction of the LNG facility for an estimated value of $596 million and is replaced with future Operating Performance Payments
- Operating Performance Payments Agreement between the Province and LNGC signed March 25, 2019, and is not an indemnity – expressly stated in Agreement
    - Scope of exemption includes LNG facility; export docks; storage and adjacent construction work camp
    - PST exemptions made effective October 2, 2018, limited to 2-train facility – expansons would require a new agreement
    - Expires earlier of 7 years or 2 liquefaction trains ready for production
    - Payments total $596 million (nominal) – equal to estimated PST exemption benefit

Measure 3: Repeal *Liquefied Natural Gas Income Tax Act* (LNGITA) and re-introduce a natural gas tax credit (NGTC)

- Legislation brought into force with *Bill 10: Income Tax Amendment Act, 2019* (April, 2019) repeals LNGITA and implements the NGTC
- An amendment to the Income Tax Act that retains natural gas income tax credit to encourage British Columbia-based companies that pay corporate income taxes
    - Available to qualifying corporations for taxation years that begin on or after January 1, 2020
    - Qualifying corporations own natural gas entering an LNG facility
    - Principal business in British Columbia is oil and gas exploration, development, refining, marketing or liquefaction of natural gas
    - Credit calculated at 3 percent of the cost of natural gas and can reduce effective BC corporate income tax rate from 12 percent to 9 percent
    - Unused credit can be carried forward if a corporation continues to be a qualifying corporation
    - Province will administer the tax credit

Measure 4: Allow LNG facilities to participate in CleanBC Industrial Incentive Program

- Amendment to the Carbon Tax Regulation was completed by OIC and deposited in November 2019 and set out the details of the CleanBC Industrial Incentive Program (CIIP), including the threshold and benchmark for the LNG sector

  - For the LNG sector, the CIIP benchmark will be set at 0.24 tonnes of CO2e per tonne of LNG produced. The benchmark is based on the top 5 operating facilities in the world and will be reviewed every 5 years.
- With a well-established industry benchmark for LNG facilities of 0.16 tonnes carbon dioxide equivalent per tonne of LNG produced, LNG facilities in BC that have emissions below the CIIP benchmark will likely be able to claim the entire incentive ($20 per tonne for a carbon tax of $50 per tonne).

Project Economics

- A joint operating/financial model was developed by Province and LNGC Phase 1 for the Project:
  - Referenced in Premier's commitment letter and is the basis for Province's consideration and implementation of the Measures.
  - Includes estimates of Project's revenues and costs over 40 years on a nominal and net present value basis.
  - Analyzed in the context of competitiveness (e.g. U.S. Gulf coast).
  - Estimated that combined provincial Measures could lead to 13 cents/MMBtu reduction in Project costs over 40 years
  - Province does not warrant or guarantee that Measures will produce savings estimated in the joint model, as LNGC and the market control most variables.
  - Joint model contains LNGC's confidential and commercial operating/ financial information.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Opportunities for LNG Development to Support Climate Change Objectives

Revised: March 9, 2020

Issue: LNG development and the ability to support government's climate change policy priorities

Response:

- CleanBC is an economic, energy and climate plan that includes important initiatives that will see BC's natural gas industry continue to be the cleanest in the world.
- Natural gas has an important role to play in the transition to a lower carbon future as it has a lower carbon emission intensity than coal and oil respectively.
- While LNG Canada is working to make its Kitimat facility the world's cleanest in terms of greenhouse gas (GHG) emissions intensity, the project could add up to 3.45 megatonnes of carbon emissions to the province's total. CleanBC has accounted for these emissions in planning how British Columbia will achieve its emissions targets.
- Two BC Ferries major vessels have been retrofitted to rely on LNG as a fuel. The use of LNG on these two vessels is expected to reduce the company's carbon dioxide emissions by 12,500 tonnes annually, which is roughly equivalent to removing 2,500 vehicles off of BC's roads per year. Five more LNG-powered vessels are currently being considered by BC Ferries.
- Export of LNG from BC can play a significant role in reducing global GHG emissions and tackling poor air quality.

Background:

CleanBC Plan

- In 2018, the Government of BC released its CleanBC plan aimed at reducing carbon pollution, while creating more jobs and economic opportunities for people, businesses and communities in BC.
- Recognizing that natural gas can be a transitional fuel on the path to less carbon-intensive options, the CleanBC program for industry will encourage the use of the greenest technology available in the sector to reduce emissions and encourage economic and job growth. More reductions from LNG's climate impact will be achieved through investments in electrification of upstream oil and gas production so extraction and processing are powered by electricity, instead of burning fossil fuels.

- Other CleanBC initiatives related to natural gas operations include:
    - Reduction of methane emissions from upstream gas operations by 45 percent by 2025.
    - Electrification of natural gas operations by increasing access to clean electricity for large operators through new transmission lines and interconnectivity to existing lines. This will ensure that extraction and processing operations are powered by electricity, instead of burning fossil fuels.
    - Facilitating the use of carbon capture and storage by ensuring a regulatory framework for safe and effective underground CO_2 storage and direct air capture.
    - Making industrial gas consumption cleaner by putting in place a minimum requirement of 15 percent to come from renewable gas.

CleanBC Industrial Incentive Program

- s.13

- It is expected that BC's LNG projects will be eligible to participate in the new CleanBC Program for Industry, announced by the provincial government in 2018. This program includes an Industrial Incentive Program (IIP) and a CleanBC Industry Fund (CIF). Under IIP, carbon tax costs can be reduced for operations based on performance against world leading emission benchmarks. Once a benchmark for world leading clean LNG production is established, it will replace existing requirements under the current *Greenhouse Gas Industrial Reporting and Control Act*.
- The CIF will invest some industrial carbon tax revenue directly into emission reduction projects, helping to make BC's traditional industries cleaner and stronger.

LNG in the Marine Sector

- Two BC Ferries major Spirit class passenger vessels, Spirit of British Columbia and Spirit of Vancouver Island, have already been converted to LNG. The company is currently considering retrofitting another five vessels in its fleet.
- The retrofits involved replacing each of the ship's four main engines with new dual-fuel engines, and the installation of a large LNG tank beneath the main deck as part of a new innovative fuel bunkering system.
- In 2017, BC Ferries' smaller line of Salish Class vessels were the first passenger vessels in the world to refuel LNG on an open vehicle deck using proprietary Canadian tanker truck technology. BC Ferries currently has three natural gas powered Salish Class vessels.
- BC Ferries' decision to switch their largest ferries from diesel fuel to LNG propulsion is garnering international attention, and has recently earned the company the

European-based Shippax Retrofit Award.

Role of Natural Gas in Tackling Poor Air Quality and Climate Change

- Natural gas emits between 45 percent and 55 percent lower GHG emissions than coal when used to generate electricity.
- "Clean" LNG imports to China may have an additional benefit in reducing emissions by switching from coal to gas, assuming LNG is imported from a project where fugitive methane emissions are reduced and the liquefaction is powered by zero-carbon electricity.
- Coal to gas switching has led to a 78 percent improvement in Beijing's winter air quality over the last five years, and an annual reduction of 178 million tonnes of carbon dioxide in Beijing and surrounding areas has been calculated as a result of coal to gas switching.
- Export of LNG from BC could have the potential to displace more emissions-intensive forms of energy in other jurisdictions, helping to meet global climate goals while providing economic opportunities both at home and abroad.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Upstream Investment and Competitiveness

Issue: Upstream Investment and Competitiveness of BC Oil and Gas Industry

Response:

- The natural gas industry is a global industry with over 50 producing jurisdictions in the world. BC is the seventeenth largest producing jurisdiction in the world and maintain a competitive position to continue to attract industry investment.
- The Province conducts a competitiveness assessment for its industry every two years with the most recent assessment being completed in 2019.
- This assessment affirmed that BC has competitive advantages due to its prolific natural gas resource in the liquid-rich Montney formation and a competitive royalty regime when compared against similar jurisdictions.
- The assessment also identified risks to competitiveness including commodity prices, transportation costs, regulatory timelines and policies that are acting as impediments to investment.
- The Province takes competitiveness issues seriously and will continue to address each as they arise to ensure that our industry continues to compete in the global environment.

Background/Status:

- Competitiveness is defined as the extent to which the business environment is conducive to attracting investment in the upstream natural gas sector.
- The Ministry of Energy, Mines and Petroleum resources has been conducting bi-annual competitiveness assessments since 2001 that look at the province's competitive position versus Alberta. Starting in 2011, given the changes in production patterns brought about by tight and shale gas development, the competitiveness assessments changed the scope of comparison to assess additional North American formations.
- The most recent of these analyses was more indepth. It evaluated and compared BC's regulatory efficiency, market access, resource base, fiscal competitiveness and climate policy, to three other jurisdictions; Montney in Alberta, Permian in Texas and Marcellus in Pennsylvania. The study concluded that the Government of BC has established a competitive policy and regulatory environment that balances positives such as the province's world class resources with the geographic reality of being at the end of a pipeline to distant markets.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

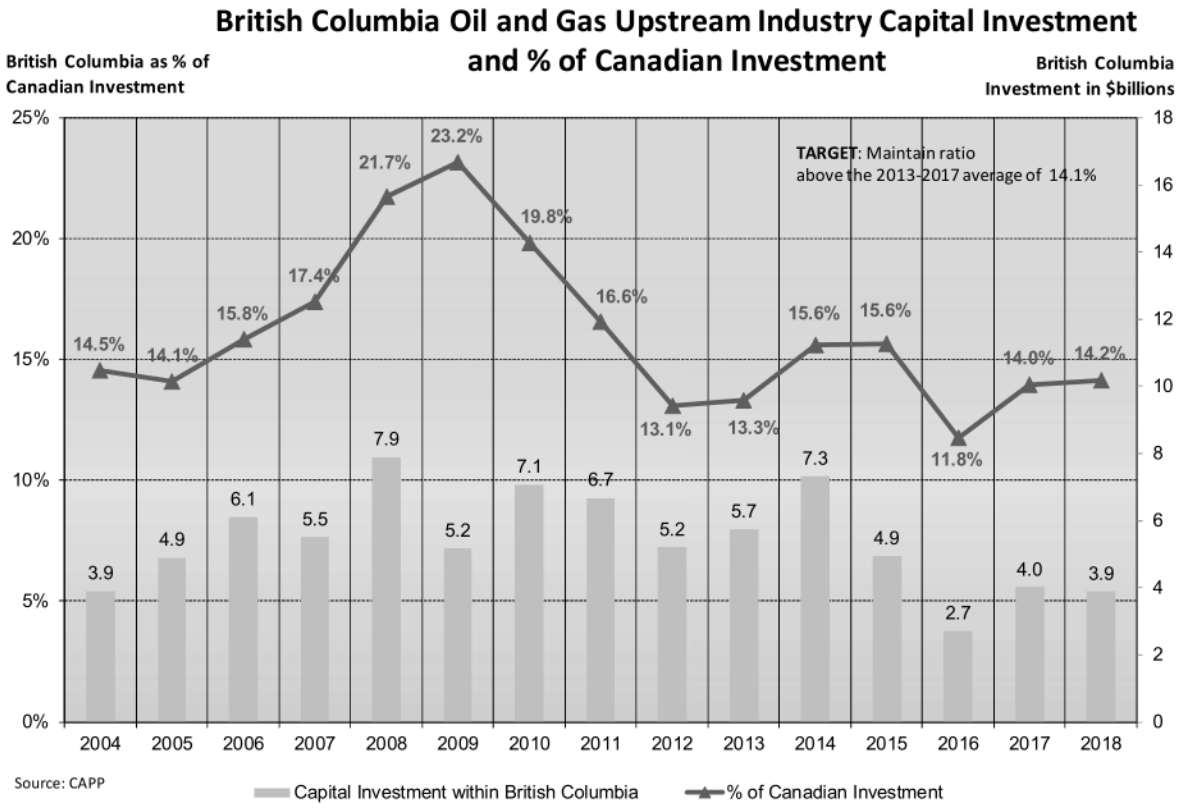
- The Appendix provides the BC upstream investment figures and percentages of BC investment as a share of total Canadian investment from 2004 to 2018 (source: Canadian Association of Petroleum Producers - CAPP).

Attachment: Appendix – BC Oil and Gas Upstream Industry Capital Investment and % of Canadian Investment

Contact:

May Mah-Paulson	ADM	Oil and Gas Division	778-698-9691

Appendix


British Columbia Oil and Gas Upstream Industry Capital Investment and % of Canadian Investment
British Columbia as % of Canadian Investment
British Columbia Investment in $billions
TARGET: Maintain ratio above the 2013-2017 average of 14.1%
25%
20%
15%
10%
5%
0%
18
16
14
12
10
8
6
4
2
0
14.5%
14.1%
15.8%
17.4%
21.7%
23.2%
19.8%
16.6%
13.1%
13.3%
15.6%
15.6%
11.8%
14.0%
14.2%
3.9
4.9
6.1
5.5
7.9
5.2
7.1
6.7
5.2
5.7
7.3
4.9
2.7
4.0
3.9
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Source: CAPP
Capital Investment within British Columbia
% of Canadian Investment

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Questions on Subsidies

Revised: June 12, 2020

Issue: **Recent media and NGO reports have identified royalty programs as subsidies. Royalty programs are not subsidies**

Response:

- The Ministry of Energy, Mines and Petroleum Resources does not provide subsidies to oil and gas producers.
- The Province's royalty programs exist to encourage oil and gas companies to invest in British Columbia. Each program is designed to either reduce the royalty to cover the Crown's share of development costs or address a cost burden that producers would not be exposed to in other jurisdictions.
- The Province can both create an attractive investment climate while insuring a fair return for our resources.
- Overall, royalty programs make a positive contribution to the provincial economy as the Government elects to take a smaller royalty on each unit of oil or gas produced to increase production and overall revenue.
- The revenues that flow from royalties are used to provide benefits to British Columbians in the form of health care, education, public infrastructure and social services.

Background/Status:

- A subsidy involves a transfer of money from government to a private company to accomplish a government objective. Government is not paying money to oil and gas companies, either directly or indirectly.
- The Province received nearly $160 in net royalties during the 2019/2020 fiscal year.
- The royalty framework for the natural gas industry was created to recognize the cost structure and revenue profiles of the industry. As with other industries, it is designed to balance revenues with growth and investment.
- Deductions under royalty programs coincide with economic activity and revenue generation – programs encourage producers to make a greater investment in our Province. The revenue to government that is relied upon from royalties paid are used to pay for our healthcare, our schools, our daycares, and affordability commitments.
- The oil and gas industry is competitive and global in nature. Producers will invest where they can generate a competitive return. BC competes for investment not

only with Alberta, but worldwide. Royalty programs are key to our ability to attract oil and gas capital investment this competitive market.

- Oil and gas companies pay money to the Provincial Government for the right to operate in British Columbia. The royalty framework reduces the amount they pay to the Province, with the goal to encourage them to make larger investments in the BC economy than they would if the royalty credit programs did not exist.
- Government believes that by collecting a bit less on each barrel of oil or cubic meter of gas produced, it can collect more money overall since companies will be more willing to invest here, and production will be higher.
- Credits can reduce royalty amounts, but there is always some amount paid to government when oil and gas production occurs. Revenue to government that flows from royalties paid by the companies are the revenues we rely on to pay for public services, and to share in our combined wealth.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: COVID-19 – Support for B.C. Oil & Gas Industry

Revised: June 12, 2020

Issue: **The Provincial and Federal governments have introduced and are implementing various measures to support the oil and gas industry in response to challenges stemming from the COVID-19 pandemic**

Response:

- Commodity prices, economic uncertainty and the COVID-19 pandemic have created extraordinary challenges within energy markets both in Canada and around the world.
- In order to support the sector, which employs many British Columbians, we have:
    - Created three new programs supported by Government of Canada funding of $120 Million that will clean up dormant and orphan well sites in B.C., while promoting job opportunities for oil and gas service workers hard-hit by the global COVID-19 pandemic.
    - Enabled the granting of a one-time, one-year continuation of drilling licenses and leases due to expire between June 1, 2020 and May 31, 2021.
    - Provided some relief on the tax front including:
        - Putting on hold the planned April 1 carbon tax increase;
        - Cutting the school tax in half to provide the industrial sector with savings; and
        - Extending tax filing and payment for the Employer Health Tax.
    - Directed BC Hydro to allow major industries to defer 50% of their bill payments for three months.
- Additionally, the BC Oil & Gas Commission has taken steps to respond to the COVID-19 pandemic by:
    - Deferring the payment due date for the 2019/20 annual Pipeline Liability Levy from 30 days to 90 days;
    - Postponing invoicing of the Orphan Liability Levy until Sept 1; and
    - Suspending activity permit or authorization expiries during the state of emergency.
- We will continue to offer support to those affected by COVID-19 through various programs like the COVID-19 Action Plan which will provide $5 billion in income supports, tax relief and direct funding for people, businesses and services.
- We will continue to work with the Federal government and stakeholders to protect the livelihoods of British Columbians who work in this industry.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

Global Market Conditions:

- Global oil markets are now facing an unprecedented double shock; a demand crisis due to reduced economic activity and a price/market share war that could push oil prices to lows not seen in years. The value of a barrel of oil has shrunk by approximately half since the revenue forecast that informed Budget 2020 was completed.
- B.C. is not a major oil producer as its portion of the western Canadian sedimentary basin is primarily natural gas prone. While BC only produces approximately 25,000 barrels per day of oil, it also produces over 100,000 barrels per day of natural gas condensate. Condensate prices are closely linked to the price of oil.
- The effects of the pandemic are expected to impact near-term global economic growth. Reduced GDP growth will in turn reduce demand for energy products including oil.
- All of B.C.'s condensate production as well as a significant portion of its natural gas production makes its way into Alberta for use in the oilsands. It is not expected that this demand will decline in the near term as those projects have a multi-decade life cycle and Canadian condensate has a transportation cost advantage over condensate imported from the U.S., which is also used as a diluent for bitumen. Although the demand for condensate isn't likely to subside, the value has dropped dramatically in concert with oil prices.

Relief Measures:

- On April 17, 2020, the federal government announced a multibillion-dollar bailout package for Canada's oil and gas sector including $120 million for British Columbia. On May 13, 2020, the province announced three new programs to bring this funding to B.C. industry: $100 million has been allocated to the Dormant Sites Reclamation Program, $15 million to the Orphan Sites Supplemental Reclamation Program and $5 million to the Legacy Sites Reclamation Program. The funding will support jobs for more than 1,200 British Columbians working in the service industry on projects that will help protect the environment and achieve CleanBC goals.
- Government also provided $5 billion in income supports, tax relief and direct funding for people, businesses and services through the COVID-19 Action Plan which dedicates $2.8 billion to help people and fund the services they need to weather the crisis while $2.2 billion will provide relief to businesses and help them recover after the outbreak.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Cross Reference: Global Oil Prices

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Methane Regulations and Federal Equivalency Agreement

Revised: June 6, 2020

Issue: Methane equivalency process concluded in spring 2020

Response:

- The Federal Government has implemented regulations to reduce methane emissions from the oil and gas sector. However, the Federal Government can order that these regulations do not apply in a province if the two governments agree that equivalent regulations exist in the province.
- In December 2018, BC amended the *Drilling and Production Regulation* to require methane emission reductions and monitoring from the upstream oil and gas sector.
- As outlined in CleanBC, BC's regulations aim to reduce methane emissions from the oil and gas sector by 45 percent below 2014 levels by 2025.
- The BC regulatory approach considers BC's specific industry makeup including economics and costs, competitiveness as well as policy and legislative implications.
- BC's methane emission regulations came into force on January 1, 2020 and will reduce methane emissions by 10.9 megatonnes of carbon dioxide equivalent over a 10-year period, which is like taking 390,000 cars off the road each year.
- BC's regulations will produce more emission reductions than the federal regulations. The Federal Government's assessment of the two regulatory approaches estimates greater reductions from BC's approach before 2025 and afterwards.
- On April 15, 2020, the equivalency process concluded. With publication of the Order in Council package in Canada Gazette Part II, the federal methane regulations stood down and only the provincial methane regulations apply in BC.
- BC was the first province to conclude an equivalency agreement with the federal government and have the federal methane regulations stood down.

Background/Status:

- Under the *Canadian Environmental Protection Act*, provinces have the flexibility to design a program for their jurisdiction and seek equivalency with federal government requirements. Once equivalency is demonstrated, the federal methane regulations would not apply in BC.

- On December 17, 2018, BC Reg. 286/2018 amended the *Drilling and Production Regulation*, the methane emissions regulation under the *Oil and Gas Activities Act* (OGAA), which aims to reduce methane emissions by 45 percent by 2025, relative to 2014 levels.
- The provincial methane regulations set emission limits on the fugitive emissions and venting sources from BC's upstream oil and gas industry, which includes leak detection and repair, pneumatic devices, compressors, glycol dehydrators, storage tanks, and surface casing vents.
- As part of the requirements to meet equivalency with federal methane regulations, the Ministry of Energy, Mines and Petroleum Resources (Ministry) amended the OGAA to enable citizen reporting of suspected violations of the methane reduction regulations.
- The Ministry, Climate Action Secretariat, and the Oil and Gas Commission have worked closely with the federal government to ensure that the statutory requirements for an equivalency agreement have been met and have confirmed through the modelling that the BC methane reduction regulations demonstrate the targeted 45 percent reduction by 2025.
- On February 26, 2020, an agreement on the *Equivalency of Federal and British Columbia Regulations Respecting the Release of Methane from the Oil and Gas Sector in British Columbia* was signed by the federal and provincial governments.
- On April 15, 2020, the federal government published an Order-in-Council package in Canada Gazette Part II to stand down the federal regulations.
- On an annual basis, the Province will share information with the federal government on the implementation and effectiveness of the provincial regulations in reducing methane emissions, and on compliance and enforcement activities.
- In 2017, the oil and gas sector accounted for approximately 10 million tonnes of greenhouse gas (GHG) emissions in BC (15 percent of BC's total emissions). Methane emissions account for about 22 percent of the total GHG emissions from oil and gas sector - about 2.1 million tonnes carbon dioxide equivalent (CO_2e). GHG emissions from BC's oil and gas sector decreased between 2014 and 2017, while production has increased over the same time period.

Other Provincial Actions Focused on Methane and Other GHG Emissions

Methane Emissions Research Collaborative (MERC)

- MERC is comprised of the Ministry of Energy, Mines and Petroleum Resources; the Ministry of Environment and Climate Change Strategy; the Oil and Gas Commission; the Canadian Association of Petroleum Producers; Explorers and Producers Association of Canada; Geoscience BC; and the Pembina Institute.

- MERC delivers practical science-based studies that will result in credible and relevant information to address knowledge gaps on methane emissions related to oil and gas development in BC.
- It provides an effective platform for industry and government to work collaboratively to identify research questions and projects to meet methane reduction goals.
- MERC has established a three-year work plan (2019 – 2021) for data collection and validation, emission quantification, detection and mitigation technologies.
- Research projects will fill knowledge gaps in methane emissions data, improve the accuracy of the emissions baseline and test the effectiveness of new technology. The results will help to optimize regulatory stringency and inform the update of provincial policies and regulations to meet methane emission reduction goals.

Clean Growth Infrastructure Royalty Program (CGIRP)

- The CGIRP offers an incentive for BC's natural gas producers and/or pipeline companies in partnership with producers, to invest in clean technologies that will result in reduced GHG emissions. CGIRP is a key Provincial incentive program for this sector, providing up to 50 percent of eligible project costs in royalty deductions.
- Eligible CGIRP projects in 2020 include electrification of oil and gas equipment and facilities and infrastructure projects that reduce venting/combustion emissions, helping achieve the legislated Province's methane and GHG reduction goals and demonstrate further sustainable management in the oil and gas sector.
- Project applications from the 2020 Request for Applications are being evaluated.
- The 12 approved projects under the Sustainability category from the 2019 CGIRP program are expected to cumulatively reduce 2.1 million tonnes CO_2e by 2029. This is equivalent to taking 75,000 cars off the road each year.

Western Provinces, Environment and Climate Change Canada (ECCC), and Canadian Association of Petroleum Producers (CAPP)

- The Province continues to work with ECCC, CAPP and other stakeholders including environmental non-governmental organizations to ensure meaningful reductions can be achieved in a cost-effective and efficient manner. Information sharing on equivalency modelling, alternative leak detection technologies, best fugitive emission management practices, measurement, monitoring, reporting, compliance and enforcement is ongoing.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Canada Energy Regulator

Revised: March 8, 2020

Issue: Establishment of the new Canada Energy Regulator in August 2019

Response:

- In June 2019, Parliament passed Bill C-69, which replaced the *National Energy Board Act* with the *Canadian Energy Regulator Act*.
- The *Canadian Energy Regulator Act* came into force on August 2019 transitioning the National Energy Board (NEB) to the new Canada Energy Regulator (CER).
- Key themes in the *Canadian Energy Regulator Act* include: a modern governance structure; timely and predictable decisions; strengthened safety and environmental protection; greater Indigenous participation; and more inclusive public participation.

Background/Status:

- Oil and natural gas pipeline systems are important to BC. Pipelines transport energy to service British Columbia, Canada, the United States and offshore markets.
- Pipelines that cross interprovincial or international borders are regulated by the CER such as the Trans Mountain Expansion Project and Enbridge's BC natural gas transmission pipeline.
- BC monitors and at times registers as an intervenor with CER pipeline proposals that affect BC's access to energy markets.
- There remain concerns from industry and provinces such as Alberta and Saskatchewan that energy projects, such as pipelines needing to go through the new CER approval process may see:
  - Longer project reviews that are more costly to get approved, and
  - Increased requirements from both the impact assessment and regulatory review which need to consider a broader range of factors.
- Regulations made under the former *National Energy Board Act* remain in force until they are repealed, or others made in their stead, as per the *Interpretation Act*.
- Updates to CER regulations are being implemented through a phased approach. The CER publishes a public list, with descriptions, of planned or anticipated federal regulatory changes that the CER intends to bring forward (Forward Regulatory Plan).

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Bill C-69 also replaced the Canadian Environmental Agency (CEA) with the Impact Assessment Agency (IAA) governed under the *Impact Assessment Act*.
- BC supported the Bill's new IAA as it aligns with principles in BC's new *Environmental Assessment Act* (EAA) and there is a high potential that 'one project, one review' can be achieved through either coordination (informal) or substitutions (formal).

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Scientific Review of Hydraulic Fracturing and Response Action Plan

Revised: June 16, 2020

Issue: Summary of the Action Plan and current measures being taken in response to the Scientific Review of Hydraulic Fracturing

Response:

- British Columbians rely on natural gas and want to know that it is being responsibly developed in a way that does not harm our shared environment.
- An independent scientific panel (panel) was asked to review the practice of hydraulic fracturing and BC's associated regulatory regime to ensure that our natural resource development is safe and responsible.
- The report produced by the panel and submitted in early 2019, concluded that the regulatory regime appears robust, and it made no recommendations to curtail hydraulic fracturing.
- The report identified improvements that could be made, including more research to address knowledge gaps.
- The Ministry of Energy, Mines and Petroleum Resources (Ministry) worked across government and with the BC Oil and Gas Commission (Commission) to assess the recommendations contained in the report.
- The result of this work is an Action Plan that directly responds to the recommendations of the report and advances improvements to regulatory and policy tools and processes, increased scientific research and baseline monitoring, and improving relations with the public and Indigenous peoples.
- Many actions have already been taken by both government and the Commission to address the recommendations, demonstrating our commitment to the protection of BC's environment.

Background/Status:

Hydraulic fracturing

- Hydraulic fracturing is an industrial activity used to develop unconventional oil and gas resources. It has been used for decades and widely in BC since 2004.
- Hydraulic fracturing involves injecting a fluid, primarily composed of water, sand and small amounts of chemical additives (friction reducers and surfactants) at a high

enough pressure to fracture or crack the rock. Sand holds the cracks open, allowing the natural gas to migrate to the wellbore.

- BC has extensive experience in regulating the oil and gas industry, including hydraulic fracturing, and comprehensive regulatory requirements under the *Oil and Gas Activities Act* and its regulations.
- The Commission has taken a leading role in developing regulations that protect British Columbians from the risks associated with hydraulic fracturing, including detection and mitigation of induced seismicity and regulation of dams and dugouts.
- A 2015 independent review, conducted by Ernst and Young, found that BC has a robust regulatory framework governing hydraulic fracturing.

Panel Report on the Scientific Review of Hydraulic Fracturing

- In 2018, the provincial government (following up on an election platform commitment) commissioned a 3-member scientific panel to conduct an independent Scientific Review of Hydraulic Fracturing in BC to understand the role of hydraulic fracturing as it relates to impacts on water quantity and quality, induced seismicity and fugitive emissions.
- Throughout 2018, in more than 50 sessions, the panel met with over 60 experts including scientific researchers, industry and industry associations, Indigenous peoples, the regulator, all levels of government and environmental organizations.
- The panel based its report on the information provided by the experts as well as on published and unpublished scientific research from a broad variety of sources.
- The panel concluded in its report that the current regulations under many acts appear to be robust and that additional research is needed to support the responsible development of BC's shale gas resources.
- The panel report's recommendations focused on addressing knowledge gaps including the need for increased research, monitoring, regulatory enhancements, data management and reporting. They advised creating a "By British Columbia for British Columbia" strategic research partnership.
- A June 2019 information bulletin publicised actions government had taken to date to address the panel's recommendations. The information bulletin also indicated that a cross-agency working group would deliver a long-term Action Plan to the Minister in December 2019.

Response Action Plan

- A cross-agency working group has been meeting since the panel report was received to review, assess and draft a response to the report recommendations and has submitted an Action Plan to the Minister in December 2019.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- The Action Plan directly responds to the scientific panel's recommendations in the context that the Province has a robust regulatory system in place for hydraulic fracturing that could be improved by: improvements to regulatory and policy tools and processes, increased scientific research and baseline monitoring, and improving relationships with the public and Indigenous peoples.
- The Action Plan focuses on enhancing existing initiatives and building BC's partnerships.
- The Action Plan is divided into four sections:
    - Section 1 mirrors the structure of the panel report. It provides a high-level overview of the panel's comments and commits agencies to actions on the topic areas of: Water Quantity, Water Quality, Induced Seismicity, Fugitive Emissions, and Cumulative Effects and First Nations.
    - Section 2 identifies collaborative research partnerships and opportunities especially around water monitoring and induced seismicity.
    - Section 3 focuses on improving information sharing and transparency with the public and Indigenous peoples.
    - Section 4 summarizes government actions that have been completed, are underway or are being actioned as part of the Action Plan. Many of these improvements were already underway during the panel review or have since been undertaken.

Next Steps

- The cross-agency government working group will continue to track and report out on the progress of the Action Plan.
- Implementation of the Action Plan will rely on support from across the natural resource sector Ministries as well as the Commission.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Clean Growth Infrastructure Royalty Program

Revised: June 15, 2020

Issue: Summary of the current status of the Clean Growth Infrastructure Royalty Program.

Response:

- The Clean Growth Infrastructure Royalty Program (Program) is part of the Province's comprehensive CleanBC plan for climate action, clean energy and sustainable economic growth. The Program was successfully run for the first time in 2019, and this is its second year.
- The 2020 Program was launched on February 27, 2020 and the Request for Applications (RFAs) closed on May 14, 2020.
- The Province has allocated up to $150 million in royalty deductions to be competed for by industry in the 2020 Program, with two categories of projects: Growth projects and Sustainability projects.
- In the 2020 Program the Ministry received 64 project applications from 18 producer companies and 2 pipeline companies. Of the 64 project applications, 31 are for Growth projects and 33 are for Sustainability projects.
- The evaluation of the applications for the 2020 Program is currently underway.
- Growth projects support jobs for British Columbians, upstream competitiveness and investment in rural communities and the province.
- Sustainability projects target greenhouse gas emission reductions through innovative infrastructure and electrification.
- The 2019 Program resulted in the approval of twenty-four (24) new electrification, emissions reduction, pipeline, and road infrastructure projects.
- The 12 Sustainability projects from the 2019 Program are estimated to result in total emission reductions of 2.1 million tonnes (CO_2 equivalent) between project completion and December 31, 2029.
- Together, these 24 projects will result in no net increase to carbon dioxide emissions.

Background/Status:

- In early 2020, Treasury Board approved continuation of the Program for three years for $150 million in royalty deductions annually.
- The Program is modeled on the previous Infrastructure Royalty Credit Program and Clean Infrastructure Royalty Credit Program, which provided royalty

deductions for infrastructure projects related to electrification, emissions reductions, roads and pipelines.

- The Program also allows royalty deductions for value-added infrastructure projects.
- The purpose of the Program is to help achieve greenhouse gas reduction goals and methane reduction targets, while also facilitating job creation, rural development and maintaining competitiveness in the upstream.
- Growth and Sustainability project applications are being evaluated together in the 2020 Program.
- For 2020, the 64 growth and sustainability applications requested royalty deductions totalling $313 million, well oversubscribing the $150 million available. The growth projects requested $164 million in deductions, the sustainability projects requested $149 million. In 2019, the RFA response was more modest with 27 project applications received requesting $171 million in deductions.
- For projects approved under the Program, applicants will be required to fund the entire cost of an approved project and may receive royalty deductions for up to 50 percent of the project cost.
- All risks and costs in building an approved infrastructure project rest with the applicant.
- For Growth projects, royalty deductions are released only when revenue neutrality is met - where net royalty revenue from new wells drilled due to the project exceeds the royalty deduction amount released.
- For sustainability projects, royalty deductions are released in two equal payments, half at completion of the project and half one year after completion.
- The Program is governed by the Petroleum and Natural Gas Royalty and Freehold Tax Regulation.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Federally Funded Programs for Dormant and Orphan Well Clean-up

Revised: NEW

Issue: **Programs will create jobs for British Columbians, stimulate the economy and clean-up the environment**

Response:

- B.C. is taking action to accelerate the restoration of orphan and inactive well sites with $120 million of funding from the federal government.
- Through three programs, the Province is supporting jobs for B.C. workers in oil and gas field service companies to clean up the environment and help restart the economy.
- The Dormant Sites Reclamation Program launched May 25, 2020 and received an overwhelming response with more than 1600 applications from over 100 companies.
- It is estimated that the program could support up to 1,200 jobs for British Columbians.

Background/Status:

- On April 17, 2020, as a response to the economic challenges resulting from COVID-19, the Government of Canada announced a funding package designed to rapidly increase employment in the oil and gas service sector while reducing the environmental footprint of the industry in relation to inactive and orphan well sites.
- B.C. has allocated the $120 million in federal funds to three new programs: $100 million to the Dormant Sites Reclamation Program; $15 million to the Orphan Sites Supplemental Reclamation Program; and $5 million to the Legacy Sites Reclamation Program.
- B.C. is committed to working with Indigenous peoples and companies in the design and implementation of all three programs.
- Work under the programs must be completed by fall 2022 with funding dispersed by December 31, 2022, as per the agreement with the federal government.
- Funds not dispersed by the end of the term of the agreement must be returned to the federal government.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Dormant Sites Reclamation Program (DSRP)

- The DSRP will offer opportunities for oil and natural gas service sector contractors in B.C. to apply for a financial contribution to undertake and complete work on reclamation of dormant sites (i.e., wells that have been inactive for five consecutive years and are unlikely to be returned to service).
- The DSRP will provide some near-term relief to industry by offsetting a portion of eligible costs and ensure that jobs are maintained in the B.C. oil and gas service sector while also allowing more rapid progress on the clean-up of dormant sites.
- The DSRP is offered in two increments of $50 million to oil and gas field service contractors based in B.C. with registration, office and operations in B.C. Successful applicants will be provided with up to $100,000, or 50% of total costs, whichever is less, for dormant site clean up projects.
- The first increment opened for applications on May 25. Design of the second increment is underway; the launch date for the second increment is November 1, 2020.
- The DSRP includes an on-line nomination process, launched June 15, 2020, that provides the opportunity for Indigenous peoples, landowners and local governments to provide input on sites to be considered for priority remediation in the second increment of the program.

Orphan Sites Supplemental Reclamation Program (OSSRP)

- An orphan designation is given by the BC Oil and Gas Commission (BCOGC) to wells and associated operating areas when the operator is insolvent or can't be located. Orphan sites represent a financial and environmental liability directly to the Province and are managed by the BCOGC.
- The federal terms for funding dictated that work must be incremental to that already planned by the Province. The BCOGC has planned $27 million of Orphan site restoration in fiscal 2020/21. The OSSRP supports supplemental work this fiscal as outlined in BCOGC's Supplemental Orphan Work Plan.
- Upon approval of the Supplemental Orphan Work Plan by B.C., B.C. will transfer $15 million of the federal funds to the BCOGC to undertake the activities detailed in the Supplemental Orphan Work Plan. These funds will be disbursed to oil and gas service companies and contractors retained by the BCOGC for reclamation work.
- Any funds not expended by the BCOGC on the Supplemental Orphan Work Plan will be returned to B.C. at the conclusion of the Program.
- The OSSRP also includes the opportunity for Indigenous peoples, landowners and local governments to nominate orphan sites for restoration. This was launched in conjunction with the DSRP on-line nomination process.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Legacy Sites Reclamation Program (LSRP)

- There are legacy disturbances in northeast B.C. associated with historic oil and gas development. These sites consist primarily of historic seismic cut lines. There are more than 70,000 km of such features in northeast BC.
- A memorandum of understanding (MOU) has been completed between EMPR, the BCOGC, the Ministry of Forests, Lands and Natural Resource Operations and Rural Development, the Canadian Association of Petroleum Producers and the Explorers and Producers Association of Canada to provide funding and oversight for the reclamation of legacy sites.
- The $5 million of federal funds for the LSRP will be administered by the Oil and Gas Research and Innovation Society. This will augment the approximately $1.5 million in existing funds dedicated to reclamation work under the MOU.
- A Management Committee has been established under the MOU to guide the development and implementation of the LSRP. One of the first steps of the Committee will be developing partnerships with Treaty 8 communities and local Governments.
- The partnerships with Treaty 8 communities will enable reclamation work to be performed by Indigenous contractors within their traditional territories.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Sierra Yoyo Desan (SYD) Road

Revised: June 15, 2020

Issue: Summary of the current status of the Sierra Yoyo Desan (SYD) Road.

Response:

- The Sierra Yoyo Desan (SYD) Road is a 180 kilometre long public road, administered by the Ministry of Energy, Mines and Petroleum Resources (Ministry), located east and north of Fort Nelson.
- The SYD Road provides the only year-round access for natural gas producers to significant active and inactive producing oil and gas assets and for considerable current and future dormant and orphan well site, facility and pipeline clean up work.
- The SYD Road also provides safe and reliable road access to traditional territory for the Fort Nelson First Nation.
- The SYD Road has been administered by the Ministry through a Public-Private Partnership (P3) Concession Agreement (CA) since 2004, with operations, maintenance and management (OMM) provided under a contract with a private sector company and funded by oil and gas producers who pay road use charges to the Province.
- The CA expires on September 30, 2020.
- Ministry staff are currently procuring a short-term, three-year road maintenance contract for the SYD Road which would start on October 1, 2020.
- A competitive Request for Qualifications has been completed, and a competitive Request for Proposals was issued in mid-June 2020. Oil and gas companies will continue to be charged road use fees which will fully cover the cost of the new maintenance contract.

Background/Status:

- The Sierra Yoyo Desan (SYD) Road is a 180 kilometre long road that is the primary corridor to over 27,000 square kilometres of oil and natural gas tenures and assets located east and north of Fort Nelson.
- The BC Oil and Gas Commission (Commission) emphasizes that the road is essential access to considerable orphan and dormant wells and the necessary abandonment and site remediation work by the Commission and industry expected over the next 30 years.
- The SYD Road provides access to traditional territory for the Fort Nelson First

Nation including numerous hunting and trapping sites and their cultural education centre located at kilometre 37 of the SYD Road.

- The SYD Road provides the only year-round access for producers to active producing oil and gas operations, including over two dozen active gas plants, facilities and compressor sites, hundreds of kilometres of pipelines and over 1,600 producing natural gas wells. These wells account for 3% of total BC natural gas production and 1% of total natural gas royalties paid in BC.
- Dozens of Fort Nelson residents have jobs associated with the above active natural gas operations and use the SYD Road to go to work each day, most of which are accessed off the SYD Road between kilometre 90 and kilometre 121.
- The Ministry is responsible for the SYD Road from kilometre 8 located at the Fort Nelson airport to the end of the SYD Road at kilometre 188. This responsibility, which began in 2004, is charged under a 99-year lease of the road to the Ministry from the British Columbia Transportation Financing Authority (BCTFA) who owns the SYD Road.
- The SYD Road has been administered by the Ministry through a Public-Private Partnership (P3) Concession Agreement (CA) since 2004, with operations, maintenance and management (OMM) provided under a contract with a private sector company and funded by oil and gas producers who pay road use charges to the Province. The CA was recently extended by approximately 3 months to allow for time to procure a new maintenance contract. The CA now expires on September 30, 2020.
- Ministry staff, with the assistance of Ministry of Transportation staff, are currently procuring a short-term, three-year maintenance contract for the SYD Road which would commence October 1, 2020. A competitive Request for Qualifications has been completed, and a Request for Proposals was issued in mid-June 2020.
- This short-term three year contract will allow time to assess how the contract is working and the ability of road users to continue to pay, meet the Fort Nelson First Nation's strong desire that the Province continues to manage the road, and also allow the ministry to re-evaluate the degree of the Province's longer-term involvement with the road.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	778-698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Trans Mountain Expansion Project - Overview and Permitting

Revised: June 12, 2020

Issue: Trans Mountain Expansion Project Overview and Permitting

Response:

- The Trans Mountain Expansion Project (TMEP) is an interprovincial, federally regulated pipeline project under the jurisdiction of the Canada Energy Regulator (CER), (formerly the National Energy Board [NEB]).
- The Government of Canada purchased the Trans Mountain Pipeline and TMEP from Kinder Morgan in August 2018.
- TMEP requires approximately 1500 provincial permits, all of which require consultation with Indigenous groups.
- The Province continues to accept permit applications from the proponent and has an administrative obligation to review the applications it receives based on their own merits.
- Our government made a commitment to defending British Columbia's (B.C.) interests; however, the courts have determined that the project is legitimate and should proceed. We acknowledge and accept the courts' decisions.
- The Province requires TMEP to follow all applicable regulations, health orders and guidelines, to ensure that workers, Indigenous communities and all British Columbians are protected from COVID-19.

Background/Status:

- TMEP falls under the CER's jurisdiction as it crosses provincial borders.
- TMEP is organized into 7 spreads. Spreads 1 and 2 are in Alberta, and spreads 3 to 7 are in B.C. Spreads 6 and 7 are in the Lower Mainland. Spread 7 includes the Burnaby Terminal, Burnaby Mountain Tunnel and Westridge Marine Terminal. It begins near Edmonton, Alberta and terminates on the B.C. coast. (See **Appendix 1** – Map)
- TMEP will twin Trans Mountain Corporation's (Trans Mountain) existing 1150-kilometre pipeline within the existing right-of way, where possible, from Edmonton to Vancouver.
- The existing pipeline has a sustainable capacity of 300,000 barrels per day (bbl/d) and the new pipeline will have a sustainable capacity of 590,000 bbl/d.
- Projected project costs are $12.6 billion and the expected in-service date is the end of 2022.
- On April 6, 2017, B.C. signed an agreement with Kinder Morgan that provides for revenue sharing of up to $1 billion over 20 years that is to go towards initiatives

and projects that protect the environment and benefit communities. The Federal government agreed to honour that commitment when it purchased Trans Mountain.
    - The agreement also commits B.C to establish a project office to facilitate a timely and efficient regulatory and decision-making process for all provincial regulatory matters related to TMEP or the existing pipeline system.
- Provincial permitting agencies reviewing TMEP permit applications include:
    - Ministry of Forests, Lands, Natural Resource Operations and Rural Development;
    - Ministry of Environment and Climate Change Strategy (including B.C. Parks);
    - Ministry of Transportation and Infrastructure;
    - the B.C. Oil and Gas Commission; and
    - the Agricultural Land Commission.
- **Appendix 2** details the current status of provincial permitting.
- B.C. has been consulting with 71 different Indigenous groups.
- As of June 16, 2020, approximately 48 percent (722) of all the required permits have been approved.

Regulatory Approvals and Key Court Decisions:

- Federal and provincial regulatory and court activity related to TMEP has been in progress since 2010.
- **Appendix 3** contains a detailed account of regulatory and court activities.
- On December 16, 2013 an application was made to the NEB to expand the Trans Mountain pipeline. Construction was proposed to begin in 2017, with the aim of having oil flow through the expansion by December 2019.
- On November 29, 2016 the Federal government approved TMEP with 157 conditions.
- TMEP was reapproved on June 21, 2019 with 156 conditions after the Certificate of Public Convenience and Necessity (CPCN-065) was quashed by the Federal Court of Appeal (FCA) on August 30, 2018.
- In July 2020, several First Nation communities, non-government organizations and communities filed leave for a judicial review of CPCN-065 with the FCA. On February 4, 2020 the FCA concluded that Canada's June 21, 2019 decision to issue the CPCN was valid.
- In April 2020 Tsleil-Waututh Nation filed for leave to appeal the FCA decision with the Supreme Court of Canada (SCC). Due to COVID-19, the SCC suspended hearings on March 25, 2020.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- As a major project, TMEP requires that an Environmental Assessment Certificate (EAC) be authorized, so that provincial regulatory agencies can accept, technically review, consult on and make decisions on project permit applications.
- In April 2017 the City of Vancouver and the Squamish Nation each commenced a judicial review in the BC Supreme Court (BCSC) of the EAC. The City of Vancouver sought a declaration that the EAC is invalid and the Squamish Nation asserted the the EAC was issued without adequate consultation.
- In May 2018 the BCSC dismissed Squamish Nation and City of Vancouver challenges to the EAC. The parties shortly thereafter appealed the BCSC decision to the B.C. Court of Appeal (BCCA).
- In September 2019 the BCCA agreed with the finding of the BC Supreme Court, and thus the EAC remains valid.
- The BCCA recommended that the Province update the EAC to align it with changes stemming from the federal approval of CPCN-065.

Appendices: **Appendix 1 – Map**
Appendix 2 – Permit Status Overview
Appendix 3 – Regulatory and Legal Timeline

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	(778) 698-9691

Page 324 of 479

Withheld pursuant to/removed as

Copyright

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Trans Mountain Expansion Project – Overview and Permitting Appendix 2: Permit Status for the Period Ending June 16, 2020

Revised: June 16, 2020

s.13; s.21

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	(778) 698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Trans Mountain Expansion Project Overview and Permitting – Appendix 3: Regulatory and Legal Timeline

Revised: June 1, 2020

- **June 21, 2010** an Environmental Assessment (EA) Equivalency Agreement signed by the Canada Energy Board (CER) and B.C. Environmental Assessment Office (EAO) on June 21, 2010 allowed the EAO to accept a CER-led review and recommendations as equivalent to a provincial environmental assessment. As a result, the EAO did not require an EA for Trans Mountain Expansion Project (TMEP) under the B.C. Environmental Assessment Act.
- **January 13, 2016** B.C. Supreme Court (BCSC) issued a decision on *Coastal First Nations v. British Columbia (Environment)* 2016 BCSC on the Northern Gateway Project, and by extension TMEP, that required the Province to render a decision on whether to issue an Environmental Assessment Certificate (EAC).
- **May 19, 2016** CER (then National Energy Board [NEB]) released its report to Governor in Council (GIC) supporting TMEP subject to 157 conditions.
- **November 29, 2016** the federal government approved TMEP subject to CER's 157 conditions.
- **December 1, 2016** CER issued the Certificate of Public Convenience and Necessity (CPCN) to Trans Mountain.
- **January 10, 2017** B.C announced that an EAC with an additional 37 conditions had been issued for TMEP to respond to concerns raised by Indigenous groups and address key areas of provincial jurisdiction and interest.
- **April 12, 2017** the City of Vancouver commenced a judicial review in the BCSC to seek a declaration that the EAC is invalid.
- **April 20, 2017** the Squamish Nation commenced a judicial review in the BCSC of the decision of the Province to issue an EAC for TMEP asserting that it was issued without adequate consultation and that the Crown owed them a duty to consult concerning the Equivalency Agreement between B.C. and Canada.
- **May 24, 2018** the BCSC dismissed Squamish Nation and City of Vancouver challenges to the EAC. The parties shortly thereafter appealed the BCSC decision to the B.C. Court of Appeal (BCCA).
- **May 29, 2018** the Government of Canada announced its intention to purchase the Trans Mountain Pipeline and TMEP from Kinder Morgan for $4.5B.
- **August 30, 2018** the Federal Court of Appeal (FCA decision *Tsleil-Waututh et al. v Attorney General of Canada et al.*), quashed federal approval citing inadequate consultation by Canada with Indigenous peoples and failure by CER to fully consider marine impacts.
- **August 31, 2018** purchase of Trans Mountain by Canada was completed.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- **August 31, 2018** Trans Mountain was ordered to cease construction of TMEP and initiate the safe shut down of construction activity. B.C.'s EAC remained valid allowing Trans Mountain to apply for provincial permits.
- **September 20, 2018** the Government of Canada, by order in council (OIC), directed CER to undertake a reconsideration of the effects of project-related marine shipping and to produce a Reconsideration Report by February 22, 2019.
- **February 22, 2019** CER issued its Reconsideration Report and recommended that TMEP be approved, subject to 156 conditions and 16 new recommendations for federal initiatives which should accompany approval of the project.
- **May 6-8, 2019** the BCCA considered whether there are implications for the EAC arising from the "new" NEB report created in support of the second CPCN.
- **June 2019** Canada released its Crown Consultation and Accommodation Report (CCAR) which builds on the previous Joint Federal/Provincial Consultation and Accommodation Report for the TMEP released in November 2016.
- **June 18, 2019** the GIC issued a positive decision on TMEP, noting it was in the national interest and directed CER to issue a new CPCN, based on the CCAR and CER's Reconsideration Report.
- **June 21, 2019** CER issued CPCN to Trans Mountain.
- **September 17, 2019** the BCCA decision agreed with the BCSC decision of May 24, 2018 that the Province had fulfilled its duty to consult and accommodate but allowed the appeal to the limited extent of remitting the conditions in the EAC to the Ministers for reconsideration and consequent adjustment in light of the changes to the original CER report as set out in its Reconsideration Report. Consideration is ongoing and the EAC remains in place.
- **February 4, 2020** the FCA[1] rejected the applications from four Indigenous groups who sought judicial review of the June 18, 2019 GIC decision to issue the CPCN for TMEP concluding that Canada's decision was reasonable and that federal approvals for TMEP continue to be valid.
- **April 6-7, 2020** the Coldwater Indian Band, Squamish Indian Band, Tlseil-Waututh Nation, and the Ts'elxwéyeqw Tribes (Aitchelitz, Skowkale, Tzeachten, Squiala First Nation, Yakweakwioose, Shxwá:y and Soowhalie) have all filed applications seeking leave to appeal the FCA's February 4, 2020 decision to the Supreme Court of Canada (SCC).
- **April 16, 2020** the SCC received notice that Ts'elxwéyeqw have discontinued their application for leave to appeal to the SCC.

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	(778) 698-9691

[1] *Coldwater et al v. Canada (Attorney General),* 2020 FCA 34

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Trans Mountain Expansion Project – Construction, Work Camps and COVID-19 Response

Revised: June 12, 2020

Issue: Overview of construction status, work camps and COVID-19 response

Response:

- Construction of the Trans Mountain Expansion Project (TMEP) re-started following the issuance of the new Certificate of Public Convenience and Necessity (CPCN) on June 18, 2019.
- Major construction is underway at the Burnaby and Westridge Marine Terminals.
- Early works construction is currently taking place at several locations along the pipeline route.
- Full construction is scheduled to start along most of the route by late August 2020.

...

Background/Status

- In September 2019, construction re-started at the Burnaby and Westridge Terminals.
- Early works construction (vegetation clearing, gravel levelling and fencing) is underway at several construction yards and pump stations along the route.
- Construction has started in late May 2020 in the City of Kamloops and will continue for seven months; construction will commence with 30 to 50 workers on-site.
- Surveying, marking and sweeping for utilities is taking place in all spreads.
- COVID-19 created a six week pause with the federal Detailed Route Hearing (hearing(s)). The impacts of this pause to construction start for TMEP in spreads 5-7 are being assessed by Trans Mountain.
- For construction to start, the hearings must be completed and decision(s) reached by the Canada Energy Regulator, such that each of the affected lands can be released. Construction also requires statutory decision maker approval on provincial permit applications for matters under provincial jurisdiction..
- In late August 2020, vegetation clearing of the project right-of-way, access development and removal of surface soil, are scheduled to start in spreads 3-7.
- At peak construction (mid-late 2021), Trans Mountain estimates TMEP will require up to 5,500 workers, providing economic recovery opportunities for communities impacted by COVID-19.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Trans Mountain has established numerous processes and programs to train and hire Indigenous members (hired 300 as of December 31, 2019) and to contract work with Indigenous owned companies in British Columbia (B.C.).
- TMEP relies on a mix of worker accommodation camps (camps), hotels, motels, RVs and other housing arrangements to house its contracted worked force.
- TMEP is also prioritizing and maximizing Indigenous, local and regional hiring to the greatest extent possible, which will reduce worker accommodation needs and pressures.
- Despite these strategies, five camps in B.C. will be required at Valemount, Blue River, Clearwater, Merritt and the Fraser Valley/Cheam First Nation area west of Hope.
- With the exception of Blue River, the four remaining camps are on private land and do not require a provincial license of occupation.
- Camps are primarily regulated by the ***Industrial Camp Regulations*** under the ***Public Health Act***.
- The Valemount camp will become operational in July 2020 and house up to 350 workers by the end of Q3 2020. The Clearwater camp will house up to 460 workers by the end of Q3 2020.
- As part of the Province's response to COVID-19 a Public Health order was issued for industrial camps; this order applies to all of TMEPs camps and accommodation strategies (hotel, motels, private lodging, etc.)
- Trans Mountain has voluntarily prepared a report on its COVID-19 preparedness and planning and shared this report with the provincial and federal governments.
- Trans Mountain continues to report no cases of COVID-19 (as of June 12, 2020) amongst its workforce.

Cross Reference: Trans Mountain Expansion Project Overview and Permitting

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	(778) 698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Trans Mountain Expansion Project – Indigenous Consultation

Revised: June 12, 2020

Issue: Overview of Indigenous Engagement and Consultation

Response:

- Trans Mountain Expansion Project (TMEP) requires over 1500 provincial permits, under various provincial acts all of which require consultation with Indigenous groups.
- Benefit Agreements (Agreements) are a result of ongoing engagement and negotiations between individual Indigenous groups and Trans Mountain. Each Agreement reflects the unique circumstances of the community involved.
- As of February 2020, there are 59 signed Agreements – 45 in British Columbia (B.C.) and 14 in Alberta. Agreements are worth in excess of $500 million.[1]
- B.C. Indigenous groups have benefitted from training, education and business opportunities.
- As of March 31, 2020 over 200 Indigenous participants received training in different programs with a total investment of over $25 million.
- s.16; s.21
- Provincial Consultation with Indigenous groups resumed in June 2019 after pause to allow the Phase 3 Federal Consultation process to conclude.
- Consultation on provincial permit applications continues.

Background/Status:

- Consultation efforts on provincial permitting have been ongoing since 2017, except for a pause due to a request by the Federal Government to allow Indigenous groups to focus on the Phase 3 Federal Consultation process.
- On June 19, 2019 the Ministry of Energy, Mines and Petroleum Resources on behalf of provincial permitting agencies, issued a letter to all First Nations to be consulted on provincial permitting for TMEP.
    - This letter notified First Nations that activity on TMEP was resuming and to expect individual letters from permitting agencies detailing each agency's approach to consultation. Agency letters were sent to First Nations within a week of the June 19, 2019 letter.
- Trans Mountain and B.C. have established working arrangements with two large Indigenous entities to deal with provincial permits – Nlaka'pamux National Tribal

[1] https://www.transmountain.com/news/2020/indigenous-agreements-provide-lasting-economic-and-social-benefits
[2] Data provided in Trans Mountain Reporting to B.C. for period ending March 31, 2020.

Council (NNTC) and S'ólh Téméxw Stewardship Alliance (STSA) via the People of the River Referrals Office (PRRO).

- About 40 percent of provincial permit applications are within NNTC and STSA consultation areas.
- The Provincial regulatory agencies have been working to provide recommendations to Statutory Decision Makers (SDM) in accordance with the working arrangements with NNTC and STSA and to ensure that their input and recommendations on provincial permit conditions are being included in the information provided to the Province's SDMs.

Federal Consultation

- **Indigenous Advisory and Monitoring Committee** (IAMC): In 2017, Canada provided $64.7 million to create the IAMC. It includes six federal members and 13 Indigenous representatives to provide advice to regulators and monitor the TMEP and the existing pipeline. There is no provincial participation.
- **Phase III Consultation process:** On August 30, 2018 the Federal Court of Appeal (FCA decision Tsleil-Waututh et al. v Attorney General of Canada et al.), quashed the federal approval citing inadequate consultation by Canada with Indigenous peoples at the last stage of the consultation process (called Phase III) and failure by the Canada Energy Regulator to fully consider marine impacts.
  - **Late 2018** Canada re-initiated the consultation process with Indigenous groups which began with obtaining input on "how to get the process right". Canada issued the final approach on February 20, 2019.
  - **January 2019** Substantive consultations began with Consultation Teams assigned a defined number of Indigenous groups to maintain consistency and promote a dedicated and substantial dialogue.
- **First Nations Ownership:** On March 15, 2019 the federal Minister of Finance issued a letter to Indigenous groups indicating a commitment to explore the possibilities for Indigenous economic participation in TMEP.
  - **June 18, 2019** Canada announced as part of its approval of TMEP that Finance Canada would be leading an initial round of consultation with Indigenous groups interested in purchasing a stake in TMEP.
  - **February 10, 2020** following the February 4, 2020 FCA,[3] decision, Canada announced its next phase is to officially seek Indigenous economic participation and to examine if there will be an agreement on one particular "consolidator" or whether there's a new option to consider.

Cross Reference: Trans Mountain Expansion Project Overview and Permitting

[3] *Coldwater et al v. Canada (Attorney General),* 2020 FCA 34 . FCA rejected the applications from four Indigenous groups who sought judicial review of the June 18, 2019 GIC decision to issue the CPCN for TMEP concluding that Canada's decision was reasonable and that federal approvals for TMEP continue to be valid.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Contact:

May Mah-Paulson	Assistant Deputy Minister	Oil and Gas Division	(778) 698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: LNG Canada Project Profile

Revised: June 1, 2020

Issue: LNG Canada Project Overview

Response:

- In October 2018, LNG Canada made a positive Final Investment Decision to construct a liquefied natural gas export facility in Kitimat.
- At $40 billion, this project represents the largest private sector investment in Canadian history. The project is expected to generate approximately $23 billion in public revenue over 40 years-new funds available to invest in health care, schools, child care and other key public services in British Columbia.
- To date, LNG Canada has spent more than $2 billion on contracts with Indigenous companies, local companies and companies in British Columbia.
- LNG Canada is on track to deliver LNG by the middle of this decade.
- Government is satisfied this project will continue to meet the key benefits established for LNG developments in BC, which are:
  - Jobs and training for British Columbians;
  - Fair return to the Province for its resources;
  - Respect for and partnerships with First Nations; and,
  - Protection for air, land and water, including living up to BC's climate commitments.
- Government is working closely with First Nations, local communities and industry to ensure the key benefits identified at the start of the project are being realized, as well as ensuring the proponents are meeting the conditions in the Environmental Assessment Certificate and permits.

Background/Status:

Project Description

- LNG Canada is a joint venture between Shell Canada, PETRONAS, PetroChina, Mitsubishi and KOGAS.

- It received a provincial Environmental Assessment Certificate (EAC) and federal approval through a substituted environmental assessment process (single process covering both the Province and Canada) in June 2015. Federal export approval was obtained from the National Energy Board in January 2016.
- LNG Canada has all of the major permits in place from the BC Oil and Gas Commission (OGC), including BC's first LNG facility permit. Permits/authorizations from other provincial and federal regulators are still in process.
- LNG Canada requires that the Coastal GasLink (CGL) pipeline be built as it will supply the natural gas for the export facility (phase 1 capacity is 2.1 billion cubic feet per day (bcf/d)). Phase two of LNG Canada will require an expansion of CGL's capacity (to 5 bcf/d) through the addition of up to 7 compressor stations (for a total of 8). A final decision on whether to pursue phase 2 has not been made.

Construction Update:

- The majority of construction activities in 2020 have focused on site preparation and rough grading, bridges and critical creek works, activities in the marine environment and the construction of Cedar Valley Lodge, that will be the primary facility to house the workforce.
- Currently, there are approximately 1,300 workers on-site. LNG Canada is currently ramping-up their workforce, with an anticipated workforce of 1,500 workers throughout July 2020.
- The first 1,500 rooms at the Cedar Valley Lodge will be ready for occupancy by September 2020, a delay of four months due to COVID-19. It will be home to approximately 7,500 workers during LNG Canada's peak construction schedule (between 2021 and 2024), with up to 4,500 people on site at any one time. Once complete, this self-contained village – limiting housing pressures in the Kitimat-Terrace area – will have a floor space of over 1.2 million square feet, representing the largest all-in-one worker' accommodation centre ever built in Canada.

LNG Canada meeting the benefits expected from LNG development:

- Jobs and training for British Columbians: LNG Canada has invested $1.76 million since 2015 in trades training with 1,382 apprentices to date. LNG Canada has prioritized local hiring first, followed by workers from within BC. LNG Canada has funded 1382 apprentices to date (see LNG Canada Workforce Strategy note).
- Fair return to the Province for its resources: LNG Canada is expected to generate $23 billion in public revenue over 40 years.
- Respect for and partnerships with First Nations: LNG Canada has entered into agreements with all affected First Nations. Haisla businesses have been involved in site preparation, forestry work and environmental services resulting in $1.78 billion awarded in contracts and procurement for Haisla Nation and other Indigenous

Nations. Major contracts include: a $500 million contract for the Haisla Nation/Seaspan joint venture and the Marine Emergency Response and Research Facility contract with the Gitga'at First Nation.

- Protection for air, land and water: LNG Canada is expected to have the lowest GHG emissions intensity of any LNG facility in the world. Emissions resulting from the project will be within the government's legislated emissions reduction targets announced in Fall 2018. Government's regulatory regime at the EAO and OGC continue to monitor and enforce the conditions of the EAC and permits as it does for all other projects.

Cross Reference: COVID-19 LNG Canada and Coastal GasLink
LNG Canada Workforce Strategy

Contact:

			s.17
Michelle Carr	Assistant Deputy Minister	LNG Canada Implementation Secretariat	

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: LNG Canada Operating Performance Payment Agreement

Revised: June 2, 2020

Issue: Overview of key terms of agreement between LNG Canada and the Crown.

Response:

- Operating performance payments were created to recognize LNG Canada's huge upfront investment, and its need to recover a substantial part of the construction costs during the first 20 years of operation.
- This agreement represents part of our work to put the LNG industry on equal footing with other industrial sectors by repealing old measures that created barriers to investment.
- Payments from the agreement total nearly $600 million over 20 years, starting when the LNG Canada project comes into service.
- The provincial government will receive revenues through other streams right from the start of construction. All forms of revenue will allow us to invest in health care, schools, child care, affordable housing and good services for British Columbians.
- This government is committed to transparency and the agreement was made public once it was signed in March 2019.
- The government has met its commitment under the agreement to fully implement the four measures of the LNG fiscal framework.
- The operating performance payments are not a subsidy to LNG Canada – the PST that the project would have paid will be repaid over the agreement's 20 year term.

Background/Status:

- The Operating Performance Payment Agreement was introduced at the same time as legislation was tabled to repeal the Liquefied Natural Gas Income Tax Act in March 2019.
- In short, the agreement specifies the terms by which LNG Canada will pay the province $596 million in place of the PST on construction costs. It replaces upfront PST obligations on LNG Canada's construction costs with future performance-based payments to the Province.
- It represents a small portion (2.6%) of the overall $23 billion in new revenues from LNG Canada over 40 years.
- Term of agreement: ends 20 years after commercial in-service
- Performance Payments – commence after in-service:
    - Triggered with production/shipment of 1st tonne of LNG annually

  - Payments total $596 million (nominal) – equal to estimated PST exemption benefit
  - Low payments early – balloon payments in last 2 years
- Project Measures Certainty:
  - Measures were put in place by November 8, 2019 after LNG Canada consented to an extension past the original June 30, 2019 deadline
  - No changes to Measures during Agreement Term
  - If Measures changed and harm Project, relief remedies available under Agreement – capped at foregone future revenue payments otherwise received by Province (max. $596 million)
- No Indemnity – expressly stated in Agreement
- The agreement is publicly accessible online under 'media assets' found here: https://news.gov.bc.ca/releases/2019FIN0035-000478

Cross Reference: Government Action on LNG Competitiveness

Contact:

May Mah-Paulson	ADM	OGD	778 698-9691

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Coastal GasLink Pipeline Project Profile

Revised: June 17, 2020

Issue: Coastal GasLink Project Overview

Response:

- Once complete, TC Energy and 65% equity holders KKR and Alberta Investment Management Corporation's 670 km Coastal GasLink (CGL) Pipeline will deliver BC natural gas from the northeast (Groundbirch near Dawson Creek) to the LNG Canada facility under construction in Kitimat.
- Initial pipeline construction activities began in January 2019, with the completion date expected in 2023.
- Coastal GasLink has cleared 77% of its right-of-way and delivered nearly 50% of pipe to stockpiling locations along the right-of-way.
- The extent of scheduling delays due to COVID-19 has not been fully determined.
- It is expected that pipe will start being placed in the ground later this summer.
- CGL is gradually and safely ramping up construction activities and is attuned to the latest direction on COVID-19 from the Provincial Health Officer regarding their workforce and accommodation centres.
- Government is working closely with First Nations, local communities and industry to ensure the key benefits identified at the start of the project are being realized, as well as ensuring the proponents are meeting the conditions in the Environmental Assessment Certificate and other permits.

Background/Status:

Project Status

- CGL received its BC Environmental Assessment Certificate (EAC) in October 2014.
- Most of the permits required from provincial agencies for construction activities are in place or are in process (minor amendments are expected during construction).
- Mainline construction will begin this year (2020). Pipe shipments are arriving across the project route and are being stored at designated storage sites.
- A temporary workforce reduction was already planned for March/April due to spring break-up conditions making field work too difficult. CGL is now working to safely

ramp up work while adhering to the Public Health Officer's direction.

- s.21

  scheduling changes, but specifics are not known at this time. Please refer to ***Workforce Accommodations and Related Issues and COVID-19 LNG Canada and Coastal GasLink notes.***
- All of CGL's workforce lodges are joint ventures with First Nations.

Project outcomes

- Once complete, the pipeline will have a capacity of 2.1 billion cubic feet per day (bcf/d) using two compressor stations (equivalent to approximately 40% of current natural gas production levels in BC).
- The EAC covers a phase 2 pipeline expansion of up to 5 bcf/d, which would require 8 compressor stations. The phase 2 pipeline expansion is dependent on LNG Canada's decision to increase capacity at its export facility in Kitimat to manage 5 bcf/d. LNG Canada's EAC also covers this expansion, but it has not made a final decision on whether to pursue phase 2.
- The CGL project is expected to create up to 2,500 jobs during construction (2019 to 2023) and provide up to 35 permanent field positions during operation and maintenance (2023 onwards). Should phase 2 proceed, further permanent field positions will be required.

First Nations

- First Nations businesses have been awarded $820 million in contract work for right of way clearing, medical, security and camp management operations.
- Coastal GasLink has signed agreements with 20 First Nations, representing all Indigenous communities along the pipeline route. Please refer to ***Indigenous Nations Agreements note.***

Compliance and enforcement:

- The BC Oil and Gas Commission, other ministries and the Environmental Assessment Office have statutory responsibility to ensure Coastal GasLink is compliant with all legislation and requirements, including conditions outlined in the EAC.

Cross Reference: *Indigenous Nations Agreements note*

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

COVID-19 LNG Canada and Coastal GasLink

Local Support and Social and Economic Effects

Attachments: Appendix 1 – Coastal GasLink Map

Contact:

			s.17
Michelle Carr	Assistant Deputy Minister	LNG Canada Implementation Secretariat	

Appendix 1 – Coastal GasLink Map

Copyright

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Coastal GasLink and the Morice River area

Revised: July 4, 2020

Issue: A court-ordered injunction allows Coastal GasLink to conduct their work in the Morice River area. Some Wet'suwet'en Hereditary Chiefs remain opposed to the Coastal GasLink project.

Response:

- Wet'suwet'en Hereditary Chiefs and the provincial and federal governments recently signed a Memorandum Of Understanding (MOU) committing to recognizing Wet'suwet'en rights and title and to further negotiations.
- The MOU is an important step in our work to rebuild relationships with the Wet'suwet'en and towards affirming and implementing their rights and title throughout their territory.
- The MOU does not change the status of the Coastal GasLink pipeline.
- The project is permitted and approved for the construction activities underway. That fact has been reaffirmed by the Supreme Court of British Columbia.
- The Coastal GasLink project is supported by Indigenous communities along the entire pipeline route, including the majority of Wet'suwet'en elected councils.

Background/Status:

Coastal GasLink (CGL) Activities

- CGL's critical construction activities in the Morice River area as well as all sections of the pipeline route remain underway. CGL decreased activities over the spring break-up period (the time of year when field construction work is reduced due to soft ground conditions caused by melting snow and thawing ground conditions) and the COVID-19 pandemic.
- The company is gradually increasing activities to support the summer construction program, consistent with COVID-19 protocols.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Wet'suwet'en

- The Wet'suwet'en's hereditary structure consists of five clans – Gil seyhu (Big Frog), Laksilyu (Small Frog). Gitdumden (Wolf/Bear), Laksamshu (Fireweed) and the Tsayu (Beaver Clan).
- Each clan is comprised of houses (13 in total) that are led by a hereditary chief. Some hereditary chiefs have stated opposition to CGL and pipeline development. Four hereditary chief positions are currently vacant. The head chief of the Birchbark House (Gil seyhu clan) has publicly communicated support for the pipeline.
- Five elected Wet'suwet'en band councils - Witset First Nation, Skin Tyee Nation, the Nee Tahi Buhn Band, Ts'il Kaz Koh First Nation (Burns Lake Band) and the Wet'suwet'en First Nation - have supported CGL, and have benefits agreements completed with British Columbia and CGL. The Hagwilget Nation is also an elected Wet'suwet'en council - they have not entered into negotiations.

Memorandum of Understanding (MOU)

- On May 14, 2020, a MOU was signed between British Columbia, Wet'suwet'en Hereditary Chiefs and the federal government. The MOU recognizes Wet'suwet'en rights and title throughout the Yintah (territory) and sets out a process to negotiate an agreement on how to implement them.
- Reunification within the Wet'suwet'en governance structure, along with clear accountabilities, is a central feature of the MOU. Wet'suwet'en governance work is essential for the success of the negotiations that will take place.
- The MOU does not change the status of the CGL pipeline project. However, opposition about the project has been expressed publicly by some Wet'suwet'en leaders both pre- and post-signing of the MOU.

Court injunction

- On December 31, 2019, the Supreme Court of British Columbia granted CGL's interlocutory injunction.
- As part of its reasons for decision, the court noted CGL has acquired the permits and authorizations to lawfully conduct work in the area, and that the law does not condone 'self-help' remedies such as blockades. The court's decision also included enforcement provisions for the RCMP.
- Enforcement operations did occur. They commenced February 6, 2020, and proceeded for a few days.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- On June 5, 2020, the BC Prosecution Service advised the court that criminal contempt proceedings were not recommended against 22 individuals arrested between February 6 and 10, 2020. The court was advised that, should further evidence come forward about dangerous conduct, potential liability under s. 247 (traps likely to cause bodily harm) or other provisions of the Criminal Code could be considered.

Cross Reference: Coastal GasLink Project Profile, Indigenous Nations Agreements

Contact:

Michelle Carr	Assistant Deputy Minister	LNG Canada Implementation Secretariat	s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: LNG Canada and Coastal GasLink Workforce

Revised: June 15, 2020

Issue: LNG Canada and Coastal GasLink pipeline project creating new career and job opportunities for British Columbians

Response:

- LNG Canada and Coastal GasLink's workforces have been impacted by COVID-19. Both companies are now gradually increasing construction activities and will continue to implement the latest direction on COVID-19 from the Provincial Health Officer.
- Collectively, LNG Canada and Coastal GasLink will increase to 2,300 workers by the end of June 2020 (up from approximately 1,800 in May).
- At peak construction, approximately 10,000 direct workers will be employed. It is anticipated that there will be an additional 20,000 secondary jobs resulting from the project.
- LNG Canada and Coastal GasLink are both funding workforce development related initiatives, with a focus on apprenticeship training. These include: LNG Canada's YOUR PLACE, the Trades Training Fund and LNG Canada Connect, while Coastal GasLink has developed the Pathway to Pipeline Readiness Program.
- These programs are providing opportunities for women in the trades, local British Columbians, Indigenous persons and a future generation of skilled workers.
- Jobs and procurement opportunities for Indigenous and local businesses are substantial and growing.
- To date, LNG Canada has spent more than $2 billion on contracts with Indigenous companies, local companies and companies in British Columbia.
- Coastal GasLink has awarded over $850 million in contracts to Indigenous groups across the pipeline right-of-way.
- This means that local and Indigenous businesses are building a stronger foundation for their future and creating new careers in their communities.

Background/Status:

- The provincial government's goals for LNG proposals include a focus on jobs and training opportunities for British Columbians. It is the government's expectation that LNG Canada and Coastal GasLink (CGL) create these benefits for British Columbians.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Workforce Projections:

- Up to 10,000 direct jobs are expected during construction
    - During peak construction in 2022, LNG Canada will employ approximately 7,500 people.
    - CGL will see seasonal peak construction occurring across the pipeline throughout the summers of 2020, 2021 and 2022. Workforce numbers are scheduled to dramatically decrease over each winter and spring due to environmental conditions. CGL will employ approximately 2,500 people during peak construction times.
- There will be approximately 20,000 secondary jobs resulting from the LNG Canada project.
- Phase I of the LNG Canada project will create approximately 950 permanent jobs during operations and maintenance to run the export facility, maintain the pipeline and pursue upstream natural gas exploration and development. Phase 2, if it proceeds, would provide additional jobs.

Industry skills and training initiatives

- LNG Canada's YOUR PLACE is an initiative launched to increase women's participation in the trades. YOUR PLACE graduates have a direct line to employment opportunities with JGC Fluor or one of its subcontractors on the LNG Canada Project site in Kitimat, BC. The Program has been paused until further notice due to COVID-19. The Program status at the end of February 2020:
    - Total applications: 1351
    - Indigenous applications: 464 (35%)
    - Local Women: 300 (22%)
    - 24 women in total have graduated, 7 of which self-identify as Indigenous.
- LNG Canada set up the Trades Training Fund to support industry and apprenticeship training for construction and related trades. To date, $1.76 million has been invested to increase the number of apprentices. The Trades Training Fund has supported 1,382 apprentices to date, with 340 construction job placements in the Kitimat-Terrace region; 64% Indigenous and 20% women.
- LNG Canada Connect is a program designed to support industry and apprenticeship training for construction and related trades and is administered in partnership with the BC Construction Association and CGL. LNG Connect provides a way for local Indigenous, students and unemployed workers to enter the construction workforce and obtain relevant skill sets.

- CGL has invested in regional partnerships with existing skills training and education organizations to provide funding for program development, equipment purchases, classroom 'seats' for participants and targeted bursaries for initiatives. Since 2014, TC Energy's education and training programs have opened over 450 seats in classrooms for students in BC.

LNG Canada Workforce

LNG Canada total expected workforce at the end of June 2020 (people)	1,500

LNG Canada total February 2020 Workforce (people) (reported workforce categories prior to COVID-19)	2,633
British Columbians (% of total)	1370 (52%)
Local Workers (% of total)*	640 (24%)
Indigenous Workers (% of total)*	270 (10%)
Women (% of total)*	399 (15%)

Note: the statistics above represent estimates by LNG Canada, JGC Fluor, contractors and subcontractors. Given the rotational nature of construction jobs, total workforce values are higher than total workers physically present in Kitimat at any one time.

**The workforce categories are not an accumulated total.*

Coastal GasLink Workforce

Coastal GasLink total expected workforce at the end of June 2020 (people)	800

Coastal GasLink total February 2020 Workforce (people) (reported workforce categories prior to COVID-19)	1,235
British Columbians (% of total)	1,091 (78%)
Local workers (% of total) *	699 (50%)

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Indigenous workers (% of total) *	339 (24%)
Women (% of total) *	340 (24%)

**The workforce categories are not an accumulated total. Individuals can be counted in multiple rows.*

Cross Reference: COVID-19 LNG Canada and Coastal GasLink
LNG Canada Project Profile
Coastal GasLink Pipeline Project Profile

Contact:

s.17

Michelle Carr	ADM	LNG Canada Implementation Secretariat

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: LNG Canada/Coastal GasLink social and economic effects and local support for the project

Revised: June 4, 2020

Issue: Update on social and economic effects

Response:

- The economic benefits for British Columbians that are associated with the projects are significant. These include: $23 billion in public revenue over 40 years. This is an unprecedented opportunity for local governments to build a strong future for British Columbians in northern BC.
- Communities most impacted from the projects have received financial support from the Province, including the Northern Capital and Planning Grant (NCPG) and supports for highway, transit, airport and housing projects.
- Our government is allocating $50 million this year to the NCPG, in addition to the $100 million provided last year.
- Both companies have also partnered with affected communities on a number of important community initiatives.
- We understand there are concerns and pressures on local services and programs as development progresses. We are attentive to any trends that develop and will work with local communities, if needed, to help them deal with growth.
- On May 11, 2020, BC announced the creation of the BC Northern Healthy Communities Fund to support communities as they prepare for major economic development. The $25 million fund will be available to local governments, First Nations and non-profits in the region to support local delivery of critical services, such as health and mental health care, housing and child care.
- LNG Canada and Coastal GasLink's Environmental Assessment Certificates have legally binding requirements to develop plans to mitigate social and economic direct effects.
- The scope of direct social and economic effects considered in the Environmental Assessments (EA) included: housing and accommodation; community infrastructure; transportation; health and social services; economy and employment; and emergency services.
- The Province reviews reports from the companies, monitors implementation of the plans, and then evaluates their efficacy at mitigating direct effects. There is a regulatory process in place to address any instances of non-compliance.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- LNG Canada's plan to manage socio-economic effects is called the Community Level Infrastructure and Services Management Plan and Coastal GasLink's (CGL) is the Socio-economic Effects Management Plan.
- The plans commit the companies to implement the mitigations identified during the EA processes to address direct social and economic effects associated with the projects.
- In addition to the regulatory requirements placed on the companies, both LNG Canada and CGL have implemented many voluntary measures that support the local communities (see Appendix 1).
- The Provincial government has also invested millions to support communities impacted by the projects (see Appendix 1).
- Some local governments have raised concerns about social and economic impacts of the projects. Government is reviewing the regulatory reports from the companies and working with those local governments to ensure effective issues identification and resolution where appropriate.

Direct effects:

- Many of the direct effects of the projects are associated with the construction phase and are therefore expected to be short-term in nature, as the large workforce coming to the areas will be over within 4-5 years for LNG Canada (Kitimat and Terrace) and 1-2 years for CGL (along pipeline).
- Impacts on local housing has emerged as a key issue, and both companies are housing workers in workforce accommodations as a primary mitigation measure to limit housing pressures and other adverse direct effects on local communities where construction is occurring (see Workforce Accommodations note).

Indirect effects:

- The Province participates in forums established by the companies that engage Indigenous and local governments and local service providers on project impacts. Some issues that have been raised relate to "indirect effects" of increased economic development (such as increased visible homelessness).
- The Province also engages directly with local governments, regional districts, Indigenous Nations, service providers and stakeholders.
- These forums enable the relevant provincial ministries to stay apprised of key issues and to proactively identify and resolve implementation issues.

Attachments: Appendix 1 – Local Supports

Cross Reference: Workforce accommodations and related issues

Contact:

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

s.17

Michelle Carr	ADM	LNG Canada Implementation Secretariat

APPENDIX 1 – LOCAL SUPPORT

Support Initiatives – Provincial Government

Northern Capital and Planning Grant (MAH)

- On May 11, 2020, British Columbia announced a $50-million investment in BC's North through the 2020 Northern Capital Planning Grant (NCPG). This is in addition to the previous $100-million provided in 2020.

  The announcement can be viewed here.

- On March 27, 2019, British Columbia announced a $100-million Northern Capital and Planning Grant (NCPG), with 80% of the funding going towards to the Regional Benefits Agreement local governments and the remainder going to other northern local governments in the Fraser-Fort George Regional District.[1] NCPG allocations for 2019 and 2020 include:

Local Govt	2019 Grant	2020 Grant	Total Combined Grant
Burns Lake	$ 3,439,000	$ 1,267,000	$ 4,706,000
Fort St. James	$ 3,342,000	$ 1,170,000	$ 4,512,000
Fraser Lake	$ 2,607,000	$ 777,000	$ 3,384,000
Granisle	$ 2,353,000	$ 358,000	$ 2,711,000
Hazelton	$ 2,148,000	$ 340,000	$ 2,488,000
Houston	$ 4,486,000	$ 2,074,000	$ 6,560,000
Kitimat	$ 1,556,000	$ 5,238,000	$ 6,794,000
Mackenzie	$ 4,727,000	$ 2,459,000	$ 7,186,000
Masset	$ 2,753,000	$ 669,000	$ 3,422,000
McBride	$ 2,389,000	$ 519,000	$ 2,908,000
New Hazelton	$ 2,580,000	$ 532,000	$ 3,112,000
Port Clements	$ 2,085,000	$ 338,000	$ 2,423,000
Port Edward	$ 2,098,000	$ 419,000	$ 2,517,000
Prince George	$ 8,135,000	$ 6,527,000	$ 14,662,000
Prince Rupert	$ 8,121,000	$ 6,524,000	$ 14,645,000
Queen Charlotte	$ 2,935,000	$ 710,000	$ 3,645,000
Smithers	$ 6,218,000	$ 3,655,000	$ 9,873,000
Stewart	$ 1,294,000	$ 372,000	$ 1,666,000

[1] Terrace received $8,197,000.

	Telkwa	$ 3,590,000	$ 1,030,000	$ 4,620,000
	Terrace	$ 8,197,000	$ 6,531,000	$ 14,728,000
	Valemount	$ 2,882,000	$ 785,000	$ 3,667,000
	Vanderhoof	$ 5,731,000	$ 3,036,000	$ 8,767,000
	Bulkley-Nechako RD	$ 5,800,000	$ 1,565,000	$ 7,365,000
	Fraser-Fort George RD	$ 4,182,000	$ 1,304,000	$ 5,486,000
	Kitimat-Stikine RD	$ 4,640,000	$ 1,362,000	$ 6,002,000
	North Coast RD	$ 1,712,000	$ 439,000	$ 2,151,000
	TOTAL	$ 100,000,000	$ 50,000,000	$ 150,000,000

That announcement can be viewed here.

Northern Healthy Communities Fund (MAH)	• On May 11, 2020, BC announced that $25 million would be available to communities as they prepare for major economic development through the creation of the Northern Healthy Communities Fund (NHCF), NHCF will be administered through the Northern Development Initiative Trust. NHCF will be available to local governments, First Nations and non-profits in the region to support local delivery of critical services, such as health and mental health care, housing and child care. The announcement can be viewed here.
Highway 16 Transportation Action Plan (MOTI)	The Five Point Transportation Action Plan is improving access to safe transportation options along Highway 16, enabling residents of First Nations communities and other residents to travel safely between communities in the corridor from Prince Rupert to Prince George. The Ministry of Transportation and Infrastructure has committed $8.1-million in provincial and federal funding for the Highway 16 Transportation Action Plan. There are five elements of the plan: • Transit expansion • Community transportation grant program • First Nations driver education program • Highway safety infrastructure improvements • Interconnectivity An additional $300,000 has been allocated, with matching funds being sought from the federal government, in order to extend the Community Transportation Grant Program through to March 2022. More details can be found here.
Northwest Regional Air port – YXT (MAH)	• YXT previously received $4.4M of grant funding for an airport terminal expansion through the provincial BC Air Access Program (BCAAP) in 2015/16. The project completed in 2018.

	• s.17 • Of note: YXT has received $6.2M funding through the federal Airport Capital Assistance Program (ACAP) for a variety of projects over the last four years (starting 2016/17).
Housing, Kitimat-Terrace (MAH)	• Sonders House – partnership with Ksan House Society recently opened 52 homes in June 2019 for individuals who are homelessness or at risk of homelessness under the Rapid Response of Homelessness Program at 4523 Olson Avenue. (Capital Budget $10.3M); and • Stone Ridge Estates - partnership with Ksan House Society recently opened 45 homes in April 2019 for low income families/individuals at 4622 Haugland Avenue (budget $11.1M). In progress: • Housing Needs Report (see next row for more information): ○ With $50,000 in provincial funding from the UBCM-administered Housing Needs Reports program, Terrace and The Regional District of Kitimat-Stikine are collaborating to study housing needs in Terrace and adjoining regional district electoral areas C and E. ○ Kitimat completed its Housing Action Plan and Needs Assessment in early 2020 (but did not apply for funding). • Cedars Motel – In partnership with Terrace & District Community Services Society, renovating an existing motel to provide 22 homes for low income individuals at 4830 16 Highway. It opened last year. (Capital budget $4.1M); • Under the Building BC: Indigenous Housing Fund, working in partnership with M'akola Housing Society on their proposal to build up to 48 homes for Indigenous singles, families and elders. Early feasibility and preliminary stage with an estimated construction completion of Summer 2022. (Preliminary capital budget of $19M); • Under the Building BC: Women Transition Housing Fund, working in partnership with Ksan House Society on their proposal to build up to 22 homes for women and children at risk of violence. Early feasibility and preliminary stage with an estimated construction completion of Summer 2021. (Preliminary capital budget of $8.1M); and • In the nearby local First Nation community of Gitaus, in discussions with Kitselas First Nation regarding their proposal to build up to 40 homes on nation for singles, families and elders in their community. (Preliminary capital budget of $11.4M). • BC Housing is working with Haisla Nation to create 23 on-nation homes in Kitamaat Village for families, singles and elders through the Indigenous Housing Fund – capital budget $12M. • BC Housing is also working with Tamitik Status of Women Association to create 42 units of transition house beds, second stage housing units, and affordable rental homes through the Women's Transition Housing Fund. Kitimat donated the site for the project – capital budget $15M.
Housing Needs Reports Program	In 2018 the Province announced $5M in funding to support local governments to meet new legislative requirements to develop housing needs reports. Administered by UBCM, more information on the Housing Needs Reports Program is available here: https://www.ubcm.ca/EN/main/funding/lgps/housing-needs-report-program.html In the first two program intakes, funding was awarded to several local governments in the North, including:

	• Central Coast Regional District - $75,000 • Granisle - $15,000 • Kitimat-Stikine Regional District (for a report including Hazelton, New Hazelton and electoral area B) - $45,000 • Mackenzie - $10,000 • Masset - $15,000 • Peace River Regional District (for a report including Chetwynd, Dawson Creek, Pouce Coupe and Hudson's Hope) - $140,000 • Port Clements - $15,000 • Smithers - $20,000 • Stewart - $15,000 • Taylor - $15,000 • Telkwa - $15,000 • Terrace (for a report including electoral areas C and E of the Regional District of Kitimat-Stikine) - $50,000 Due to COVID-19, the program's third intake has been postponed, likely to fall 2020. • Some local governments (including some of the above) have also received funding for housing needs reports from the Northern Development Initiative Trust (e.g. Houston).

Support Initiatives – Industry

LNG Canada	LNG Canada has made investments in the social needs and infrastructure of communities in which they operate, specifically Kitimat and Terrace. (More information from LNGC on community and social investments can be found here.) LNGC has also contributed to substantial economic benefits for communities A summary of LNGC's activities and investments targeted to Kitimat and Terrace area: HOUSING & ACCOMMODATIONS • $250,000 funding commitment over 2019-2024 to Tamitik Status of Women and Kitimat Community Development Centre towards operational funds to support delivery of services to vulnerable groups. • $270,000 since 2013 to Kitimat and Terrace community foundations CONTRACTING AND PROCUREMENT • The Project prioritizes contracting and procurement with the Haisla Nation and other Indigenous-owned businesses, and with local area businesses. At the end of 2019, the Project had awarded contracts and procurement in excess of $2.1 billion to businesses in BC. Of this amount, over $1.4 billion has been awarded to local area and Indigenous businesses. WORKFORCE DEVELOPMENT / TRAINING • As of December 2019, LNG Canada has invested over $4 million in workforce development programs, focusing on trades training and development programs that are designed to increase the participation of local area residents, Indigenous communities, women and British Columbians overall. Several programs delivered in partnership with the BC Construction Association have promoted skilled trades development in BC. These include: • LNG Canada Connect, which has provided 340 construction job placements for workers from the Kitimat-Terrace area • Gear up Fund, which has contributed almost $200,000 towards removing barriers to

employment by funding tools, training, clothing and gear essential for those entering the construction industry;
- LNG Canada Trades Training Fund, which has funded 1382 apprentices in connection with 540 employers
- Your Place program: As of Q4 2019, the first cohort of 12 female apprentices completed the 4-week training program and were all extended employment offers as apprentices.

COMMUNITY HEALTH

- $200,000 commitment to support health care aid training, working with Kitimat Valley Institute
- $550,000 commitment over 2019-2021 towards construction of the Kitimat Pilot Dementia Home and to work with the Kitimat Valley Housing Society to increase community awareness for dementia,
- Active participant in the District of Kitimat-led COVID-19 emergency response committee and the COVID-19 Economic Recovery Task Force led by the Kitimat Chamber of Commerce.
- In March 2020, LNG Canada committed $500,00 to support the community response to COVID-19 for Kitimat, Terrace and nearby Indigenous communities. Funds have been committed to support the needs of the public healthcare and education systems, Indigenous communities, service organizations and local businesses:
    - Frontline worker recognition / small business support (distribution of gift cards from local businesses) + matching of employee donations to local foodbanks $13,500
    - Coast Mountains School District to support equitable virtual learning (100 laptops procured for use by local students without any device in the household) $78,500
    - Terrace Community Foundation COVID relief fund $10,000
    - Northern Health testing and diagnostics procurement priorities for the local area $250,000
    - Remaining funds ($148,000) have been allocated to support Indigenous Communities with food security initiatives as well as to support local service organizations and business recovery initiatives.

TRAFFIC

- $100,000 towards community driver safety training, road safety awareness and school bus safety initiatives in 2018-2019

EMERGENCY RESPONSE

- $90,000 in 2019 to support search & rescue organizations in both Kitimat and Terrace
- $150,000 since 2013 to support Kitimat Fire Department
- $500,000 commitment towards a replacement highway emergency response vehicle for Terrace Fire Department

COMMUNITY AMENITIES

- $150,000 contribution in-kind donation of Baily Bridges ($212,000 value) to support District of Kitimat (DOK) Waterfront Access Park

EDUCATION

- $200,000 in 2019 towards a range of educational programs from science enrichment through Vancouver Aquarium (AquaVan) outreach in Kitimat and Terrace schools

	and communities, to subsidized access to summer camps for children in Kitimat • $54,000 towards training of early childhood educators (ECE) in Kitimat-Terrace • $150,000 since 2013 in annual trades scholarships for Kitimat and Terrace high school graduates • $375,000 funding commitment over 2019-2021 towards educational bursaries and programs benefitting local Indigenous groups MUNICIPAL CONTRIBUTIONS • In 2019 LNG Canada paid over $1.5 million in municipal taxes and other municipal capacity contributions to the DOK. • Working together with the DOK, in 2019 LNG Canada was successful in obtaining a $55 million infrastructure investment from the Canadian Ministry of Finance to support the replacement of the aging Haisla Bridge in Kitimat • Open Lodge operators in Kitimat paid a one-time Affordable housing Tax contribution of $500 per unit, resulting in $709,000 of cumulative contributions to the DOK by the end of 2019, primarily attributed to LNG Canada Project activities.
Coastal GasLink	• Coastal GasLink and TC Energy have spent over $8.5 million in Community Investments & Sponsorships in Northern B.C. supporting local and Indigenous communities along the pipeline route. • This includes recent partnerships such as Coastal GasLink's $100,000 partnership with United Way of Northern B.C. for their COVID-19 Relief Fund, and environmental stewardship initiatives with Spruce City Wildlife Association in Prince George, B.C., Nechako Environment Stewardship Society in Vanderhoof, B.C., and A Rocha Canada in Houston, B.C. • Education has been a major focus of Coastal GasLink's Community Investments, with a focus on building transferable skills for the project as well as supporting long term education initiatives. Over $3 million has been spent in Northern BC since 2014. • This includes $300,000 for Coast Mountain College to support student bursaries, the Mobile Trades Trailer, and the new welding booths in the Trades Training Centre. • CGL expects that construction of the project will cost over $6.6 billion, with at least 32% spent in BC and an additional $42 million spent in each year of operation, mainly in BC. Annual property tax benefits of $20.88 million will support community services and build infrastructure. Since 2012, Coastal GasLink has invested in the following initiatives: • A Rocha Canada - Environmental Stewardship • Bear Lake Beautification Project • Breakfast Club of Canada • Bulkley Valley Search and Rescue, Smithers • Bulterys Community House, South Peace Health Services Society, Dawson Creek • Burns Lake Baker Airport Rehabilitation • Burns Lake Youth Soccer Association • Canada Winter Games, Prince George • Chetwynd Chamber of Commerce Power Lunch Series • Chetwynd Communications Society • Chetwynd Medical Centre • Clean Up Kitamaat/Kitimat campaign • Crisis Centre of BC • Dawson Creek Kindness Meters • Dawson Creek World Junior A Hockey Challenge • Don Titus Montessori School, Chetwynd

	• Fort St. John Inclusive Playground for Margaret Murray School • Fort St. John North Peace Fall Fair • Fort St. John Public Library Association • Fort St. John 2020 BC Winter Games • Fraser Lake Curling Club • Fraser Lake Playground • Fraser Lake Fire Department • Fraser Lake Fire Rescue Training Society • Hope Air • Houston Hikers Society • Houston Search and Rescue • Kitimat Fire Department • Lakes Animal Friendship Society - MacEwan Dog Park, Burns Lake • Nechako Valley Search and Rescue Society, Vanderhoof • Nechako Environment & Water Stewardship Society • Northern Environmental Action Team • Pacific Salmon Foundation • Para Nordic Skiing Championship Official Accessibility Sponsor, Prince George • Prince George Cougars Hockey Club Heroes Night Sponsorship • Prince George Naturalists Club • Rotary Club of Terrace Skeena Valley Starfish Pack Program • Spruce City Wildlife Association, Prince George • Terrace Rotary Splash Park • Terrace Community Foundation – Founding Donor • Terrace & District Community Service Society • Terrace Search and Rescue Building & Emergency Operations Center • Terrace Skeena Paddle Club • Tumbler Ridge Museum Foundation • United Way of Northern B.C. • Vanderhoof Airshow Vanderhoof Aquatic Centre • Vanderhoof Arena – Sunday Family Skate More information can be found here.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Indigenous Nations Agreements

Revised: June 9, 2020

Issue: **There are multiple agreements in place with Indigenous Nations linked to LNG Canada and Coastal GasLink.**

Response:

- The Government of British Columbia has partnered with Indigenous Nations in Kitimat and along the Coastal GasLink pipeline route to create new economic opportunities as the LNG Canada project develops.
- The provincial government has signed benefit agreements with the vast majority of Indigenous communities along the pipeline route.
- Each mutually exclusive agreement provides Indigenous Nations with financial support to address their own priorities, including training and education, contracting and employment opportunities, and community development.
- LNG Canada and Coastal GasLink have also shown a commitment to respect and partner with Indigenous communities. Both LNG Canada and Coastal GasLink have agreements in place with Indigenous Nations.
- The provincial agreements are found on the EMPR website at: https://lng.gov.bc.ca/

Background/Status:

- There are three primary types of benefits agreements associated with the development of the LNG industry: pipeline benefits agreements, coastal fund agreements and LNG Benefits Agreements.
- Each agreement provides Indigenous Nations with financial support to address their own priorities, including training and education, contracting and employment opportunities and community development.

Pipeline Benefits Agreements (PBAs)

- These agreements are specific to those First Nations whose territories are affected by a pipeline project. These agreements include initial payments upon triggering of the effective date of the agreement and at project construction milestones. PBAs also include ongoing in-service benefits of $10 million/year divided amongst the affected First Nations.
- To date, 17 of 20 PBAs for the Coastal GasLink project have been signed.

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- s.16; s.17; s.21

- If the LNG Canada project remains in operation based on the Canada Energy Regulator-approved 40-year export license, Indigenous Nations eligible for PBAs will receive up to $450 million in benefits from the Province. Any ongoing benefits will be adjusted for inflation in accordance with the terms of the agreements.
- Separately, industry also has agreements in place with Indigenous Nations. Of particular note, Coastal GasLink has signed 20 agreements with First Nations, representing all Indigenous communities along the pipeline route.

Coastal Fund Benefits Agreements

- These agreements address direct, indirect and incremental impacts associated with future LNG transport and shipment in northwest BC.
  - Seven of eight agreements have been completed associated with LNG Canada.s.16; s.17; s.21

s.16; s.17; s.21

LNG Facilities Agreements

- These agreements are specific to the needs and interests of those Indigenous Nations whose territories include or will be impacted by LNG Canada's export facility. These agreements can include both cash and land benefits.
  - Four of five agreements have been completed, with negotiations in progress for the one outstanding agreement - with Haisla.[2]

Attachments: Appendix 1 - Status of agreements for Coastal GasLink and LNG Canada

Contact:

Michelle Carr	Assistant Deputy Minister	LNG Canada Implementation Secretariat	s.17

s.16; s.17; s.21

[2] The Gitga'at LNG Benefits Agreement combines elements of a Coastal Fund Agreement and a LNG Facilities Agreement.s.16; s.17; s.21

Page 360 of 479

Withheld pursuant to/removed as

s.16; s.17; s.21

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: LNG Canada and Coastal GasLink Workforce Accommodations and related issues

Revised: June 4, 2020

Issue: Regulatory oversight and managing impacts of workers on communities

Response:

- Concerns about impacts from workers associated with the LNG Canada and Coastal GasLink projects were considered in their Environmental Assessment processes.
- Workforce accommodations (also known as workcamps) for both projects are required and are seen as a mitigation measure to reduce housing and services pressures on local communities.
- Legally binding conditions were attached to the Environmental Assessment Certificates (Certificate) of the LNG Canada and Coastal GasLink projects. The conditions required that the companies develop plans to address the anticipated significant social and economic effects of the projects, including the construction workforce, on local infrastructure and services.
- The companies have taken both regulatory and voluntary measures to mitigate effects and government is confident that the companies have been attentive to the concerns raised by communities.
- We will continue to monitor their mitigation of social and economic impacts to communities.
- Our government is committed to advancing gender equality, and we have instituted Gender-Based Analysis Plus in our policies and programs. Training on this subject was provided to both LNG Canada and Coastal GasLink.
- With regard to COVID-19, both LNG Canada and Coastal GasLink have operational protocols in place to align with the order for industrial camps released by British Columbia's Provincial Health Officer to protect the health, safety and well-being of workers, First Nations and their neighbour communities (see COVID-19 LNG Canada and Coastal GasLink).

Background/Status:

- In 2013, numerous Liquefied Natural Gas (LNG) projects were proposed in BC, which required Environmental Assessments (EA) and provincial negotiations on benefits agreements with potentially impacted Indigenous Nations.

- In response to feedback during pipeline negotiations and concerns raised during the Missing and Murdered Women and Girls Inquiry, the Province provided funding for special projects – including a workshop with Lake Babine and Nak'azdli Whut'en communities to discuss the potential impacts of workforce accommodations on Indigenous communities that were then outlined in the Firelight Report. Both companies are aware of the Firelight Report, and similar reports, and have considered the findings in their workforce accommodation design and programming.
- The Provincial Government is working directly with both companies on their plans and programming for their workforce accommodation centres; providing feedback on their mitigation measures and highlighting successful approaches to inform government's work in this area.

Regulatory Oversight of Workforce Accommodations:

- Regulatory oversight of workforce accommodations begins when a major project proponent starts the EA process to evaluate the environmental, economic, health, cultural and social effects of a project.
- A number of conditions in the EA Certificate were related to mitigation of social and economic impacts, including requirements for cultural training of workers, code of conduct policies (drugs, alcohol and respectful behaviour), worker wellbeing and accommodation program, communication with Indigenus Nations and communities about construction progress, as well as the SEEMP and CLISMP.
- Following the EA, authorizations for workforce accommodations are focused on siting, construction and operations.
- The Province continually reviews the social and economic effects related to workforce accommodations through the cross ministry Social and Economic Management Committee (SEMC), comprised of approximately twenty provincial agencies. The SEMC reviews reports from the companies, monitors implementation of the companies' SEEMP/CLISMPs and can raise any issues of non-compliance through the regulatory process (see LNG Canada/Coastal GasLink social and economic effects and local support for the project note).

LNG Canada and Coastal GasLink (CGL) Workforce Accommodations

- LNGC and CGL both ramped down work activities and workforce numbers during phase one of BC's Restart Plan in March and April and are now increasing their work activities, taking a slow and measured approach to increasing their workforce (see LNGC and CGL's COVID-19 Response Note and the LNG Canada workforce strategy note).

- In addition to the requirements set out in the EAs, LNG Canada and CGL are implementing several mandatory and voluntary programs and initiatives to further mitigate negative social impacts the workforce accommodations may have.

Program type	Examples (not an exhaustive list)
Corporate Culture Programs – intended to continuously improve corporate culture	CGL's Extraordinary Legacy Initiative, is an internal program that is aimed to empower all project personel to create a legacy of safety, respect for all peoples, community and the environment.
Enhanced community engagement	CGL's enhanced website, including lodge locations and regular community newsletters. LNG Canada's multi-stakeholder Social Management Roundtable, which meets quarterly. CGL's Construction Monitor and Community Liaison Program provides opportunities for Indigenous participation in construction activities within their traditional territory.
Collaborative Cultural Awareness Programs	For both projects, cultural awareness training is provided to all workers during orientation, including training modules that are collaboratively designed with the local Nation.
Workforce Inclusivity and Diversity Programs	LNG Canada's Women Building Futures: LNG Canada held workshops with women across Canada to better understand women's experiences in industry workplaces. This work has informed the design of their workforce accommodation centres.
	LNG Canada's YOUR PLACE: o aims to increase women's participation in the trades; o offers 4-week workplace readiness training program and employment supports; and o provides direct line to employment opportunities with LNGC's subcontractors.
	CGL's Community Workforce Accommodation Advisor positions are supporting the implementation of the key plans and that will have a community advisor living and working in workforce accommodations to: o support a safe and respectful environment; o increase transparency between the project and Indigenous and local communities; o enhance cultural awareness training; and o enhance positive benefits to local communities.

Cross Reference: - *COVID-19 LNG Canada and Coastal GasLink*
- *LNG Canada/Coastal GasLink social and economic effects and local support for the project*

Contact: Michelle Carr | Assistant Deputy Minister | LNG Canada Implementation Secretariat | s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: LNG Canada and Coastal GasLink COVID-19 Response

Created: June 17, 2020

Issue: LNG Canada/Coastal GasLink were responsive to COVID-19, taking measures to protect health and safety. Critical activities were maintained with limited workforces. Construction is gradually increasing following BC's Restart Plan.

Response:

- British Columbia put informed measures in place, including detailed guidance for industrial camps, to allow large-scale construction projects to move forward.
- LNG Canada and Coastal GasLink (CGL) have been responsive, with measures that align with the advice of our Provincial Health Officer. Both companies have engaged local governments and Indigenous nations on their COVID plans.
- These measures included workforce reductions, adjusted construction schedules, physical distancing protocols and more – actions that protect the health, safety and well-being of workers, First Nations and community stakeholders.
- Like any other employer, LNG Canada and CGL will need to stay responsive and keep protective measures in place. They must continue to show they are gradually increasing construction activities safely as British Columbia starts its road to recovery.
- These projects represent a major economic opportunity for our province. That fact is even more evident today following the economic challenges created by COVID-19.

Background/Status:

- On May 6, 2020, British Columbia released a 'Restart Plan' – the next steps to move through the COVID-19 pandemic. The plan lifts restrictions in phases, gradually allowing for more social and economic activity, while closely monitoring health information to minimize the risk to the public.
- Businesses restarting operations (or increasing their activities) must ensure it is in compliance with the provincial health officer's orders and in accordance with occupational health and safety guidance provided by WorkSafeBC.
- During the COVID-19 pandemic, the provincial government released guidelines and orders for industrial work camps. The guidelines supported operators with their response to keep workers safe. Orders provided specifics about the actions employers, coordinators and workers needed to take under the *Public Health Act* and its regulations.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

LNG Canada

- The workforce in Kitimat was reduced during the COVID-19 pandemic, with LNG Canada and their engineering, procurement and construction (EPC) contractor - JGC Fluor - implementing measures to reduce the potential spread of COVID-19.
- Only work deemed essential continued, including environmentally-sensitive work. Schedule-sensitive activities such as construction of the Cedar Valley Lodge (future onsite workforce accommodation) also continued.
- Other measures LNG Canada put in place: two meters physical distancing; passenger limits in vehicles (max 2 persons); checkerboard seating (buses), with the driver first off/last on and boarding back to front; lodge policies, including one person per table, reduced touchpoints and social distancing lines on the floor; limited community interactions; health checkpoints and daily health checks at lodges; and self-isolation protocols.
- People are gradually returning to work with safety measures remaining in effect. LNG Canada remains on schedule for operation mid-decade.

Coastal GasLink (CGL)

- Construction on the CGL pipeline ramped down during spring break-up period, which coincided with the COVID-19 pandemic. Spring break-up is the time of year when field construction work is reduced due to soft ground conditions caused by melting snow and thawing ground conditions.
- Some of the safety measures CGL put in place: two metres physical distancing; restrictions on the use of common areas and dining rooms; health screening and temperature checks during daily camp admission; ongoing disinfection cycles for common areas, individual rooms, kitchen and dining areas; mandatory hand sanitizing at entrances; and self-isolation practices and support for workers who may have symptoms.
- CGL continues to employ residents and local contractors to perform critical activities, including environmental monitoring, pipe delivery and stockpiling.
- CGL is in the process of gradually ramping up their activities over the coming months.

Cross Reference: LNG Canada Project Profile
Coastal GasLink Pipeline Project Profile

Contact:

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Michelle Carr	Assistant Deputy Minister	LNG Canada Implementation Secretariat	s.17

EMPR ESTIMATES

Q: COVID-19 has created many challenges for our economy – can the Minister confirm the LNG Canada Project is moving forward on schedule?

- Construction is progressing. Both LNG Canada and Coastal GasLink were able to maintain essential work activities during the COVID-19 pandemic, under the guidance provided by our Provincial Health Officer.
- The workforces are gradually increasing. Construction activities are being maintained with safety protocols in place.
- Construction in Kitimat is focused on environmentally sensitive work and the development of the future onsite workforce accommodation (Cedar Valley Lodge).
- Coastal GasLink is approaching more milestones with clearing the route for the pipeline, and stockpiling pipe for construction and installation in the near future.
- Understandably, both projects are assessing their construction schedules but the evidence in front of us tells us they are overcoming the challenges created as a result of COVID-19.
- We understand the LNG Canada project remains on schedule for an in-service date mid-decade.

Q: What is the status of the workforce?

- As each project increases their construction activities, we know they are doing it gradually with health and safety at the forefront.
- LNG Canada's workforce has reached approximately 1,500 people.
- Coastal GasLink's workforce has reached approximately 800 people at the end of June, and with construction ramp-up they could see as many as 1,700 people working this month (July).
- These numbers are expected to grow over the coming months.

Q: What is the status of workforce accommodations?

- LNG Canada:
    - A substantial portion of LNG Canada's construction work right now is concentrated on Cedar Valley Lodge, in order to have it ready for its first 1,500 guests by early fall 2020.

- Coastal GasLink:
    - There are <u>four</u> workforce lodges currently in operation:
        - Little Rock Lake Lodge (Section 5)
        - 7 Mile Road Lodge (Section 6)
        - Sitka Lodge and Hunter Creek Lodge (Section 8).

    - There are <u>two</u> workforce lodges ready for workforces to return (following Spring break up/COVID-19)

    - Sukunka Lodge (Section 2)
    - Parsnip Lodge (Section 3)
  - There are three lodges under development:
    - Chetwynd Lodge (Section 1)
    - Vanderhoof Lodge (Section 4)
    - Huckleberry Lodge (Section 7)
  - The remaining seven (of the total 16) lodges are scheduled to be built in the future.

Q: What benefits have reached British Columbians so far?

- LNG Canada has awarded a cumulative total of approximately $2.7 billion in contracts to British Columbia businesses, including Indigenous businesses, since 2014.
- Coastal GasLink has awarded $900 million in contracts to Indigenous and local businesses to date.
- In addition to the investments made, both projects have prioritized a local/B.C. workforce.
- As the engineering, procurement, and construction contractor for the LNG Canada Project, JFJV (and its subcontractors) are part of that commitment – it's enshrined in LNG Canada contract commitments with JFJV.
- Of the total workforce in Kitimat right now, over 50% are British Columbians. For Coastal GasLink, that percentage is over 75%.
- We expect to see opportunities for British Columbians increase as core construction activities continue in Kitimat and along the pipeline route.

Q: Can the Minister comment of the Operating Performance Payment Agreement?

- Operating performance payments were created to recognize LNG Canada's huge upfront investment, and its need to recover a substantial part of the construction costs during the first 20 years of operation.
- This agreement represents part of our work to put the LNG industry on equal footing with other industrial sectors by repealing old measures that created barriers to investment.
- Payments from the agreement total nearly $600 million over 20 years, starting when the LNG Canada project comes into service.
- The provincial government will receive revenues through other streams right from the start of construction. All forms of revenue will allow us to invest in health care, schools, childcare, affordable housing and good services for British Columbians.
- The operating performance payments are not a subsidy to LNG Canada – the Provincial Sales Tax that the project would have paid will be repaid over the agreement's 20-year term.

Q: Can the Minister explain the status of LNG Canada's commitment to reach 25% apprentices?

- LNG Canada and Coastal GasLink are both funding workforce development related initiatives. Many jobs offer apprenticeship programs, depending on the trade – especially those that are linked to the LNG Canada facility.
- YOUR PLACE – an initiative launched by LNG Canada last year – is one program successfully creating opportunities for women in the trades. LNG Canada regularly provides updates about this program on their website.
- The aim remains the same: to have at least 25 percent of the total skilled workforce as apprentices.

Q: Will LNG Canada use temporary foreign workers?

- The LNG Canada Project workforce is not supported by temporary foreign workers.
- If for any reasons they are required, it would only be during peak construction and in highly specialized trades.

Q: Can the Minister explain if the Wet'suwet'en MOU alters any development associated with the Coastal GasLink project?

- The MOU is a first step toward resolving difficult and complicated issues around Wet'suwet'en rights and title. It's part of a negotiation process, and there is more work ahead.
- The MOU does not change the status – now or in the future - of the Coastal GasLink pipeline project. As we know, Coastal GasLink is fully authorized and permitted for the construction activities underway.
- The Ministry of Indigenous Affairs and Reconciliation is the ministry overseeing the MOU and the negotiation process.

Q: What is the status of the provincial government's oversight? What is the status of the recent orders imposed on the Coastal GasLink pipeline?

- Regulators – the BC Oil and Gas Commission and the BC Environmental Assessment Office - conduct inspections regularly to monitor compliance.
- For example: The EAO has conducted over 30 inspections for the Coastal GasLink project to date – Coastal GasLink has been responsive to correcting non-compliances found.
- On June 16, 2020, after finding that Coastal GasLink was not compliant with Conditions 6 and Condition 18 of the Environmental Assessment Certificate (EAC), the EAO issued orders under the Environmental Assessment Act (2018) requiring Coastal GasLink to address noncompliance with these two conditions.
- Construction activity to date includes right-of-way clearing, access road development, and the clearing, grading, and development of camps and work areas.
- Work that was not compliant with Condition 6 includes construction in 42 ecologically and socio-economically important wetlands without first conducting preconstruction

surveys and developing site specific mitigations, and construction in other ecologically and socio-economically important wetlands with outdated preconstruction surveys.
- Work that was not compliant with Condition 18 includes a failure to salvage small Whitebark pine trees and collect cones from cleared Whitebark pine for use in project reclamation activity in Whitebark pine habitat.

Q: What steps is government taking so LNG Canada can move forward with Phase 2 (under CleanBC) and still remain with British Columbia's legislated climate commitments?

- As we know, LNG Canada is in the process of building one of the lowest greenhouse gas-emitting facilities of its kind. It is going to use some of the latest technology available to help us meet our emissions targets.
- CleanBC is about the entire province. All sectors will need to manage their overall emissions to ensure B.C. achieves its emissions reduction targets.
- The Ministry of Energy, Mines and Petroleum Resources is working closely with the Ministry of Environment to remain responsive to the commitments we outlined in CleanBC. At this time, LNG Canada has not made a decision about Phase 2.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Status Update on Woodfibre LNG Project

Revised: June 15, 2020

Issue: Woodfibre LNG

Response:

- Woodfibre LNG is proposing a 2.1 million tonnes per annum (MTPA) facility that will utilize electrically driven liquefied natural gas (LNG) trains situated on privately-owned upland.
- The project represents $1.6 billion in new investment and hundreds of jobs.
- Notice to proceed could be expected in Q2, 2021 with construction pending regulatory and permit approvals.
- Several significant commercial agreements have been completed.
- Woodfibre, FortisBC and the Province have concluded impact benefit agreements with Squamish First Nation.

Background/Status:

Woodfibre has achieved significant milestones in working towards a Notice to Proceed:

- Received environmental approvals from the BC Environmental Assessment Office, Canadian Environmental Assessment Agency, and a Squamish Nation Environmental Assessment Agreement;
- Woodfibre is currently in a process to extend its Environmental Assessment Certificate for 5 additional years;
- Received its facilities permit from the BC Oil and Gas Commission;
- Pacific Oil and Gas completed the acquisition of Canbriam Energy, representing one of the largest investments in BC's upstream sector since 2014.
- Fully permitted on major Federal permits, permit plan in place for the issuance of supporting provincial and federal permits;
- Concluding commercial agreements with BC Hydro and FortisBC;
- Concluded Impact Benefit Agreements with Squamish Nation and is in negotiations with remaining impacted nations;
- Woodfibre commercial offtake agreements have the project's LNG capacity fully committed;
- Underway with decommissioning, pre-construction work onsite;
- Local consultations regarding this project (over 320 community sessions) and the LNG industry in general have taken place over the past several years; and
- On June 9, 2017 the National Energy Board issued Woodfibre LNG a 40-year export licence.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

PROJECT TABLE

Proponent	Pacific Oil and Gas / Royal Golden Eagle
Location	Squamish area (former Woodfibre pulp mill site)
Proposed Size	2.1 MTPA
Export Licence	40-year licence issued
Environmental Assessment	Federal and Provincial approvals completed
Pipeline	Eagle Mountain – Woodfibre Gas Pipeline
Estimated Investment	$1.6 billion
Jobs	Construction: 650 Operations: 100

Contact:

Suzanne Manahan	Executive Lead	Woodfibre Implementation Group	250 952-0792

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: UNDRIP

Revised: June 15, 2020

Issue: EMPR Reconciliation Plan

Response:

- The Ministry of Energy, Mines and Petroleum Resources (EMPR) is developing a Reconciliation Plan to implement the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
- EMPR's Reconciliation Plan will have three components: a Cultural Learning Program for staff; a review of how we currently operate to identify strengths and opportunities; and an incremental approach to reviewing our legislation for alignment with UNDRIP.
- EMPR's Reconciliation Plan will be guided by the provincial Action Plan being developed by the Ministry of Indigenous Relations and Reconcilation and the First Nations Leadership Council (FNLC).
- EMPR's Reconciliation Plan will be developed in conjunction with other Natural Resource ministries and Indigenous partners.

Background/Status:

- This Government's commitment to reconciliation is reflected in the Concrete Commitments document, the Ten Draft Principles to Guide the Province's Relationship with Indigenous People, Ministers' mandate letters, and the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA).
- The DRIPA confirms UNDRIP as the framework within which the Province will work with Indigenous partners towards the goal of reconciliation.
- The draft EMPR Reconciliation Plan proposes to have three components:
    - Cultural Learning Program: Consistent with the TRC Call to Action #57, EMPR will provide education and training to our staff on Indigenous cultures, the history of Crown-Indigenous relations, aboriginal law and UNDRIP.
    - Review of Operations: In response to the ongoing reconciliation work addressing aboriginal rights and title, EMPR leads and participates in numerous innovative agreements and initiatives with Indigenous Nations that support reconciliation (e.g., collaborative land and resource stewardship agreements; revenue-sharing and economic development agreements; and shared decision-making agreements). EMPR is reviewing how these initiatives and agreements can be improved. EMPR will undertake this work in collaboration with Indigenous partners.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

- Align our laws with UNDRIP: Over time, and as guided by the provinicial Action Plan being developed by MIRR and the FNLC, EMPR will incrementally review its laws and regulations for alignment with UNDRIP.

Attachments: N/A

Cross Reference: N/A

Contact:

Simon Coley	ADM	Strategic and Indigenous Affairs	778 698-7176

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Strategic and Indigenous Affairs Division Overview

Revised: June 15, 2020

Issue: Purpose of the Strategic and Indigenous Affairs Division

Response:

- The Strategic and Indigenous Affairs Division (SIAD) supports mandate delivery of the Ministry of Energy, Mines and Petroleum Resources' (EMPR) and EMPR's Divisions on its energy, mining and natural gas mandates.
- Indigenous Nations participating in Environmental Stewardship Initiative (ESI) projects have indicated that the consensus-based approach to projects co-managed under ESI is a prime example of implementing the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
- SIAD supports EMPR efforts to advance reconciliation with Indigenous Nations including negotiating revenue sharing agreements, Site C Accommodation Agreements and Reconciliation Agreements and the delivery of the ESI with over 30 northern Indigenous Nations. This work is consistent with Government's objectives under the *Declaration on the Rights of Indigenous Peoples Act* and ensures that First Nations actively participate in natural resource development in their Traditional Territories.
- Corporate oversight and coordination of policies, intergovernmental relations and reporting requirements by SIAD ensure that EMPR takes a strategic approach to the delivery of its programs and services.

Background/Status:

- SIAD was formed in late 2017 to address the need for corporate oversight of the Indigenous files and strategic policy functions. Administrative and operational components such as Freedom of Information and the Correspondence Unit were transferred from SIAD to the Deputy Minister's Office to align with similar arrangements across government.
- SIAD's Mission is: Collaborative leadership and support of cross-ministry policy and planning initiatives, and Indigenous reconciliation, while advancing the interests of EMPR and Province. The Division has three goals: Indigenous reconciliation and key negotiations are advanced; cross-ministry initiatives (policies, planning, strategies) are supported; and collaborative environmental stewardship is enhanced.
- SIAD's three branches align with its goals: Environmental Stewardship Initiative (ESI); Indigenous Affairs Branch (IAB); and Strategic Initiatives Branch (SIB):

- ESI addresses Indigenous Nations' concerns around cumulative effects by providing information to inform natural resource decision-making. The Initiative involves over 30 Indigenous nations. See separate ESI Note 3 in this section for further details.
- IAB leads EMPR's implementation plan for UNDRIP, the Truth and Reconciliation Commission, and the 10 Principles, co-ordinates ministry participation in reconciliation tables, leads EMPR's participation in First Nation negotiations related to major projects, and leads EMPR's work within the Indigenous Funding Envelope. IAB also works with EMPR divisions and the Ministry of Indigenous Relations and Reconciliation on key reconciliation related matters, for example Indigenous engagement on CleanBC, and economic recovery matters, such as the Mining Reform Project.
- SIB supports the ministry on those planning, intergovernmental and policy files that transect multiple agencies and business lines. Examples include, the BC Regional Mining Alliance, Land Use Planning, Revitalized Environmental Assessment process, intergovernmental negotiations and energy competitiveness (e.g. Environmental and Social Governance investment). SIB also supports energy and climate policy relating to CleanBC and manages all of EMPR's corporate reporting processes.

- SIAD's 2020/21 Estimates budget is 3.031million.

Cross Reference: 03 ESI_CSF General Overview

Contact:

Simon Coley	ADM	Strategic and Indigenous Affairs Division	778 698-7176

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Revised: June 12, 2020

Issue: Update on current state of the Environmental Stewardship Initiative (ESI)

Response:

- The Environmental Stewardship Initiative (ESI) is a $30 million initiative which was started in 2015. There are 30 First Nations participating in the projects.
- EMPR leads the provincial financial management and coordination of the ESI.
- The ESI is focused on collaboratively addressing First Nations' concerns around cumulative effects (CE) by generating high-quality, accessible and trusted information to inform natural resource decision-making.
- All decisions (project scope, funding and communications) are made by consensus. Participating First Nations have indicated that ESI projects support First Nation and provincial implementation of United Nations Declaration on the Rights of Indigenous Peoples. ESI represents a significant shift in the way the Province works with First Nations and is directly contributing to improved working relationships.
- The ESI projects are aiming to finalize work products (e.g., current condition reports) by March 2021 and to develop recommendations regarding resource management in each of the project areas. First Nations have high expectations that recommendations will be implemented by government, thus representing a significant opportunity to enhance First Nation support for natural resource sector decision-making.
- The current mandates for the ESI and the Collaborative Stewardship Framework (CSF) collaborative forums end in March 2021 s.12; s.13; s.16
  s.12; s.13; s.16

  s.12; s.13; s.16 In addition, the forum model as expressed by ESI and CSF is being explored as a potential delivery model to integrate other critical stewardship engagements into a single consistent and efficient delivery model.
- The ESI Technical Conference took place in Vancouver in November 2019. It was an opportunity for forum members to share technical information, discuss onboarding of strategic partners, engage in cross-pollination of ideas and solidify a path forward for the future of stewardship forums.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Background/Status:

- ESI was initially formed as a response to First Nations' requests to address broader environmental stewardship concerns that were raised in liquefied natural gas-related regulatory and benefits discussions. It is one of the first collaboratively developed initiatives among First Nations and the Province (Ministry of Indigenous Relations and Reconciliation, Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and Ministry of Energy, Mines and Petroleum Resources).
- First Nations and the Province agreed to develop the ESI through a series of demonstration projects that would be implemented through four regional forums (North Coast, Skeena, Omineca and Northeast). Each forum has been allocated $7 million of the $30 million commitment.
- The structure and operation of the ESI is supported by an ESI Governance Working Group (GWG), which includes membership from the participating First Nations, the Province and industry. The GWG plays a collaborative decision-making role over the allocation of available ESI funding to support demonstration projects. The GWG has been allocated $2 million of the $30 million commitment.
- The ESI has expended $23.4 million to date. The remaining funds, ~$6.6 million, will be allocated to complete existing projects through an updated one-year spending plan within the IFE.
- Appendix 1 provides a high-level summary of the projects underway. Management recommendations, based on the current work, are anticipated to be completed in FY2020/21 for each of the projects.
- First Nations participating in the ESI have expectations that the ESI will continue beyond the initial $30 million commitment.

Attachments: Appendix 1 – ESI Project Updates

Cross Reference: N/A

Contact:

Simon Coley	Assistant Deputy Minister	Strategic and Indigenous Affairs Division	778 698-7176

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Appendix 1: ESI Demonstration Projects

Northeast

- The Northeast ESI is conducting a Regional Strategic Environmental Assessment (RSEA) that is assessing the CE of natural resource development activities on five values: Old forest/forest biodiversity, water, moose, peaceful enjoyment, and environmental livelihoods.
- The RSEA table is working to complete data collection and analysis on the shared values in 2020, the results of which will be used to develop management recommendations.
- In addition, the RSEA table is developing a Methods Pilot in the Fort St. John TSA sub area of the RSEA study area. The Pilot will describe different resource development (Petroleum and Natural Gas and forestry) scenarios and their respective impacts on RSEA values in support of further management recommendations, including those within the Fort St. John Land Use Planning update.

Omineca

- The Omineca Demonstration Project is conducting a CE assessment on the condition of three valued ecosystem components: forest biodiversity, moose, and anadromous fish/riparian.
- Omineca has largely completed the CE assessment and the project team is beginning to examine the implementation of collaboratively developed management responses. Spatial information has been developed for the identified values and work is now under collaborative review with forest licensees to identify opportunities to voluntarily change management practices on the landscape.

Skeena

- The Skeena Sustainability Assessment Forum (SSAF) is conducting a CE assessment on five collaboratively identified values: Grizzly Bear, fish and fish habitat, wetlands, moose, and medicinal and traditional plants.
- The SSAF is incorporating Indigenous knowledge into the assessments through Indigenous Stewardship Projects and Indigenous participation and leadership in the Science and Technical Committee.
- The SSAF is working to finalize protocols and produce State of Values Reports for each of the five values. The SSAF will then produce joint recommendations for consideration by Indigenous and provincial decision makers on enhanced management, restoration, operational procedures and monitoring protocols.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

North Coast

- The North Coast Regional Stewardship Forum (RSF) is overseeing two distinct projects: CE and Ecosystem Restoration. The North Coast projects have been developed in close collaboration with the Marine Plan Partnership North Coast sub-region, which is a partnership between the Province and member First Nations that is implementing marine use plans for BC's North Pacific Coast.
- The North Coast ESI CE Project is formally aligned with the Marine Plan Partnership's (MaPP's) North Coast CE Initiative. This Project is piloting the implementation of the collaboratively developed MaPP CE Framework by monitoring, assessing, and managing initial CE values: aquatic habitats, estuary, food security, access to resources and salmon.
- The CE Project Team is working to develop protocols and current condition reports for the values, with the goal of producing CE management recommendations for by March 2021.
- The North Coast ESI Ecosystem Restoration Project is also pursuing a number of Indigenous Stewardship Projects that have been prioritized by the participating Nations.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Site C

Revised: June 15, 2020

Issue: Peace River Legacy Fund

Response:

- The Peace River Legacy Fund (PRLF) is one of three Site C Continuation Measures announced in December 2017, as part of the decision to proceed with the development of the Site C Project.
- Once approved, PRLF would be funded through water rental revenues from Site C once it comes into operation in 2024.
- The PRLF is intended to be administered by a community-based structure to support solutions to longer-term environmental, social and economic issues in the Peace Region.
- The PRLF will be accessible to communities, local governments, and First Nations in the Peace Region.
- s.16

- Strategic Indigenous Affairs Division (SIAD) is facilitating provincial participating in the Informal Working Group.

Background/Status:

- The Site C Continuation Measures include:
  - Peace River Legacy Fund;
  - Agricultural Food Security Fund; and
  - Indigenous Clean Energy Program (pending further assessment of need for this initiative).

- Funding for PRLF will be subject to the following directives s.12; s.13
  s.12; s.13; s.17

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

s.12; s.13; s.17

- Allotment of funds among the three Site C Continuation Measures is yet to be determined. EMPR is working with Agriculture on a coordinated approach.

- s.16
  s.16 the development process will broaden to provide opportunities for input and involvement from other Indigenous Nations, local governments, stakeholders and citizens of the Peace Region.

- The community-led approach to developing the PRLF is intended to bridge divides between Indigenous and non-Indigenous communities in the Northeast, promoting collaboration towards common goals. The Province will continue to support the development of the PRLF. Pending further approvals by Treasury Board and Cabinet, the Province will also collaborate with local governments, First Nations and the community to ensure that all required legislation, agreements, and structures are in place to establish the PRLF with the onset of water rentals upon completion of Site C.

Attachments: N/A

Cross Reference: N/A

Contact:

Simon Coley	ADM	Strategic and Indigenous Affairs	778 698-7176

Ministry of Energy, Mines and Petroleum Resources
February 2020 – 20/21 Estimates

Budget and Ministry Key Documents (Prepared by CSNR)

Budget Highlights..... 1
- i. Minister Briefing Slides
- ii. Estimates Summary

Service Plan & Estimates Blue Book 2
- a. Service Plan Briefing Note

Ministry Top Issues 3

Budget Questions & Answers 4
- i. FTE staffing details

Statistical Analysis - Operating Budget Summaries 5

- i. Operating Budget by Core Business
- ii. Operating Budget by Group Accounting Classification
- iii. Operating Budget by Group Accounting Classification and Vote
- iv. Operating Budget Changes by STOB

Capital..... 6

Revenue..... 7

Minister Mandate Letter 8

Other 9
- ii. Ministry of Finance – Clean BC
- iii. Information, Innovation & Technology Division moving from FLNRO to EAO
- iv. Contracts and Transfers
  - a. Direct Awards
  - b. Statistics
  - c. Schedule A (Top 4 Direct Awards)

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
2020 Budget Highlights

Fiscal 2020/21 Changes

EMPR's 2020/21 budget is $113.631M. **This represents a ($66.650M) or 37% net decrease from the previous year**. This net budget decrease is comprised of:

($66.103M) net decrease in Ministry Operations;
($0.547M) net decrease in Innovative Clean Energy Fund Special Account

Ministry Operations - the ($66.103M) net decrease is due to:

($66.469M) decrease for Clean BC; ($98.749M) planned reduction; $32.280M increase for the Clean Energy Vehicle Program
($3.271M) decrease for expenditure management
$0.689M increase for negotiated wage increases and other adjustments
$2.798M increase from a previous budget approval for Regulatory Excellence in Mining
$0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements

Innovative Clean Energy (ICE) Fund - net decrease of ($0.547M) due to:

($0.554M) decrease for ICE Fund spending plan adjustment
$0.007M increase for negotiated wage increases and other adjustments

$000	2019/20 Estimates	Change	Restated 2019/20	2020/21	$ Change	% Change
Vote 22 - Ministry Operations	177,038	-	177,038	110,935	(66,103)	(37.3%)
Innovative Clean Energy Fund Special Account	3,243	-	3,243	2,696	(547)	(16.9%)
Total	**180,281**	**-**	**180,281**	**113,631**	**(66,650)**	**-37.0%**



Budget 2020

Ministry of Energy, Mines and Petroleum Resources

Minister Briefing
February 2020

Ministry Budget 2019/20 – 2022/23

	2019/20	2020/21	2021/22	2022/23
Ministry Operations		**$000**		
Mines Competitiveness and Authorizations	17,525	18,293	18,487	18,487
Mines Health, Safety and Enforcement	9,297	10,306	10,674	10,674
Electricity and Alternative Energy	117,346	51,147	28,960	28,960
Oil and Gas	17,913	16,772	16,855	16,855
Strategic and Indigenous Affairs	3,100	3,031	3,055	3,055
Executive and Support Services	11,857	11,386	11,539	11,539
Total Ministry Operations	**177,038**	**$110,935**	**$89,570**	**$89,570**
Changes from Budget 2019		*($66,103)*	*($87,468)*	*($87,468)*
Changes Year over Year		*($66,103)*	*($21,365)*	*$0*
Innovative Clean Energy Fund Special Account	**3,243**	**2,696**	**2,326**	**2,326**
Total Ministry Budget	**$180,281**	**$113,631**		

s.13; s.17

Operations Budget Changes from Budget 2019	
CleanBC	($66,469)
Budget 2019	($98,749)
Budget 2020	$32,280
Expenditure Management	($3,271)
Negotiated Wage Increases/benefits	$689
Prior Year Approvals	
Land Use Planning	$0
Regulatory Excellence in Mining	$2,798
Tailing Storage Facilities	$150
Total Changes	($66,103)
Percent Change to Operations from Budget 2019	-37%



Budget 2020 Highlights

- Clean BC 2020/21 increase of $32.280M, offset by planned decrease of $98.749
  - $20.000M Clean Energy Vehicle Program Expansion
  - $5.000M Home and Workplace Charging
  - $5.000M Medium and Heavy Duty ZEV program
  - $2.000M Public Charging
  - $0.200M Public Outreach
  - $0.080M Research, Analysis and Reporting
- Increase to fund negotiated wages and benefit charge backs
- Previous Budget approvals continued (Regulatory Excellence in Mining, Tailing Storage Facilities)
- Expenditure Management reduction of $3.271M per year over the fiscal plan

Clean BC Detail

s.13; s.17

	2020/21
Clean Energy Vehicle Program Expansion	32,280
Previous Budget Approvals:	
Efficiency BC Expansion	13,260
Clean Energy Vehicle Supply Standard	1,218
Building Energy Codes	140
	46,898

Page 389 of 479

Withheld pursuant to/removed as

s.13; s.17



Questions ?

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

Budget 2020 Estimates Summary

By Core Business

$000s

				Budget 2020 Decisions							Decisions prior to Budget 2020
	Estimates 2019/20	Mining Fix	Restated Estimates 2019/20	Salary & Benefits	CleanBC	Regulatory Excellence in Mining	Tailing Storage Facilities	Spending Plan Adjustment	Expenditure Management	Estimates 2020/21	s.13; s.17
Ministry Operations											
Mines Competitiveness and Authorization	19,095	(1,570)	17,525	278		873	150		(533)	**18,293**	
Mines Health, Safety and Enforcement	7,727	1,570	9,297	156		1,090			(237)	**10,306**	
Electricity and Alternative Energy	117,346	-	117,346	80	(66,212)				(67)	**51,147**	
Oil and Gas	17,913		17,913	113					(1,254)	**16,772**	
Strategic & Indigenous Affairs	3,100	-	3,100	38					(107)	**3,031**	
Minister's Office	576	-	576	-					-	**576**	
Executive and Support Services	11,281	-	11,281	24	(257)	835			(1,073)	**10,810**	
Sub-Total	**177,038**	**-**	**177,038**	**689**	**(66,469)**	**2,798**	**150**	**-**	**(3,271)**	**110,935**	
Innovative Clean Energy Fund	**3,243**	**-**	**3,243**	**7**				**(554)**	**-**	**2,696**	
TOTAL MINISTRY	**180,281**	**-**	**180,281**	**696**	**(66,469)**	**2,798**	**150**	**(554)**	**(3,271)**	**113,631**	

Restated Estimates 2019-20:
reallocation between the two divisions to better reflect the spending. Funding was provided under Budget 2019 Regulatory Excellence in Mining Approval

Budget 2020 Decisions:
Salary and Benefits respresent negotiated wage increases in collective agreements under the Sustainable Service Negotiated Mandate and benefits charge back adjustments

The ministry was given a $3.271M **expenditure management** reduction. In alignment with government and ministry priorities, we focused on protecting staff and the delivery of core services with minimal disruption to stakeholders. As such, we targeted primarily operational expenses such as travel, contract expenditures, information technology, office and business expenses and other somewhat discretionary expenditures.
Clean BC received a one year increase of $32.280M for the Clean Energy Vehicle Program. ($20M Base Vehicle Incentives, $5M Home & Workplace Charging, $5M Medium & Heavy Duty ZEV Program, $2M Public Charging, $0.2M Public Outreach and $0.08M Research, Analysis & Reporting), offset by planned prior budget year decision reduction of $98.749M resulting in a net reduction of $66.469M.

Innovative Clean Energy Fund (ICE) updated to **spending plan**

s.13; s.17

Ministry of Energy, Mines and Petroleum Resources

2020/21 – 2022/23 SERVICE PLAN

February 2020



Minister Accountability Statement



The *Ministry of Energy, Mines and Petroleum Resources 2020/21 - 2022/23 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.

Honourable Bruce Ralston
Minister of Energy, Mines and Petroleum Resources
February 10, 2020

Table of Contents

Minister Accountability Statement 2
Purpose of the Ministry 4
Strategic Direction 4
Performance Planning 6
Resource Summary 11
Appendix A: Agencies, Boards, Commissions and Tribunals 12

Purpose of the Ministry

The Ministry of Energy, Mines and Petroleum Resources (Ministry) is responsible for British Columbia's (B.C.) electricity, alternative energy, oil, natural gas and related infrastructure, and the province's mining and mineral exploration sectors. These sectors are made up of diverse interests that explore for and produce oil, natural gas, coal and other valuable minerals and that develop energy and electricity generation, transmission and distribution infrastructure. To support Government's climate objectives, the Ministry focuses on advancing energy efficiency and clean or renewable energy sources and technologies, making sure that the energy we use, develop and export is the cleanest possible. The Ministry facilitates electricity, mining and oil and gas sectors which are globally competitive, environmentally leading, and advance reconciliation with Indigenous peoples, while providing opportunities and quality jobs for British Columbians. The Ministry carries out this work in accordance with the CleanBC plan, and commitments to Indigenous reconciliation. In fulfilling its mandate, the Ministry consults and collaborates with other ministries and levels of government, private sector stakeholders, Indigenous people, communities, environmental and industry organizations, and the public.

The Ministry supports the Minister in her governance responsibilities for the following Crown Corporations: British Columbia Hydro and Power Authority (BC Hydro), and the BC Oil and Gas Commission (OGC).

Strategic Direction

The Government of British Columbia remains focused on its three strategic priorities: making life more affordable, delivering better services, and investing in a sustainable economy.

Ministries are actively working to provide quality, cost-effective services to British Columbia families and businesses. By adopting the Gender-Based Analysis Plus (GBA+) lens and Business and Economic Implications Framework to budgeting and policy development, Ministries will ensure that equity is reflected in budgets, policies and programs.

Additional key initiatives underpinning lasting prosperity in 2020/21 and beyond are the implementation of:

- A Framework for Improving British Columbians' Standard of Living which will provide the foundation for quality economic growth in our province and a pathway to a more inclusive and prosperous society,
- The *Declaration on the Rights of Indigenous Peoples Act* and the Truth and Reconciliation Commission Calls to Action, demonstrating support for true and lasting reconciliation, and
- The CleanBC plan, putting B.C. on the path to a cleaner, better future – with a low carbon economy that creates opportunities while protecting our clean air, land and water.

This 2020/21 service plan outlines how the Ministry of Energy, Mines and Petroleum Resources will support the government's priorities, including selected action items identified in the July 2017 Minister's Mandate Letter. Over the previous fiscal year, the Ministry of Energy, Mine and Petroleum Resources made progress on these priorities by:

- Supporting the development and implementation of CleanBC, the Province's energy, climate and economic development plan, in coordination with the Ministry of Environment and Climate Change Strategy, and the Ministry of Jobs, Trade and Technology.

- Working with Liquefied Natural Gas (LNG) proponents to ensure project proposals meet the government's goals and expectations for LNG development in B.C.
- Implementing the recommendations of the Mining Jobs Task Force to explore opportunities to create and sustain good jobs in the B.C. mining industry.
- Completing and starting to implement Phase Two of the Comprehensive Review of BC Hydro to identify how BC Hydro can accomplish the provincial policy objectives laid out in the CleanBC plan, including supporting economic development opportunities.
- Sustaining the Clean Energy Vehicle program to encourage and accelerate the adoption of zero emission vehicles (ZEVs).
- Concluding accommodation and revenue/benefit sharing agreements; collaborative stewardship initiatives such as the Environmental Stewardship Initiative; and collaborative mine permitting agreements, as well as supporting the negotiation of Comprehensive Reconciliation Agreements with Indigenous nations.
- Implementing the Mine Audits and Effectiveness Unit in the new Mines Health, Safety and Enforcement Division as the independent oversight unit, and targeting new resources to increase industry safety.

In January 2020, the Honourable Bruce Ralston was appointed as Minister of Energy, Mines and Petroleum Resources and a new mandate letter is forthcoming.

The following performance plan outlines how the Ministry of Energy, Mines and Petroleum Resources will continue to track progress on key mandate letter commitments and other emerging government priorities.

Performance Planning

Goal 1: A competitive energy portfolio powered by clean, renewable energy and supported by technological innovation

This goal relates to the Mandate Letter priority of creating a roadmap for the future of B.C. energy, to generate new energy responsibly and sustainably, and create lasting good jobs across the province. A focus on technological innovation will expand upon energy efficiency and conservation opportunities and create new jobs in the provincial energy sector.

Objective 1.1: Decarbonize B.C.'s energy sectors and usage in support of the provincial CleanBC plan

Key Strategies:

- Incorporate direction from the CleanBC plan into ministry operations to meet provincial economic and climate goals.
- Further reduce the carbon-intensity of transportation fuels.
- Increase the production and consumption of biofuels in B.C.
- Continue to implement policies, programs, regulations, codes and standards to advance energy efficiency and conservation in the built environment, including retrofits.
- Work with BC Hydro to complete and implement Phase 2 of the Comprehensive Review, and ensure the Province's generation, transmission and distribution assets continue to deliver reliable and cost-effective service.

Performance Measure	2019/20 Forecast	2020/21 Target	2021/22 Target	2022/23 Target
1.1 Clean or renewable energy as a share of utility and transportation fuel sales [1, 2]	29%	30%	31%	32%

[1] Data Source: Compiled by the Ministry of Energy, Mines and Petroleum Resources and includes data from BC Hydro.
[2] 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.

Linking Performance Measure to Objective:

The provincial energy objectives in the CleanBC plan confirm the role of B.C. generated electricity in reducing greenhouse gas emissions. This performance measure supports the objective of decarbonization, as the Ministry's programs and regulations directly impact energy utilities and the transportation fuels industries.

Objective 1.2: Support quality economic growth and electrification to reduce greenhouse gas emissions

Key Strategies:

- Implement outcomes from Phase One of the Comprehensive Review of BC Hydro and work to keep electricity rates affordable for British Columbians.

- Expand electrification of the upstream oil and gas industry.
- Decarbonize the transportation industry by accelerating the adoption of ZEVs.
- Expand electrification of transportation, buildings and industry.

Performance Measure	2019/20 Forecast	2020/21 Target	2021/22 Target	2022/23 Target
1.2 Zero-Emission Vehicle sales percent of new light-duty vehicle sales. [1]	9%	9%	10%	12%

[1] Data Source: Compiled by Ministry of Energy, Mines and Petroleum Resources staff from BC Hydro, ICBC and ZEV sales. Transport Canada defines a light-duty vehicle as one that weighs 3,856kg (8,500lbs) or less.

Linking Performance Measure to Objective:

Transportation currently accounts for 38 per cent of B.C.'s total emissions; as a result, to reduce emissions and meet B.C.'s climate targets, significant action needs to be taken in this area. Increased adoption of ZEVs will reduce B.C.'s emissions and improve air quality. This performance measure supports progress towards Government's target of increasing the number of ZEVs in B.C., reaching 100% of all new light-duty vehicle sales by 2040. This measure was changed from the number of light-duty Zero Emission Vehicles registered in B.C., which was in the 2019/20 Service Plan, in order to align with CleanBC targets.

Goal 2: A sustainable, responsible and competitive mining sector that supports Indigenous reconciliation, creates jobs and contributes to responsible mining products and low-carbon technologies

Objective 2.1: B.C. is positioned as an attractive, responsible jurisdiction for investment in the mining sector

Key Strategies:

- Develop an improved and sufficiently resourced approvals process to assess mining applications.
- Grow the mining industry as part of an inclusive, progressive low carbon economy by implementing Mining Jobs Task Force recommendations.
- Continue to utilize and improve the Natural Resource Sector Online Services portal to streamline the Notice of Work application process.
- Continuously improve consultation and engagement with Indigenous Nations on relevant permit applications, and collaboration and benefit negotiations for major mine developments.
- Develop and implement new legislation that supports transparency in the regulation of mining in B.C.

Performance Measure	2015-2017 Average	2019/20 Forecast	2020/21 Target	2021/22 Target	2022/23 Target
2.1 B.C.'s share of Canadian mineral resource development investments[1]	13%	14%	15%	16%	17%

[1] Data Source: Ministry of Energy, Mines and Petroleum Resources and Natural Resources Canada

Linking Performance Measure to Objective:

Through its strategies to improve B.C.'s competitiveness, the Ministry continuously strives to attract long-term investment in B.C.'s mining sector and related service industries. Government can help to reduce risk and sustain investment levels through streamlined processes for mine project permitting, and this performance measure reflects B.C.'s efforts to achieve its objective. Due to current commodity prices and the investment climate, B.C.'s share of Canadian investment declined slightly (approximately 1%) in 2018/19, with another modest decrease expected in 2019/20

Objective 2.2: Oversight of the mining industry is continuously improved to protect the environment, human health and public safety

Key Strategies:

- Continue to review legislation and regulations to ensure B.C. remains competitive and enhance the integrity of environmental, health and safety standards.
- Ensure timely follow-up on environmental, human health, Indigenous and public safety concerns.
- Implement the Audit Unit's annual plan, with the goal of ensuring regulatory requirements are protecting workers, the public and the environment.
- Continually improve regulatory oversight and inspection frequency of mines.
- Work with the Environmental Assessment Office and the Ministry of Environment and Climate Change Strategy on the coordination of regulatory oversight and on compliance promotion.

Performance Measure	Baseline 2014-2018 Average	2019 Forecast	2020 Target	2021 Target	2022 Target
2.2 Mine inspections [1, 2]	1288	1,500	1,550	1,600	1,600

[1] Data Source: Manually compiled by Ministry of Energy, Mines and Petroleum Resources.
[2] Targets for 2020 and beyond have been adjusted to reflect Budget 2019 investments in compliance and enforcement.

Linking Performance Measure to Objective:

The Ministry's Mines Inspectors conduct inspections of mine sites to promote operator awareness of regulatory requirements, to verify compliance with the *Mines Act*, the Heath, Safety and Reclamation Code for Mines in B.C., and individual permit conditions, and to take enforcement action as necessary. Inspections are a key compliance verification tool to ensure the protection of the environment, human health and public safety.

Goal 3: B.C.'s low carbon-intensity oil and gas products provide sustainable jobs for British Columbians, support Indigenous reconciliation and LNG projects meet the government's four conditions

Objective 3.1: Policies and processes that ensure the competitive and responsible development of oil and gas resources that support the provincial economic framework.

Key Strategies:

- Implement the Action Plan responding to the recommendations of the Scientific Hydraulic Fracturing Review Panel.
- Continue incentivizing industry to invest in clean technologies through infrastructure royalty credit programs.
- Oversee and support the implementation of LNG Canada through the establishment of a dedicated LNG Canada Implementation Secretariat to ensure government's goals and expectations are being met.
- Support the reduction of greenhouse gas (GHG) emissions in our oil and gas sector.
- Continue working with the Climate Action Secretariat and the BC Oil and Gas Commission to reduce industry methane emissions.

Performance Measure	2017/18 Baseline	2019/20 Forecast	2020/21 Target	2021/22 Target	2022/23 Target
3.1 Annual GHG reductions from infrastructure improvements under infrastructure royalty credit programs offered by the Province[1]	35,000 tonnes	109,000 tonnes	140,000 tonnes	163,000 tonnes	210,000 tonnes

[1] Data Source: Ministry of Energy, Mines and Petroleum Resources

Linking Performance Measure to Objective:

This measure tracks the GHG reductions from oil and gas infrastructure development, which directly relates to the responsible development of oil and gas resources in B.C. These targets align with the Province's legislated GHG reduction targets: 40 per cent below 2007 levels by 2030, 60 per cent by 2040 and 80 per cent by 2050.

Objective 3.2: Support the value-added development of B.C.'s oil and gas resources to maximize the benefits to all British Columbians

Key Strategies:

- Monitor and adapt oil and gas fiscal and regulatory frameworks to ensure they are competitive and generate a fair return to the Province.
- Add value to B.C.'s abundant natural gas resources by working with industry, Indigenous Nations and communities to guide and plan resource development and industrial activities.
- Continue appropriate and sustainable management of subsurface rights and timely decisions on oil and gas tenures and authorizations.

- Contribute to economic, social and environmental reconciliation by building meaningful partnerships with Indigenous communities for oil and gas development.
- Continue to work with Industry, Indigenous Nations, BC Hydro, and the Provincial Climate Action Secretariat to ensure oil and gas development and related infrastructure supports CleanBC and clean growth.

Performance Measure	2019 Forecast	2020 Target	2021 Target	2022 Target
3.2 Relative annual investment in natural gas and oil exploration and development (B.C. as % of Canada)[1]	14%	14%	14%	14%

[1] Data Source: Ministry of Energy, Mines and Petroleum Resources based on Canadian Association of Petroleum Producers Net Cash Expenditure historical data and forecasts for 2019. All data is only available and provided by calendar year.

Linking Performance Measure to Objective:

Investment in the development of B.C.'s oil and gas resources is important for maximizing value to British Columbians. Ensuring that B.C.'s share of annual investment in Canadian oil and gas resources continues to grow, including value-added oil and gas development, to support job creation, economic growth, and infrastructure development in B.C.

Resource Summary

Core Business Area	2019/20 Restated Budget[1]	2020/21 Estimate	2021/22 Plan	2022/23 Plan
Operating Expenses ($000)				
Mines Competitiveness and Authorizations	17,525	18,293	18,487	18,487
Mines Health, Safety and Enforcement	9,297	10,306	10,674	10,674
Electricity and Alternative Energy	117,346	51,147	28,960	28,960
Oil and Gas	17,913	16,772	16,855	16,855
Strategic and Indigenous Affairs	3,100	3,031	3,055	3,055
Executive and Support Services	11,857	11,386	11,539	11,539
Innovative Clean Energy Fund Special Account	3,243	2,696	2,326	2,326
Total	**180,281**	**113,631**	**91,896**	**91,896**
Ministry Capital Expenditures (Consolidated Revenue Fund) ($000)				
Executive and Support Services	198	218	218	218
Total	**198**	**218**	**218**	**218**
[2] Other Financing Transactions ($000)				
Oil and Gas Commission Receipts	(46,800)	(45,050)	(43,300)	(45,300)
Oil and Gas Commission Disbursements	46,800	45,050	43,300	45,300
Net Cash Requirement (Source)	0,000	0,000	0,000	0,000
Total Receipts	**(46,800)**	**(45,050)**	**(43,300)**	**(45,300)**
Total Disbursements	**46,800**	**45,050**	**43,300**	**45,300**
Total Net Cash Requirement (Source)	**0,000**	**0,000**	**0,000**	**0,000**

[1] For comparative purposes, amounts shown for 2019/20 have been restated to be consistent with the presentation of the 2020/21 Estimates.
[2] The ministry collects production levies (operating) and OSRF revenues on behalf of the Oil and Gas Commission, but not pipeline revenues.
* Further information on program funding and vote recoveries is available in the Estimates and Supplement to the Estimates.

Appendix A: Agencies, Boards, Commissions and Tribunals

BC Oil and Gas Commission

The BC Oil and Gas Commission (OGC) is a single-window regulatory agency with responsibilities for overseeing oil, gas and renewable geothermal operations in British Columbia. The Commission oversees activities from exploration and development, to pipeline transportation and reclamation.

British Columbia Hydro and Power Authority

BC Hydro is one of the largest electricity suppliers in Canada, generating and delivering electricity to 95% of the population of B.C., serving over four million people.

2020/21 Estimates Note
Advice to the Minister

Ministry: **Ministry of Energy, Mines and Petroleum Resources**
Minister Responsible: **Hon. Bruce Ralston**

Title: Ministry Service Plan

Revised: March 9, 2020

Issue: Ministry of Energy, Mines and Petroleum Resources Service Plan 2020/21 – 22/23

Response:

- Goals and objectives outlined in this service plan support Government's three strategic priorities: making life more affordable, delivering better services, and investing in a sustainable economy.
- The energy and mining sectors provide jobs and business opportunities throughout the province, driving the economy and generating millions of dollars in revenue to support programs that the citizens of British Columbia rely on.
- The Ministry of Energy, Mines and Petroleum Resources (EMPR) is well positioned to deliver on the Service Plan for fiscal 2020/21.
- I believe this is an excellent service plan that ensures the responsible development of British Columbia's energy and mining sectors.

Background/Status:

- EMPR's Service Plan was prepared in accordance with the Service Plan Guidelines released by the Crown Agencies and Board Resourcing Office (CABRO) in October 2019. The coordination of Ministry and Crown Corporation service plans is performed by CABRO at the Ministry of Finance.
- The EMPR 2020/21 Service Plan is consistent with the Minister's February 2020 Mandate Letter from Premier Horgan.
- The 2020/21 goals, objectives and strategies, both new and carried forward, expand upon the Ministry's 2019/20 – 2020/21 Service Plan published in February 2019.
    - Goal 1: A competitive energy portfolio powered by clean, renewable energy and supported by technological innovation.
        - Objective 1.1: Decarbonize B.C.'s energy sectors and usage in support of the provincial CleanBC plan.
        - Objective 1.2: Support quality economic growth and electrification to reduce greenhouse gas emissions.

- Goal 2: A sustainable, responsible and competitive mining sector that supports Indigenous reconciliation, creates jobs and contributes to responsible mining products and low-carbon technologies.
  - Objective 2.1: B.C. is positioned as an attractive, responsible jurisdiction for investment in the mining sector.
  - Objective 2.2: Oversight of the mining industry is continuously improved to protect the environment, human health and public safety.
- Goal 3: B.C.'s low carbon-intensity oil and gas products provide sustainable jobs for British Columbians, support Indigenous reconciliation and LNG projects meet the government's four conditions.
  - Objective 3.1: Policies and processes that ensure the competitive and responsible development of oil and gas resources that support the provincial economic framework.
  - Objective 3.2: Support the value-added development of B.C.'s oil and gas resources to maximize the benefits to all British Columbians.

- The Service Plan supports Government's commitment to implement the United Nations Declaration on the Rights of Indigenous Peoples and the Calls to Action of the Truth and Reconciliation Commission through several goals and strategies.
- During development of the EMPR Service Plan, a thorough review of current resources was completed to enable the Ministry to focus on programs designed to achieve Service Plan goals and objectives.
- The Service Plan incorporates direction from the CleanBC plan and includes goals, objectives and strategies that make progress towards the CleanBC targets to protect our air, land and water.
- The complete 2020/21 Service Plan is attached.

Contact:

Simon Coley	ADM	Strategic and Indigenous Affairs Division	778 698-7176

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

The mission of the Ministry of Energy, Mines and Petroleum Resources is to facilitate sustainable, safe, environmentally responsible, and competitive natural gas, oil, energy, and mining sectors for the benefit of British Columbians and effective service delivery in all areas of business.

MINISTRY SUMMARY

($000)

	Estimates 2019/20[1]	**Estimates 2020/21**
VOTED APPROPRIATION		
Vote 22 — Ministry Operations	177,038	**110,935**
STATUTORY APPROPRIATION		
Innovative Clean Energy Fund Special Account	3,243	**2,696**
OPERATING EXPENSES	180,281	**113,631**
CAPITAL EXPENDITURES [2]	198	**218**
LOANS, INVESTMENTS AND OTHER REQUIREMENTS [3]	—	**—**
REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES [4]	—	**—**

NOTES

[1] For comparative purposes, figures shown for the 2019/20 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 *2020/21 Estimates*. A reconciliation of restated operating expenses and capital expenditures resulting from transfers between ministries 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, MINES AND PETROLEUM RESOURCES

SUMMARY BY CORE BUSINESS

($000)

OPERATING EXPENSES	2019/20 Net	2020/21 ESTIMATES Gross	External Recoveries	Net
Core Business				
Mines Competitiveness and Authorizations	17,525	**21,346**	**(3,053)**	**18,293**
Mines Health, Safety and Enforcement	9,297	**10,308**	**(2)**	**10,306**
Electricity and Alternative Energy	117,346	**51,149**	**(2)**	**51,147**
Oil and Gas	17,913	**16,774**	**(2)**	**16,772**
Strategic and Indigenous Affairs	3,100	**3,033**	**(2)**	**3,031**
Executive and Support Services	11,857	**11,392**	**(6)**	**11,386**
Innovative Clean Energy Fund Special Account	3,243	**2,698**	**(2)**	**2,696**
TOTAL OPERATING EXPENSES	180,281	**116,700**	**(3,069)**	**113,631**

CAPITAL EXPENDITURES	Capital Expenditures	Capital Expenditures	Receipts and P3 Liabilities	Net
Core Business				
Executive and Support Services	198	**218**	**—**	**218**
TOTAL	198	**218**	**—**	**218**

REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES	Net	Disbursements	Receipts	Net
Core Business				
Oil and Gas	—	**45,050**	**(45,050)**	**—**
TOTAL REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES	—	**45,050**	**(45,050)**	**—**

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

VOTE DESCRIPTIONS

($000)

	Estimates 2019/20	**Estimates 2020/21**

VOTE 22 — MINISTRY OPERATIONS

This vote provides for the programs, operations, and other activities described in the voted appropriations under the following core businesses: Mines Competitiveness and Authorizations; Mines Health, Safety and Enforcement; Electricity and Alternative Energy; Oil and Gas; Strategic and Indigenous Affairs; and Executive and Support Services.

MINES COMPETITIVENESS AND AUTHORIZATIONS

Voted Appropriation

Mines Competitiveness and Authorizations	17,525	**18,293**

Voted Appropriation Description: This sub-vote provides for the management and responsible development of the province's mineral, coal, and aggregate resources through developing and delivering geoscience databases and surveys; profiling British Columbia's mineral and coal opportunities; providing secure mineral and coal tenure systems; delivering a fair, effective, and transparent regulatory process; developing and implementing policies and legislation to attract investment in British Columbia; developing strategies and actions to continuously enhance provincial competitiveness; collecting fees and securities associated with permits and tenures; advising government agencies on mineral and coal resources and their potential; and engaging and collaborating with Indigenous communities, stakeholders, local and federal governments, and the public. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this sub-vote.

MINES HEALTH, SAFETY AND ENFORCEMENT

Voted Appropriation

Mines Health, Safety and Enforcement	9,297	**10,306**

Voted Appropriation Description: This sub-vote provides for oversight of the mining sector, including health and safety on all mineral, coal, and aggregate mine sites during exploration, development, production, and reclamation; performing independent auditing and effectiveness monitoring for continuous improvements to regulatory oversight; undertaking investigations and enforcement; providing data-driven process and policy to support robust compliance and enforcement; engaging with Indigenous communities in relation to mining oversight; and providing for a standing Code Review Committee to ensure labour, Indigenous communities, and industry are involved in developing British Columbia's mine safety standards. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for activities described within this sub-vote.

ELECTRICITY AND ALTERNATIVE ENERGY

Voted Appropriation

Electricity and Alternative Energy	117,346	**51,147**

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; province-wide energy efficiency and clean fuel-switching measures and programs; alternative energy resource development; the advancement of leading edge energy technologies; and the management of geothermal resources. This sub-vote also includes regulatory initiatives and programs to increase adoption of zero emission vehicles; reduce the carbon intensity of transportation fuels and expand the production and use of renewable fuels. This sub-vote supports the provision of policy 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; Indigenous communities and community investment in new electricity and alternative energy resources; and strategic policy development for clean, renewable energy producers. Costs may be recovered from ministries, including activities related to the Columbia River Treaty, Columbia Basin Trust, and Columbia Power Corporation; Crown agencies; other levels of government; and parties external to government for activities described within this sub-vote.

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

VOTE DESCRIPTIONS

($000)

	Estimates 2019/20	**Estimates 2020/21**
OIL AND GAS		
Voted Appropriation		
Oil and Gas	17,913	**16,772**

Voted Appropriation Description: This sub-vote provides for the management and responsible development of the province's oil and gas resources, including issuing and administrating Crown petroleum and natural gas subsurface tenures, as well as the revenues associated with those tenures; incenting infrastructure that supports resource development and contributes to lowering carbon intensity; undertaking analysis to develop and implement policies and programs, including the province's royalty regime; identifying, stimulating, and facilitating development and market opportunities, such as development of the province's liquefied natural gas industry and other industries that add value to British Columbia's oil and gas resources; developing provincial statutes and regulations that apply to the oil and gas sector; representing the province's interests before energy regulatory tribunals; facilitating and leading the development and implementation of intra-provincial liquefied natural gas pipelines and related infrastructure; facilitating the development and implementation of interprovincial oil pipelines and related infrastructure projects; 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; 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.

STRATEGIC AND INDIGENOUS AFFAIRS		
Voted Appropriation		
Strategic and Indigenous Affairs	3,100	**3,031**

Voted Appropriation Description: This sub-vote provides for leadership and support in areas of strategic and cross-ministry policy, Indigenous relations, intergovernmental relations, environmental stewardship initiatives, business review and planning, the legislative and legal affairs of the ministry, and liaising on Indigenous policy with the Oil and Gas Commission and the British Columbia Hydro and Power Authority. 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	576	**576**
Corporate Services	11,281	**10,810**
	11,857	**11,386**

Voted Appropriations Description: This sub-vote provides for the office of the Minister of Energy, Mines and Petroleum Resources; executive support, including the deputy minister's office; and coordination of legislation. This sub-vote also provides for corporate services and corporate business innovation, including legislation; internal communications; 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 22 — MINISTRY OPERATIONS	177,038	**110,935**

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

STATUTORY DESCRIPTIONS

($000)

	Estimates 2019/20	**Estimates 2020/21**

STATUTORY APPROPRIATIONS

This statutory appropriation provides for the programs, operations, and other activities of the following special account: Innovative Clean Energy Fund.

INNOVATIVE CLEAN ENERGY FUND

Statutory Appropriation

Innovative Clean Energy Fund special account	3,243	**2,696**

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	41,884	**44,266**
Operating Costs	27,661	**25,471**
Government Transfers	112,078	**45,245**
Other Expenses	1,729	**1,727**
Internal Recoveries	(10)	**(9)**
External Recoveries	(3,061)	**(3,069)**
TOTAL OPERATING EXPENSES	180,281	**113,631**

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

SPECIAL ACCOUNTS[1]

($000)

	Estimates 2019/20	**Estimates 2020/21**
INNOVATIVE CLEAN ENERGY FUND SPECIAL ACCOUNT		
This account was created by the *Finance Statutes (Innovative Clean Energy Fund) Amendment Act* in 2007 and is continued under the *Special Accounts Appropriation and Control Act*. 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 *Provincial Sales Tax Act* 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 *Special Accounts Appropriation and Control Act*, 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]	3,973	**6,230**
OPERATING TRANSACTIONS		
Revenue	5,500	5,500
Expense	(3,246)	(2,699)
Internal and External Recoveries	3	3
Net Revenue (Expense)	2,257	**2,804**
FINANCING TRANSACTIONS		
Receipts	—	—
Disbursements	—	—
Capital Expenditures	—	—
Net Cash Source (Requirement)	—	**—**
PROJECTED SPENDING AUTHORITY AVAILABLE AT THE END OF THE FISCAL YEAR [2]	6,230	**9,034**

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 2019/20 is based on the *2018/19 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, MINES AND PETROLEUM RESOURCES

REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES BY CORE BUSINESS

($000)

	Estimates 2019/20	**Estimates 2020/21**
OIL AND GAS		
OIL AND GAS COMMISSION — Disbursements are provided by the province to the Oil and Gas Commission with respect to oil and gas industry fees, levies, and taxes assessed and collected on behalf of the Commission under the *Oil and Gas Activities Act* and the Fee, Levy and Security Regulation. Administration costs are funded through the ministry's voted appropriations.		
Disbursements	46,800	**45,050**
Receipts	(46,800)	**(45,050)**
Net Cash Requirement (Source)	—	**—**

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
($000)

VOTE 22 Ministry Operations

Description	Total 2019/20 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
Mines Competitiveness and Authorizations	**17,525**	**13,481**	**1,109**	**3,424**	**—**	**18,014**	**50**	**863**	**—**	**1,725**	**164**	**263**	**—**	**—**	**65**
Mines Health, Safety and Enforcement	**9,297**	**6,443**	**740**	**1,637**	**—**	**8,820**	**50**	**512**	**—**	**588**	**80**	**128**	**—**	**—**	**32**
Electricity and Alternative Energy	**117,346**	**4,191**	**—**	**1,065**	**—**	**5,256**	**—**	**114**	**—**	**2,049**	**62**	**57**	**920**	**—**	**—**
Oil and Gas	**17,913**	**5,633**	**—**	**1,431**	**—**	**7,064**	**—**	**354**	**—**	**2,490**	**306**	**340**	**—**	**—**	**69**
Strategic and Indigenous Affairs	**3,100**	**1,768**	**—**	**449**	**—**	**2,217**	**—**	**103**	**—**	**513**	**21**	**75**	**—**	**—**	**—**
Executive and Support Services	**11,857**	**1,829**	**36**	**485**	**54**	**2,404**	**—**	**177**	**2,458**	**438**	**737**	**1,380**	**—**	**—**	**—**
Minister's Office	576	339	—	106	54	499	—	47	—	—	9	15	—	—	—
Corporate Services	11,281	1,490	36	379	—	1,905	—	130	2,458	438	728	1,365	—	—	—
Total	**177,038**	**33,345**	**1,885**	**8,491**	**54**	**43,775**	**100**	**2,123**	**2,458**	**7,803**	**1,370**	**2,243**	**920**	**—**	**166**

Statutory Appropriations

Description	Total 2019/20 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
Innovative Clean Energy Fund special account	**3,243**	**392**	**—**	**99**	**—**	**491**	**—**	**5**	**—**	**16**	**—**	**5**	**—**	**—**	**—**
Total	**3,243**	**392**	**—**	**99**	**—**	**491**	**—**	**5**	**—**	**16**	**—**	**5**	**—**	**—**	**—**

70	72	73	75	Total Operating Costs	77	79	80	Total Govt Transfers	81	83	85	Total Other Expenses	86	88	Total Internal Recoveries	89	90	Total External Recoveries	Total 2020/21 Operating Expenses
69	**—**	**—**	**—**	**3,199**	**—**	**—**	**118**	**118**	**—**	**—**	**16**	**16**	**—**	**(1)**	**(1)**	**(1)**	**(3,052)**	**(3,053)**	**18,293**
34	**—**	**—**	**—**	**1,424**	**—**	**—**	**57**	**57**	**—**	**—**	**8**	**8**	**—**	**(1)**	**(1)**	**(1)**	**(1)**	**(2)**	**10,306**
—	**—**	**—**	**—**	**3,202**	**—**	**—**	**42,688**	**42,688**	**—**	**—**	**4**	**4**	**—**	**(1)**	**(1)**	**(1)**	**(1)**	**(2)**	**51,147**
63	**—**	**5,934**	**—**	**9,556**	**—**	**—**	**100**	**100**	**—**	**—**	**55**	**55**	**—**	**(1)**	**(1)**	**(1)**	**(1)**	**(2)**	**16,772**
—	**—**	**—**	**—**	**712**	**—**	**—**	**100**	**100**	**—**	**—**	**5**	**5**	**—**	**(1)**	**(1)**	**(1)**	**(1)**	**(2)**	**3,031**
287	**—**	**842**	**1,033**	**7,352**	**—**	**—**	**—**	**—**	**—**	**—**	**1,639**	**1,639**	**—**	**(3)**	**(3)**	**(3)**	**(3)**	**(6)**	**11,386**
—	—	—	—	71	—	—	—	—	—	—	9	9	—	(1)	(1)	(1)	(1)	(2)	576
287	—	842	1,033	7,281	—	—	—	—	—	—	1,630	1,630	—	(2)	(2)	(2)	(2)	(4)	10,810
453	**—**	**6,776**	**1,033**	**25,445**	**—**	**—**	**43,063**	**43,063**	**—**	**—**	**1,727**	**1,727**	**—**	**(8)**	**(8)**	**(8)**	**(3,059)**	**(3,067)**	**110,935**

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 2020/21 Operating Expenses
—	**—**	**—**	**—**	**26**	**—**	**—**	**2,182**	**2,182**	**—**	**—**	**—**	**—**	**—**	**(1)**	**(1)**	**(1)**	**(1)**	**(2)**	**2,696**
—	**—**	**—**	**—**	**26**	**—**	**—**	**2,182**	**2,182**	**—**	**—**	**—**	**—**	**—**	**(1)**	**(1)**	**(1)**	**(1)**	**(2)**	**2,696**

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

1. Clean BC Targets

Question: Will the Ministry be able to support CleanBC targets noting the big reduction in Electricity and Alternative Energy Funding?

Response: The Ministry has sufficient funding in its budget to:

- continue to support quality economic growth through electrification of new or existing industry;
- continue to work on decarbonizing the energy sector;
- continue to work on decarbonizing the building sector;
- continue the progress on electrification of transportation; and
- continue working with delivery partners to reduce diesel use in remote communities.

2. Competitiveness

Question: What steps will the Ministry be taking to keep the mining and oil and gas sectors competitive, provide a fair return for BC, and address tensions between resource/infrastructure development and environmental concerns?

Response Mining: Building on the commitment to advance Mining Jobs Task Force actions and BC's $20M investment into the Ministry, the Ministry will continue to advance regulatory excellence and enhance competitiveness of the mining sector by:

- delivering more efficient and effective mine related permitting to create quality economic growth opportunities for British Columbians;
- enhancing environmental sustainability and outcomes;
- implementing BC's reconciliation goals by partnering with key Indigenous Nations on mining related opportunities; and
- continuing to support the Low Carbon Industrial Strategy to ensure trade exposed industries like mining remain competitive.

These initiatives will contribute to BC taking advantage of opportunities to become a jurisdiction of choice to supply responsible low-carbon products and attracting a growing pool of Environmental, Social, and Governance (ESG) focused investment.

Response Oil and Gas:
The Ministry will:

- support, monitor and adapt oil and gas fiscal and regulatory frameworks to ensure they are competitive and generate a fair return to BC;
- implement the Action Plan responding to the recommendations of the Scientific Hydraulic Fracturing Review Panel;
- continue incentivizing industry to invest in clean technologies through infrastructure royalty credit programs;
- continue to develop greater certainty on for the working land base to maintain a competitive market for oil and gas development;
- regularly measure and report on the effectiveness of our royalty programs;
- add value to BC's natural resources by working with industry, Indigenous Nations and communities to guide and plan resource development and industrial activities; and
- work with Industry, Indigenous Nations, BC Hydro, and the Provincial Climate Action Secretariat to ensure oil and gas development and related infrastructure supports CleanBC and clean growth.

3. Site C Budget Concerns

Question: The most recent quarterly report on Site C disclosed significant cost pressures. Can the project still be completed for $10.7 billion?

Response:

- the current project budget is $10 billion, with a 0.7 billion project reserve held by Treasury Board;
- as of September 30, 2019, $4.3 billion has been spent and a further $2.7 billion has been committed;
- the budget is under pressure and there are some areas where costs have increased since the budget was approved in 2018;
- the construction timeline for this project is much longer than a traditional project and there are scenarios that would cause us to exceed the budget;
- to-date, we have used about 70 per cent of the contingency, and while we have not drawn on the project reserve, we expect to draw on it at some point;
- there is a process that we would follow to access the project reserve and update the project budget; and
- this process includes providing an updated analysis and forecast of the total project cost to our Project Assurance Board and then to Treasury Board.

Ministry of Energy, Mines and Petroleum Resources
2020/21 Estimates
Finance Based Questions and Answers

Table of Contents

1. Why has the ministry's operating budget decreased by ($66.650M) in 2020/21? 2
2. What is being spent on Clean BC with the $32.280M budget lift? 2
3. How much has Budget 2020 committed over the next three years for Clean BC? 2
4. Why has Electricity and Alternative Energy's budget reduced by ($66.199M)? 2
5. What is the impact of the expenditure management? 3
6. What is the FTE burn in EMPR and how does this compare to past years? 3
7. How many vacant positions are there? 3
8. Why has the ministry's capital budget increased by $0.020M in 2020/21? 4
9. What are the Minister's staff salaries by position? 4
10. What is the Minister's compensation? 4
11. Have there been any audits completed for any area of the ministry/programs? What was the reason for the audit? What recommendations are done and what is outstanding? 4
12. What crowns and public bodies is the minister responsible for? 4

1. Why has the ministry's operating budget decreased by ($66.650M) in 2020/21?

The ministry's operating budget decreased by ($66.650M) in 2020/21 due to:

- ($66.469M) planned decrease from previous budget for Clean BC; ($98.749M); $32.280M increase for the Clean Energy Vehicle Program
- (3.271M) decrease for expenditure management
- ($0.554M) decrease for the ICE Fund spending plan adjustment
- $0.696M increase for negotiated wage increases and other adjustments
- $2.798M increase from a previous budget approval for Regulatory Excellence in Mining
- $0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements

2. What is being spent on Clean BC with the $32.280M budget lift?

- $20M - Base Vehicle Incentives
- $5M - Home and Workplace Charging
- $5M - Medium and Heavy Duty ZEV Program
- $2M - Public Charging
- $0.200M - Public Outreach
- $0.080M - Research, Analysis and Reporting

3. How much has Budget 2020 committed over the next three years for Clean BC?

Including the $32.280M in incremental funding, Budget 2020 commits $96M over three years for Clean BC programs managed by Electricity and Alternative Energy.

	2020/21
Clean Energy Vehicle Program Expansion	32,280
Previous Budget Approvals:	
Efficiency BC Expansion	13,260
Clean Energy Vehicle Supply Standard	1,218
Building Energy Codes	140
	46,898

s.13; s.17

4. Why has Electricity and Alternative Energy's budget reduced by ($66.199M)?

- ($66.212M) for Clean BC
- ($0.067M) decrease for the fiscal adjustment (reductions)
- $0.080M increase for negotiated wage increases and other adjustments

The ministry has sufficient funding in its budget to:

- continue to support quality economic growth through electrification of new or existing industry;

- continue to work on decarbonizing the energy sector;
- continue to work on decarbonizing the building sector;
- continue the progress on electrification of transportation; and
- continue working with delivery partners to reduce diesel use in remote communities.

5. What is the impact of the expenditure management?

- In alignment with government and ministry priorities, we focused on protecting staff and the delivery of our core services with minimal disruption to our stakeholders.
- We protected specific ministry program funding such as the Clean BC Initiatives.
- We targeted primarily operational expenses such as travel, contract expenditures, information technology, office and business expenses and other somewhat discretionary expenditures.

Breakdown by core business is as follows:

Core Business	Amount	%
Mines Competitiveness and Authorizations	($0.533M)	16%
Mines Health, Safety and Enforcement	($0.237M	7%
Electricity and Alternative Energy	($0.067M)	2%
Oil and Gas	($1.254M)	38%
Strategic and Indigenous Affairs	(0.107M)	3%
Executive and Support Services	(1.073M)	33%
TOTAL:	**($3.271M)**	**100%**

6. What is the FTE burn in EMPR and how does this compare to past years?

In 2013/14 the ministry was split to form the Ministry of Natural Gas Development. In 2017/18 the ministry was merged again to form the Ministry of Energy, Mines and Petroleum Resources:

2016/17 previously MEM	2017/18 EMPR	2018/19 EMPR	2019/20 EMPR at Mar 2020
223	315	330	398

7. How many vacant positions are there?

The number of positions the ministry can accommodate within its budget depends on many factors including the staff mix throughout the year, thus the number of vacant positions will fluctuate.

There are currently 2 positions in the recruitment process.

8. Why has the ministry's capital budget increased by $0.020M in 2020/21?

The ministry's capital budget increased by $0.020M in 2020/21 to fund the number of vehicle replacements scheduled, including up-fitting.

s.17; s.22

10. What is the Minister's compensation?

Information on compensation is availabe on the following website: https://www.leg.bc.ca/learn-about-us/accountability

The compensation is broken into 2 parts:

- Basic Compensation as an MLA is $111,024
- Top-up of 50% for being a Minister is $55,051
  Ministerial salaries are subject to a hold back of 20%. Half is accrued to meeting the government's bottom line and the other half by delivering on those accountabilities that are attributed to my ministry
- Total $166,075 (20% holdback $33,215)

11. Have there been any audits completed for any area of the ministry/programs? What was the reason for the audit? What recommendations are done and what is outstanding?

- To date, there were no OCG or OAG EMPR specific audits.

12. What crowns and public bodies is the minister responsible for?

The minister is responsible for the British Columbia Hydro and Power Authority Crown Corporation and the Oil and Gas Commission.

BC Hydro has two subsidiaries: Powerex Corp. and Powertech Labs Inc.

The ministry is also responsible for the Assayer Certification Board of Examiners.

- The Assayer Certification is unique, because B.C. is the only mining jurisdiction in the world that requires **assayers** to pass an examination before being **certified**. Candidates are examined by an independent **Board of Examiners** drawn from educators and industry.

Page 422 of 479 to/à Page 423 of 479

Withheld pursuant to/removed as

s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
OPERATING BUDGET - 2019/20 to 2022/23

By Core Business

$000s

	2019/20 Restated	Change	2020/21 Estimates	Change	2021/22 Plan	Change	2022/23 Plan
Ministry Operations							
Mines Competitiveness and Authorizations	17,525	768	**18,293**	194	18,487	-	18,487
Mines Health, Safety and Enforcement	9,297	1,009	**10,306**	368	10,674	-	10,674
Electricity and Alternative Energy	117,346	(66,199)	**51,147**	(22,187)	28,960	-	28,960
Oil and Gas	17,913	(1,141)	**16,772**	83	16,855	-	16,855
Strategic & Indigenous Affairs	3,100	(69)	**3,031**	24	3,055	-	3,055
Minister's Office	576	-	**576**	-	576	-	576
Executive and Support Services	11,281	(471)	**10,810**	153	10,963	-	10,963
Sub-Total	**177,038**	**(66,103)**	**110,935**	**(21,365)**	**89,570**	**-**	**89,570**
Innovative Clean Energy Fund	**3,243**	**(547)**	**2,696**	**(370)**	**2,326**	**-**	**2,326**
TOTAL MINISTRY	**180,281**	**(66,650)**	**113,631**	**(21,735)**	**91,896**	**-**	**91,896**

2020/21 Changes include:

Ministry Operations: net decrease of ($66.103M)

($66.469M) planned decrease from previous budget for Clean BC; ($98.749M); $32.280M increase for the Clean Energy Vehicle Program

($3.271M) decrease for expenditure management

$0.689M increase for negotiated wage increases and other adjustments

$2.798M increase from a previous budget approval for the Regulatory Excellence in Mining

$0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements

Innovative Clean Energy (ICE) Fund: net decrease of ($0.547M)

($0.554M) decrease for ICE Fund spending plan adjustment

$0.007M increase for negotiated wage increases and other adjustments

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

OPERATING BUDGET - 2019/20 to 2020/21

by Group Account Classification (GAC)

$000s

Group Account Classification All Votes and Special Accounts	2019/20 Restated	2020/21 Estimates	Increase (Decrease)	% Change
Salaries and benefits	41,884	**44,266**	2,382	5.7%
Operating costs	27,661	**25,471**	(2,190)	(7.9%)
Government transfers	112,078	**45,245**	(66,833)	(59.6%)
Other expenses	1,731	**1,729**	(2)	(0.1%)
Recoveries	(3,073)	**(3,080)**	(7)	0.2%
Total Operating Budget	**180,281**	**113,631**	**(66,650)**	**(37.0%)**

2020/21 Changes include:

Salaries & Benefits: net increase of $2.382M

$2.040M increase from a previous budget approval for Regulatory Excellence in Mining
$0.696M increase for negotiated wage increases and other adjustments
($0.354M) decrease for Clean BC

Operating Costs: net decrease of ($2.190M)

($3.271M) decrease for expenditure management
$0.758M increase from a previous budget approval for Regulatory Excellence in Mining
$0.164M increase for Clean BC; $0.080M increase from Budget 2020 and $0.084M from a previous budget approval
$0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements
$0.010M increase from a previous budget approval for FIP Supervisor Certificate

Government Transfers: net decrease of ($66.833M)

($66.279M) planned decrease from previous budget for Clean BC
($0.554M) ICE Fund spending plan adjustment

Other Expenses: decrease of ($0.002M)

($0.002M) decrease due to Implementation Initiatives moving into Oil and Gas

Internal & External Recoveries: net increase of $0.007M

($0.010M) adjustment for recovery to vote for FIP Supervisor Certificate Program
$0.003M adjustment due to the Implementation Initiatives moving into Oil and Gas

MINISTRY ENERGY, MINES AND PETROLEUM RESOURCES

OPERATING BUDGET - 2019/20 to 2020/21

by Group Account Classification (GAC)

$000s

Vote / Special Accounts	Group Account Classification	2019/20 Estimates	Change	2019/20 Restated	2020/21 Estimates	Increase (Decrease)
Ministry Operations	Salaries and Benefits	41,400	-	41,400	**43,775**	2,375
	Operating Costs	27,635	-	27,635	**25,445**	(2,190)
	Government Transfers	109,342	-	109,342	**43,063**	(66,279)
	Other Expenses	1,731	-	1,731	**1,729**	(2)
	Internal Recoveries	(9)	-	(9)	**(8)**	1
	External Recoveries	(3,061)	-	(3,061)	**(3,069)**	(8)
Ministry Operations Total		177,038	-	177,038	**110,935**	(66,103)
Innovative Clean Energy (ICE) Fund	Salaries and Benefits	484	-	484	**491**	7
	Operating Costs	26	-	26	**26**	-
	Government Transfers	2,736	-	2,736	**2,182**	(554)
	Internal Recoveries	(1)	-	(1)	**(1)**	-
	External Recoveries	(2)	-	(2)	**(2)**	-
Special Account Total		3,243	-	3,243	**2,696**	(547)
MINISTRY TOTAL		**180,281**	**-**	**180,281**	**113,631**	**(66,650)**

	Combined Totals	2019/20 Estimates	Change	2019/20 Restated	2020/21 Estimates	Increase (Decrease)
	Salaries and Benefits	41,884	-	41,884	**44,266**	2,382
	Operating Costs	27,661	-	27,661	**25,471**	(2,190)
	Government Transfers	112,078	-	112,078	**45,245**	(66,833)
	Other Expenses	1,731	-	1,731	**1,729**	(2)
	Internal Recoveries	(10)	-	(10)	**(9)**	1
	External Recoveries	(3,063)	-	(3,063)	**(3,071)**	(8)
Combined Totals		**180,281**	**-**	**180,281**	**113,631**	**(66,650)**

2020/21 Ministry Operations decrease of ($66.103M), changes include:

Salaries & Benefits: net increase of $2.375M

$2.040M increase from a previous budget approval for Regulatory Excellence in Mining

$0.689M for negotiated wage increases and other adjustments

($0.354M) planned decrease from previous budget for Clean BC

Operating Costs: net decrease of ($2.190M)

($3.271M) decrease for expenditure management

$0.758M increase from a previous budget approval for Regulatory Excellence in Mining

$0.164M increase for Clean BC; $0.080M increase from Budget 2020 and $0.084M from a previous budget approval

$0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements

$0.010M increase from a previous budget approval for FIP Supervisors Certificate Program

Government Transfers: net decrease of ($66.279M)

($66.279M) planned decrease from previous year for Clean BC

Other Expenses: decrease of ($0.002M)

($0.002M) decrease due removal of recovery placeholder, offset by recovery

Internal & External Recoveries: net increase of $0.007M

($0.010M) adjustment for recovery to vote for FIP Supervisor Certificate Program

$0.003M adjustment due to removal of recovery placeholder

Innovative Clean Energy Fund changes include decrease of ($0.547M):

Salaries & Benefits: net increase of $0.007M

$0.007M for negotiated wage increases and other adjustments

Government Transfers: net decrease of ($0.554M)

($0.554M) ICE Fund spending plan adjustment

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

2019/20 to 2022/23

Operating Budget Changes by STOB

$000s

s.13; s.17

All Votes and Special Accounts		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	31,912	1,825	**33,737**
51	Supplementary Salary Costs	1,795	90	**1,885**
52	Employee Benefits	8,123	467	**8,590**
54	Legislative Salaries - Indemnities	54	-	**54**
Total Salaries & Benefits		**41,884**	**2,382**	**44,266**
55	Boards, Commissions, Courts Fees	100	-	**100**
57	Public Servant Travel Expenses	2,483	(355)	**2,128**
59	Centralized Management Services	2,458	-	**2,458**
60	Professional Services	8,914	(1,095)	**7,819**
63	Information Systems - Operating	1,683	(313)	**1,370**
65	Office and Business Expenses	2,726	(478)	**2,248**
67	Advertising	220	700	**920**
68	Statutory Advertising and Publications	-	-	**-**
69	Utilities Materials and Supplies	156	10	**166**
70	Operating Equip, Vehicles and Other	463	(10)	**453**
73	Amortization Expenses	7,369	(593)	**6,776**
75	Building Occupancy Charges	1,089	(56)	**1,033**
Total Operating Expenditures		**27,661**	**(2,190)**	**25,471**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	112,078	(66,833)	**45,245**
Total Grants and Transfers		**112,078**	**(66,833)**	**45,245**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	1,729	(2)	**1,727**
Total Misc. Expenditures		**1,729**	**(2)**	**1,727**
88	Recoveries - Internal	(10)	1	**(9)**
89/90	Recoveries - External	(3,061)	(8)	**(3,069)**
Total Recoveries		**(3,071)**	**(7)**	**(3,078)**
TOTAL		**180,281**	**(66,650)**	**113,631**
Percent Change				**(37.0%)**

2020/21 Changes include net decrease of ($66.650M:)

Salaries & Benefits: net increase of $2.382M

$2.040M increase from a previous budget approval for Regulatory Excellence in Mining
$0.696M increase for negotiated wage increases and other adjustments
($0.354M) planned decrease from previous budget for Clean BC

Operating Costs: net decrease of ($2.190M)

($3.271M) decrease for expenditure management
$0.758M increase from a previous budget approval for Regulatory Excellence in Mining
$0.164M increase for Clean BC; $0.080M increase from Budget 2020 and $0.084M from a previous budget approval
$0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements
$0.010M increase from a previous budget approval for Supervisors Certificate Program

Government Transfers: net decrease of ($66.833M)

($66.279M) planned decrease from previous budget for Clean BC
($0.554M) ICE Fund spending plan adjustment

Other Expenses: decrease of ($0.002M)

($0.002M) decrease due removal of recovery placeholder, offset by recovery

Internal & External Recoveries: net increase of $0.007M

($0.010M) recovery to vote for Supervisor Certificate Program
$0.003M adjustment due to removal of recovery placeholder

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

2019/20 to 2022/23

Operating Budget Changes by STOB

$000s

s.13; s.17

Ministry Operations		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	31,526	1,819	33,345
51	Supplementary Salary Costs	1,795	90	1,885
52	Employee Benefits	8,025	466	8,491
54	Legislative Salaries - Indemnities	54	-	54
Total Salaries & Benefits		**41,400**	**2,375**	**43,775**
55	Boards, Commissions, Courts Fees	100	-	100
57	Public Servant Travel Expenses	2,478	(355)	2,123
59	Centralized Management Services	2,458	-	2,458
60	Professional Services	8,898	(1,095)	7,803
63	Information Systems - Operating	1,683	(313)	1,370
65	Office and Business Expenses	2,721	(478)	2,243
67	Advertising	220	700	920
68	Statutory Advertising and Publications	-	-	-
69	Utilities Materials and Supplies	156	10	166
70	Operating Equip, Vehicles and Other	463	(10)	453
73	Amortization Expenses	7,369	(593)	6,776
75	Building Occupancy Charges	1,089	(56)	1,033
Total Operating Expenditures		**27,635**	**(2,190)**	**25,445**
77	Transfers - Grants	-	-	-
79	Entitlements	-	-	-
80	Transfers Under Agreement	109,342	(66,279)	43,063
Total Grants and Transfers		**109,342**	**(66,279)**	**43,063**
81	Trsf Payment Between Votes	-	-	-
84	Interest Costs - Non Public Debt	-	-	-
85	Other Expenses	1,729	(2)	1,727
Total Misc. Expenditures		**1,729**	**(2)**	**1,727**
88	Recoveries - Internal	(9)	1	(8)
89/90	Recoveries - External	(3,059)	(8)	(3,067)
Total Recoveries		**(3,068)**	**(7)**	**(3,075)**
TOTAL MINISTRY OPERATIONS		**177,038**	**(66,103)**	**110,935**
Percent Change				**(37.3%)**

2020/21 Ministry Operations changes include decrease of ($66.103M):

Salaries & Benefits: net increase of $2.375M

$2.040M increase from a previous budget approval for Regulatory Excellence in Mining
$0.689M increase for negotiated wage increases and other adjustments
($0.354M) planned decrease from previous budget for Clean BC

Operating Costs: net decrease of ($2.190M)

($3.271M) decrease for expenditure management
$0.758M increase from a previous budget approval for Regulatory Excellence in Mining
$0.164M increase for Clean BC; $0.080M increase from Budget 2020 and $0.084M from a previous budget approval
$0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements
$0.010M increase from a previous budget approval for Supervisors Certificate Program

Government Transfers: net decrease of ($66.279M)

($66.279M) planned decrease from previous budget for Clean BC

Other Expenses: decrease of ($0.002M)

($0.002M) decrease due to removal of recovery placeholder, offset by recovery

Internal & External Recoveries: net increase of $0.007M

($0.010M) recovery to vote for Supervisor Certificate Program
$0.003M adjustment due to removal of recovery placeholder

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
2019/20 to 2022/23

Operating Budget Changes by STOB

$000s s.13; s.17

Mines Competitiveness and Authorizations		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	12,246	1,235	13,481
51	Supplementary Salary Costs	1,055	54	1,109
52	Employee Benefits	3,111	313	3,424
54	Legislative Salaries - Indemnities	-	-	-
Total Salaries & Benefits		**16,412**	**1,602**	**18,014**
55	Boards, Commissions, Courts Fees	50	-	50
57	Public Servant Travel Expenses	1,089	(226)	863
59	Centralized Management Services	-	-	-
60	Professional Services	2,070	(345)	1,725
63	Information Systems - Operating	183	(19)	164
65	Office and Business Expenses	435	(172)	263
67	Advertising	-	-	
68	Statutory Advertising and Publications	-	-	
69	Utilities Materials and Supplies	43	22	65
70	Operating Equip, Vehicles and Other	100	(31)	69
73	Amortization Expenses	-	-	-
75	Building Occupancy Charges	-	-	-
Total Operating Expenditures		**3,970**	**(771)**	**3,199**
77	Transfers - Grants	-	-	-
79	Entitlements	-	-	-
80	Transfers Under Agreement	175	(57)	**118**
Total Grants and Transfers		**175**	**(57)**	**118**
81	Trsf Payment Between Votes	-	-	-
84	Interest Costs - Non Public Debt	-	-	-
85	Other Expenses	12	4	**16**
Total Misc. Expenditures		**12**	**4**	**16**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(3,043)	(10)	**(3,053)**
Total Recoveries		**(3,044)**	**(10)**	**(3,054)**
TOTAL		**17,525**	**768**	**18,293**
Percent Change				**4.4%**

2020/21 Changes include: net increase of $0.768M 4.4%

Salaries & Benefits: increase of $1.602M

$1.324M increase from a previous budget approval for Regulatory Excellence in Mining

$0.278M increase for negotiated wage increases and other adjustments

Operating Costs: decrease of ($0.771M)

($0.533M) decrease for expenditure management

($0.398M) decrease from a previous budget approval for Regulatory Excellence in Mining

$0.150M increase from a previous budget approval for tailing storage facilities regulatory requirements

$0.010M increase from a previous budget approval for Supervisor Certification Program

Government Transfers: decrease of ($0.057M)

($0.057M) decrease from a previous budget approval for Regulatory Excellence in Mining

Other Expenses: increase of $0.004M

$0.004M increase from a previous budget approval for Regulatory Excellence in Mining

Internal & External Recoveries: increase of $0.010M

($0.010M) recovery to vote for Supervisor Certificate Program

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
2019/20 to 2022/23
Operating Budget Changes by STOB

s.13; s.17

Mines Health, Safety and Enforcement		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	5,777	666	**6,443**
51	Supplementary Salary Costs	704	36	**740**
52	Employee Benefits	1,467	170	**1,637**
54	Legislative Salaries - Indemnities	-	-	**-**
Total Salaries & Benefits		**7,948**	**872**	**8,820**
55	Boards, Commissions, Courts Fees	50	-	**50**
57	Public Servant Travel Expenses	550	(38)	**512**
59	Centralized Management Services	-	-	**-**
60	Professional Services	500	88	**588**
63	Information Systems - Operating	102	(22)	**80**
65	Office and Business Expenses	94	34	**128**
67	Advertising	-	-	**-**
68	Statutory Advertising and Publications	-	-	**-**
69	Utilities Materials and Supplies	44	(12)	**32**
70	Operating Equip, Vehicles and Other	-	34	**34**
73	Amortization Expenses	-	-	**-**
75	Building Occupancy Charges	-	-	**-**
Total Operating Expenditures		**1,340**	**84**	**1,424**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	-	57	**57**
Total Grants and Transfers		**-**	**57**	**57**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	12	(4)	**8**
Total Misc. Expenditures		**12**	**(4)**	**8**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(2)	-	**(2)**
Total Recoveries		**(3)**	**-**	**(3)**
TOTAL		**9,297**	**1,009**	**10,306**
Percent Change				**10.9%**

2020/21 Changes include: net increase of $1.009M

Salaries & Benefits: increase of $0.872M

$0.716M increase from a previous budget approval for Regulatory Excellence in Mining
$0.156M increase for negotiated wage increases and other adjustments

Operating Costs: increase of $0.084M

$0.321M increase from a previous budget approval for Regulatory Excellence in Mining
($0.237M) decrease for expenditure management

Government Transfers: net increase of $0.057M

$0.057M increase from a previous budget approval for Regulatory Excellence in Mining

Other Expenses: decrease of ($0.004M)

($0.004M) decrease for Regulatory Excellence in Mining

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

2019/20 to 2022/23

Operating Budget Changes by STOB

$000s

s.13; s.17

Electricity and Alternative Energy		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	4,410	(219)	**4,191**
51	Supplementary Salary Costs	-	-	
52	Employee Benefits	1,120	(55)	**1,065**
54	Legislative Salaries - Indemnities	-	-	
Total Salaries & Benefits		**5,530**	**(274)**	**5,256**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	140	(26)	**114**
59	Centralized Management Services	-	-	
60	Professional Services	2,329	(280)	**2,049**
63	Information Systems - Operating	77	(15)	**62**
65	Office and Business Expenses	82	(25)	**57**
67	Advertising	220	700	**920**
68	Statutory Advertising and Publications		-	**-**
69	Utilities Materials and Supplies	-	-	
70	Operating Equip, Vehicles and Other	-	-	**-**
73	Amortization Expenses	-	-	**-**
75	Building Occupancy Charges	-	-	**-**
Total Operating Expenditures		**2,848**	**354**	**3,202**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	108,967	(66,279)	**42,688**
Total Grants and Transfers		**108,967**	**(66,279)**	**42,688**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	4	-	**4**
Total Misc. Expenditures		**4**	**-**	**4**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(2)	-	**(2)**
Total Recoveries		**(3)**	**-**	**(3)**
TOTAL		**117,346**	**(66,199)**	**51,147**
Percent Change				**(56.4%)**

2020/21 Changes include: net decrease of ($66.199M)

Salaries and Benefits net decrease of ($0.274M)

($0.354M) planned decrease from previous budget for Clean BC

$0.080M increase for negotiated wage increases and other adjustments

Operating Costs: increase of $0.354M

$0.421M increase for Clean BC; $0.080M increase from Budget 2020 and $0.341M from a previous budget approval

($0.067M) decrease for expenditure management

Government Transfers: decrease of ($66.279M)

($66.279M) planned decrease from previous budget for Clean BC; ($98.479M); $32.200M Budget 2020 increase for the Clean Energy Vehicle Program

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

2019/20 to 2022/23

Operating Budget Changes by STOB

$000s

s.13; s.17

Oil and Gas Division		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	5,543	90	**5,633**
51	Supplementary Salary Costs	-	-	
52	Employee Benefits	1,408	23	**1,431**
54	Legislative Salaries - Indemnities	-	-	**-**
Total Salaries & Benefits		**6,951**	**113**	**7,064**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	398	(44)	**354**
59	Centralized Management Services	-	-	
60	Professional Services	2,925	(435)	**2,490**
63	Information Systems - Operating	351	(45)	**306**
65	Office and Business Expenses	455	(115)	**340**
67	Advertising		-	
68	Statutory Advertising and Publications		-	
69	Utilities Materials and Supplies	69	-	**69**
70	Operating Equip, Vehicles and Other	70	(7)	**63**
73	Amortization Expenses	6,543	(609)	**5,934**
75	Building Occupancy Charges	-	-	
Total Operating Expenditures		**10,811**	**(1,255)**	**9,556**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	100	-	**100**
Total Grants and Transfers		**100**	**-**	**100**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	57	(2)	**55**
Total Misc. Expenditures		**57**	**(2)**	**55**
88	Recoveries - Internal	(2)	1	**(1)**
89/90	Recoveries - External	(4)	2	**(2)**
Total Recoveries		**(6)**	**3**	**(3)**
TOTAL		**17,913**	**(1,141)**	**16,772**
Percent Change				**(6.4%)**

2020/21 Changes include: net decrease of ($1.141M)

Salaries and Benefits net increase of $0.113M

$0.113M increase for negotiated wage increases and other adjustments

Operating Costs: decrease of ($1.255M)

($1.255M) decrease for expenditure management

Other Expenses: decrease of ($0.002M)

($0.002M) decrease due to removal of recovery placeholder, offset by recovery

Internal & External Recoveries: net decrease of ($0.003M)

$0.003M adjustment due to removal of recovery placeholder

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

2019/20 to 2022/23

Operating Budget Changes by STOB

$000s s.13; s.17

Strategic & Indigenous Affairs		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	1,738	30	**1,768**
51	Supplementary Salary Costs	-	-	
52	Employee Benefits	441	8	**449**
54	Legislative Salaries - Indemnities	-	-	**-**
Total Salaries & Benefits		**2,179**	**38**	**2,217**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	116	(13)	**103**
59	Centralized Management Services	-	-	
60	Professional Services	579	(66)	**513**
63	Information Systems - Operating	24	(3)	**21**
65	Office and Business Expenses	100	(25)	**75**
67	Advertising	-	-	
68	Statutory Advertising and Publications	-	-	
69	Utilities Materials and Supplies	-	-	
70	Operating Equip, Vehicles and Other	-	-	**-**
73	Amortization Expenses	-	-	**-**
75	Building Occupancy Charges	-	-	**-**
Total Operating Expenditures		**819**	**(107)**	**712**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	100	-	**100**
Total Grants and Transfers		**100**	**-**	**100**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	5	-	**5**
Total Misc. Expenditures		**5**	**-**	**5**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(2)	-	**(2)**
Total Recoveries		**(3)**	**-**	**(3)**
TOTAL		**3,100**	**(69)**	**3,031**
Percent Change				**(2.2%)**

2020/21 Changes include: decrease of ($0.069M)

Salaries and Benefits increase of $0.038M

$0.038M increase for negotiated wage increases and other adjustments

Operating Costs: decrease of ($0.107M)

($0.107M) decrease for expenditure management

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
2019/20 to 2022/23
Operating Budget Changes by STOB

$000s

s.13; s.17

Executive and Support Services		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	1,812	17	**1,829**
51	Supplementary Salary Costs	36	-	**36**
52	Employee Benefits	478	7	**485**
54	Legislative Salaries - Indemnities	54	-	**54**
Total Salaries & Benefits		**2,380**	**24**	**2,404**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	185	177	**177**
59	Centralized Management Services	2,458	-	**2,458**
60	Professional Services	495	(57)	**438**
63	Information Systems - Operating	946	(209)	**737**
65	Office and Business Expenses	1,555	(175)	**1,380**
67	Advertising	-	-	
68	Statutory Advertising and Publications	-	-	
69	Utilities Materials and Supplies	-	-	
70	Operating Equip, Vehicles and Other	293	(6)	**287**
73	Amortization Expenses	826	16	**842**
75	Building Occupancy Charges	1,089	(56)	**1,033**
Total Operating Expenditures		**7,847**	**(495)**	**7,352**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	-	-	**-**
Total Grants and Transfers		**-**	**-**	**-**
81	Trsf Payment Between Votes	-	-	-
84	Interest Costs - Non Public Debt	-	-	-
85	Other Expenses	1,639	-	1,639
Total Misc. Expenditures		**1,639**	**-**	**1,639**
88	Recoveries - Internal	(3)	-	**(3)**
89/90	Recoveries - External	(6)	-	**(6)**
Total Recoveries		**(9)**	**-**	**(9)**
TOTAL		**11,857**	**(471)**	**11,386**
Percent Change				**(4.0%)**

2020/21 Changes include: net decrease of ($0.471M)

Salaries and Benefits net increase of $0.024M

$0.024M increase for negotiated wage increases and other adjustments

Operating Costs net decrease of ($0.495M)

($1.073M) decrease for expenditure management

$0.835M increase from a previous budget approval for Regulatory Excellence in Mining

($0.257M) planned decrease from previous budget for Clean BC

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
2019/20 to 2022/23
Operating Budget Changes by STOB

$000s s.13; s.17

Innovative Clean Energy (ICE) Fund		2019/20 Restated	Change	2020/21 Estimates
50	Base Salaries and Overtime	386	6	**392**
51	Supplementary Salary Costs	-	-	
52	Employee Benefits	98	1	**99**
54	Legislative Salaries - Indemnities	-	-	
Total Salaries & Benefits		**484**	**7**	**491**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	5	-	**5**
59	Centralized Management Services	-	-	
60	Professional Services	16	-	**16**
63	Information Systems - Operating	-	-	
65	Office and Business Expenses	5	-	**5**
67	Advertising		-	
68	Statutory Advertising and Publications		-	
69	Utilities Materials and Supplies		-	**-**
70	Operating Equip, Vehicles and Other	-	-	**-**
73	Amortization Expenses	-	-	**-**
75	Building Occupancy Charges	-	-	**-**
Total Operating Expenditures		**26**	**-**	**26**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	2,736	(554)	**2,182**
Total Grants and Transfers		**2,736**	**(554)**	**2,182**
85	Other Expenses	-	-	**-**
Total Misc. Expenditures		**-**	**-**	**-**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(2)	-	**(2)**
Total Recoveries		**(3)**	**-**	**(3)**
TOTAL		**3,243**	**(547)**	**2,696**
Percent Change				**(16.9%)**

2020/21 Changes include: decrease of ($0.547M)

Salaries & Benefits: net increase of $0.007M

$0.007M for negotiated wage increases and other adjustments

Government Transfers: net decrease of ($0.554M)

($0.554M) ICE Fund spending plan adjustment

s.13; s.17

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

CAPITAL BUDGET - 2019/20 to 2022/23

$000s

s.13; s.17

	2019/20 Restated	Change	2020/21 Estimates
Ministry Operations			
Furniture & Equipment	1	-	1
Specialized Equipment	45	-	45
Information Technology		-	-
Vehicles	152	20	**172**
MINISTRY CAPITAL	**198**	**20**	**218**

s.13; s.17

s.13; s.17

s.13; s.17

Ministry Operations

Specialized Equipment funding for Mines Health and Safety equipment

Vehicles - The lead ministry for vehicle management is Labour and Citizens' Services. Funding reflects costs for replacing old/retired vehicles

s.13; s.17

Page 437 of 479

Withheld pursuant to/removed as

s.13; s.17

BRITISH
COLUMBIA

February 11, 2020

Honourable Bruce Ralston
Minister of Energy, Mines and
Petroleum Resources
Room 138, Parliament Buildings
Victoria, BC V8V 1X4

Dear Minister Ralston: Bruce

Congratulations on your new appointment as Minister of Energy, Mines and Petroleum Resources.

British Columbians expect their government to work for ordinary people, not just those at the top. It is your job to deliver that leadership in your ministry.

Our government made three key commitments to British Columbians.

Our first commitment is to make life more affordable. Too many families were left behind for too long by the previous government. They are counting on you to keep working to make their lives easier.

Our second commitment is to deliver the services that people count on. We've started making progress. Together, we're ensuring children are getting access to the quality public education they need to succeed, that families are getting timely medical attention, and that our senior citizens are able to live their final years with dignity. These and other government services touch the lives of British Columbians every day. It is your job as Minister to work within your budget to deliver quality services that are available and effective.

Our third key commitment is to build a strong, sustainable, innovative economy that works for everyone across B.C., not just the wealthy and the well-connected. Together, we are tackling poverty and inequality, creating good-paying jobs in every corner of the province, and ensuring people from every background have the opportunity to reach their full potential.

These three commitments along with your specific ministerial objectives will guide your work and shape your priorities from day to day. I expect you to work with the skilled professionals in the public service to deliver on this mandate.

.../2

Office of the Premier

Web Site:
www.gov.bc.ca

Mailing Address:
PO Box 9041 Stn Prov Govt
Victoria BC V8W 9E1

Location:
Parliament Buildings
Victoria

Our Confidence and Supply Agreement with the B.C. Green caucus is critical to the success of our government. Accordingly, the principles of "good faith and no surprises" set out in that document should also guide your work going forward.

As Minister, you are responsible for ensuring signatories of the Confidence and Supply Agreement are appropriately consulted on major policy issues, budgets, legislation and other matters as outlined in our agreement. This consultation should be coordinated through the Confidence and Supply Agreement Secretariat in the Premier's Office. The Secretariat is charged with ensuring that signatories are provided access to key documents and officials as set out in the agreement. This consultation and information sharing will occur in accordance with protocols established jointly by government and the signatories of the Confidence and Supply Agreement, and in accordance with relevant legislation.

As part of our commitment to true, lasting reconciliation with First Nations in British Columbia, our government passed legislation that will harmonize the province's laws with the UN Declaration on the Rights of Indigenous Peoples. As Minister, you are responsible for reviewing policies, programs, and legislation to determine how to bring the principles of the Declaration into action in British Columbia.

Our government is also committed to real action on climate change, as outlined in our CleanBC plan. CleanBC is about putting our province on the path to a cleaner, better future – with a low-carbon economy that creates opportunities for all while protecting our clean air, land and water. As Minister, you are responsible for ensuring the actions and goals of this cross-government plan are reflected and implemented in your ministerial work.

As you know, mining and energy development are major contributors to British Columbia's economy, and as Minister you will have a key role in championing quality economic growth across all regions of our province.

To that end, in your role as Minister of Energy, Mines and Petroleum Resources I expect that you will make substantive progress on the following priorities:

- Work with the Minister of Environment and Climate Change Strategy and with all your Cabinet colleagues to advance programs under CleanBC that will transform our economy by reducing greenhouse gas emissions to meet the province's climate commitments, while supporting affordability for people.

- Work with your colleagues on the Environment and Land Use Committee on regulatory efficiency initiatives, with a near-term emphasis on expedited permit processing and reconciliation initiatives in the mining sector.

- Provide oversight as B.C. Hydro completes the construction of the Site C project.

- Complete Phase 2 of the B.C. Hydro review, and implement programming that will drive innovation, reduce GHG emissions, support energy affordability, deliver energy efficiency and conservation programs, generate new energy responsibly and sustainably, and support quality economic growth and good jobs across British Columbia.

.../3

- Collaborate with the Minister of Jobs, Economic Development and Competitiveness to further connect the technology and innovation sector with the mining, energy and petroleum sectors and showcase made-in-B.C. technologies that are contributing to industrial competitiveness or helping to reduce GHG emissions.

- Invest in promising new energy technologies, clean technology, and climate change solutions through the Innovative Clean Energy program.

- Ensure that your ministry makes timely progress on the implementation of the *Declaration of the Rights of Indigenous Peoples Act*, both in identifying priority legislative areas for inclusion in the action plan, and in ensuring that future ministry actions are consistent with the principles set out in the Act.

- Partner with your Cabinet colleagues and the business community on an international brand strategy that capitalizes on the low carbon footprint of B.C.'s products and services, including natural resources, clean technology and value-added goods, demonstrating how sourcing B.C. products is both climate-positive and cost competitive.

- Oversee the implementation of the LNG Canada project.

- Continue to ensure British Columbians benefit from liquefied natural gas projects by requiring proposals to meet the following four conditions: (1) Proposals must include express guarantees of jobs and training opportunities for British Columbians; (2) Proposals must provide a fair return for our resource; (3) Proposals must respect and make partners of First Nations; and (4) Proposals must protect our air, land and water, including living up to our climate commitments.

All members of Cabinet are expected to review, understand and act according to the Members' Conflict of Interest Act and to conduct themselves with the highest level of integrity. Remember, as a minister of the Crown, the way you conduct yourself will reflect not only on yourself, but on your Cabinet colleagues and our government as a whole.

I look forward to working with you in the coming weeks and months ahead. It will take dedication, hard work, and a real commitment to working for people to make it happen, but I know you're up to the challenge.

Sincerely,

John J. Horgan

John Horgan
Premier

Page 441 of 479 to/à Page 447 of 479

Withheld pursuant to/removed as

s.13; s.17

ADVICE TO MINISTER

ESTIMATES NOTE (2020) **Confidential** **Ministry of Energy, Mines and Petroleum Resources** **Date: May**	**ISSUE TITLE:** **Procurement Practices including Direct Award Contracts** **Fiscal 19/20 YTD ending April 30, 2020**

KEY MESSAGES:

- **Key message #1** – The Province is committed to obtaining best value for taxpayers when contracting for services.
- **Key message #2** – The Province's procurement is based on the principles of fair and open public sector procurement – competition, value for money, transparency, accountability and economies of scale.
- **Key message #3** – There are certain circumstances where it makes financial and business sense to award contracts directly.
- **Key message #4** – All Ministry procurement is subject to corporate policy as stated in Chapter 6 of the Core Policy and Procedures Manual.
- **Key message #5** – The Ministry awarded **97** contracts and **160** government transfers valued at **$123,134,809**.
- **Key message #6** – **23%** of Ministry contracts and transfers were awarded through a competitive process.
- **Key message #7** – **63%** of the dollar value of Ministry contracts and transfers were awarded through a competitive process.
- **Key message #8** – **59%** of Ministry contracts were directly awarded for regular business activities, accounting for **42% ($4,797,667)** of ministry contract dollars.
- **Key message #9** – **88% ($40,561,700)** of Ministry transfers were directly awarded.
- **Key message #10** – The single largest Ministry transfer was directly awarded to the **Coast Economic Development Society** accounting for **8% ($9,000,000)** of Ministry transfer dollars (Appendix B).

KEY POINTS AND BACKGROUND:

- For fiscal **19/20**, no formal vendor complaints were filed under the Vendor Complaint Review Program pertaining to the Ministry.

- The Ministry has a process in place to ensure contracts are awarded based on a fair and open tendering process as per government policy. Specifically:
  - The Ministry has a website which provides up-to-date information on procurement and links to training resources;
  - The Ministry has a hierarchical contract approval process based on the dollar value of the contract.

- Contracts of a material value may be negotiated and directly awarded in limited circumstances, including the following:
  - **Public sector organization** – The contract is with another government organization;
  - **Sole Source** – The Ministry can strictly prove that only one contractor is qualified and available to provide the goods/services;
  - **Emergency** – An unforeseeable emergency exists and the goods/services could not be obtained in time by any other means;
  - **Confidentiality** – The acquisition is of a confidential or privileged nature;
  - **Security** – A competitive process, such as open bidding, would interfere with the Ministry's ability to maintain security or confidentiality;
  - **Under $25,000** (Services and Construction) – A contract is less than $25,000 and a competitive process was not cost effective or reasonable;
  - A transfer payment may be direct awarded where a competitive process is not appropriate or to benefit a specific target population; or
  - **Notice of Intent** – A contract may be direct awarded after posting a Notice of Intent on BC Bid, thus advising the vendor community of the intent to direct award. Vendors have the opportunity to challenge the proposed direct award.

The table below lists the largest **11** of the **57** direct award contracts:

Supplier Name	Procurement Code	Description	Contract Value/ Encumbrance
The Bowra Group Inc.	Emergency	s.13	$ 1,000,000
British Columbia Hydro and Power Authority	Public sector organization		700,000
Golder Associates Ltd.	Notice of Intent		600,000
Four Directions Management Services Ltd.	Notice of Intent		500,000
First Nation LNG Alliance Society	Shared Cost Arrangement		317,610
Mda Geospatial Services Inc.	Notice of Intent		150,000
Eurasia Group, Ltd.	Sore source		141,000
Greer, Brian H*	Notice of Intent		75,000
Eurasia Group, Ltd.	Sore source		66,500
Golder Associates Ltd.	Emergency		65,000
Total Earth Science Services	Notice of Intent		60,000
Sum of all other direct award contracts			1,122,557
Total			**$ 4,797,667**

APPENDIX A – ANALYSIS OF DIRECT AWARDS FOR CONTRACTS

In fiscal 19/20 as at April 30, 2020, **57** direct award contracts were entered into with a total value of **$4,797,667**. This accounts for **42%** of Ministry contract dollars.

The contracts were directly awarded by the Ministry as allowed under CORE policy, as follows:

- **61** contracts were under $25,000 and not cost-effective to compete for a total of **$786,381**.

- The ministry can strictly prove that only one contractor is qualified and available to provide the goods/services – **55** contracts were awarded under this criteria totalling **$1,231,612**.

- **15** contracts were directly awarded to another government organization for **$661,787**.

- **13** contracts totalling **$483,845** were directly awarded after posting a Notice of Intent on BC Bid, thus advising the vendor community of the intent to direct award.

- **5** contracts totalling **$116,897** were directly awarded as being of a confidential or privileged nature.

- **4** contracts totalling **$88,072** were directly awarded under another Corporate Policy or Legislation.

- **3** contracts totalling **$23,200** were directly awarded due to an unforeseeable emergency and the goods/services could not be obtained in time by any other means.

APPENDIX B – TOP 11 DIRECT AWARD TRANSFERS, BY DOLLAR VALUE

Supplier Name	Procurement Code	Description	Contract Value/ Encumbrance
Coast Economic Development Society	Shared Cost Arrangement	s.13	$ 9,000,000
Canada Foundation for Sustainable Development Technology	Shared Cost Arrangement		6,028,000
Fraser Basin Council Society	Shared Cost Arrangement		6,000,000
Association of School Transportation Services of British Columbia	Shared Cost Arrangement		3,970,262
Rental Housing Council of British Columbia	Shared Cost Arrangement		1,500,000
British Columbia Hydro and Power Authority	Public sector organization		1,308,968
North Coast-Skeena First Nations Stewardship Society	Shared Cost Arrangement (Financial Assistance)		1,120,000
Fortisbc Inc.	Sore source		1,000,000
Home Performance Stakeholder Council Association	Shared Cost Arrangement		594,000
Carrier-Sekani Tribal Council	Shared Cost Arrangement (Financial Assistance)		499,800
Tsay Keh Dene Nation	Shared Cost Arrangement (Financial Assistance)		498,807
Sum of all other direct award transfers			9,041,863
Total			**$ 40,561,700**

MEMPR FISCAL 2020 DIRECT AWARD CONTRACTS as at March 31, 2020
(not including the largest DACs reported in the Advice to Minister document)

PO Number	STOB	P-Code	Supplier Name	Description	Amended Total
GS20MAN0031	6001	205	MAISON BLANCHE CONSULTING INC.	s.13	60,000
GS20MAN0075	6001	201	BGC ENGINEERING INC.		60,000
CA20MAN0045	6001	208	KASKA DENA COUNCIL		50,000
GS20MAN0008	6001	201	CHRIS W. SANDERSON LAW CORPORATION		50,000
GS20MAN0009	6001	201	KURSCHNER, RENATA		50,000
GS20MAN0025	6001	205	BRIDGEWAY CONSULTING INC.		50,000
GS20MAN0054	3286	205	SNC-LAVALIN INC.		50,000
GS20MAN0014	6001	201	ESSA TECHNOLOGIES LTD.		42,382
GS20MAN0077	6001	201	BGC ENGINEERING INC.		40,000

MEMPR FISCAL 2020 DIRECT AWARD CONTRACTS as at March 31, 2020
(not including the largest DACs reported in the Advice to Minister document)

PO Number	STOB	P-Code	Supplier Name	Description	Amended Total
				s.13	
GS20MAN0024	6001	201	CARVER, MARTIN, DR		30,000
GS20MAN0049	6001	201	CARVER, MARTIN, DR		30,000
GS20MAN0015	6001	201	ESSA TECHNOLOGIES LTD.		28,572
GS20MAN0096	6001	201	J. D. POWER		27,928
GS20MAN0021	6001	207	8070695 CANADA INC.		25,000
GS20MAN0101	6001	201	PRICEWATERHOUSECOOPERS LLP		25,000
GS20MAN0102	6001	201	ASSOCIATION FOR MINERAL EXPLORATION BRITISH COLUMBIA		25,000
GS20MAN0026	6001	207	ELEVATE CONSULTING INC.		24,950
GS20MAN0045	6001	207	JACCARD, MARK J		24,900

MEMPR FISCAL 2020 DIRECT AWARD CONTRACTS as at March 31, 2020
(not including the largest DACs reported in the Advice to Minister document)

PO Number	STOB	P-Code	Supplier Name	Description	Amended Total
GS20MAN0048	6001	207	ENERGY STRATEGIES, LLC	s.13	24,800
GS20MAN0050	6001	207	COSOURCE INFORMATION TECHNOLOGY SERVICES INC.		22,500
GS20MAN0095	6001	201	INDIGENUITY CONSULTING GROUP INC.		22,000
GS20MAN0074	6001	204	ROSCOE POSTLE ASSOCIATES INC.		21,500
GS20MAN0043	6001	207	KOCH, STEPHEN		21,000
GS20MAN0044	6001	207	SHAFFER, BLAKE, DR		21,000
GS20MAN0007	6001	201	DAVIDSON, GLEN W*		20,000
GS20MAN0017	6001	207	BROOK PUBLIC RELATIONS FIRM		20,000
GS20MAN0023	6001	201	TIM NEWTON CONSULTING		20,000

MEMPR FISCAL 2020 DIRECT AWARD CONTRACTS as at March 31, 2020
(not including the largest DACs reported in the Advice to Minister document)

PO Number	STOB	P-Code	Supplier Name	Description	Amended Total
				s.13	
GS20MAN0066	6001	207	FPINNOVATIONS		20,000
GS20MAN0084	6001	207	ZEN AND THE ART OF CLEAN ENERGY SOLUTIONS INC.		20,000
IS20IIT013	6397	201	LDTS VENTURES INC.		20,000
GS20MAN0063	6001	207	6893449 CANADA INC.		19,750
GS20MAN0042	6001	207	O'HARA, LIISA		18,500
GS20MAN0060	6001	207	MCPHEE, ANNITA L		18,500
GS20MAN0047	6001	207	SIMON FRASER UNIVERSITY		16,900
CS20MAN0016	6001	207	UNDSETH ENERGY MARKETING LTD.		15,000
GS20MAN0010	6001	207	E SOURCE EVENT REGISTRATION LIMITED		12,400

MEMPR FISCAL 2020 DIRECT AWARD CONTRACTS as at March 31, 2020
(not including the largest DACs reported in the Advice to Minister document)

PO Number	STOB	P-Code	Supplier Name	Description	Amended Total
				s.13	
GS20MAN0046	6001	207	FARRELL, GWENNE TERESA		10,500
GS20MAN0006	6001	201	JACCARD, MARK J		10,000
GS20MAN0068	6001	207	KETCHUM, KELVIN		10,000
GS20MAN0100	6001	201	TRAPEZE COMMUNICATIONS INC.		10,000
GS20MAN0098	6001	207	MARITZ RESEARCH COMPANY		9,875
CS20MAN0090	6001	201	KENT GROUP LTD.		7,875
GS20MAN0083	6001	207	0922109 B.C. LTD.		7,875
GS20MAN0041	6001	201	ROSHAN DANESH LAW CORPORATION		4,550
GS20MAN0051	6001	207	BRITISH COLUMBIA SUSTAINABLE		2,500

MEMPR FISCAL 2020 DIRECT AWARD CONTRACTS as at March 31, 2020
(not including the largest DACs reported in the Advice to Minister document)

PO Number	STOB	P-Code	Supplier Name	Description	Amended Total
			ENERGY ASSOCIATION		
GS20MAN0089	6001	201	KAIROS: CANADIAN ECUMENICAL JUSTICE INITIATIVES	s.13	1,800
Total					**1,122,557**

Ministry of Energy, Mines and Petroleum Resources
Contracts and Transfers Award Statistics
April 1, 2019 - March 31, 2020

	#	$	% by #	% by $
Total number & dollar value of contracts and transfers awarded	**257**	**123,134,809**		
Total contacts and transfers awarded through a competitive process	60	77,775,442	23.3%	63.2%
Total contacts and transfers directly awarded	197	45,359,367	76.7%	36.8%
Total number & dollar value of contracts	**97**	**11,478,109**	**37.7%**	**9.3%**
Contracts awarded through a competitive process	40	6,680,442	41.2%	58.2%
Contracts directly awarded	57	4,797,667	58.8%	41.8%
Total number & dollar value of transfers (shared cost arrangements & grants)	**160**	**111,656,700**	**62.3%**	**90.7%**
Transfers awarded thorough a competitive process	20	71,095,000	12.5%	63.7%
Transfers directly awarded	140	40,561,700	87.5%	36.3%
Analysis of competed contracts, shared cost arrangements & grants:	**57**	**29,130,442**	**22.2%**	**23.7%**
Code 100 - Open Competitive Process	36	28,680,000	63.2%	98.5%
Code 300 - Competitive Process Among Selected Vendors	12	280,692	21.1%	1.0%
Code 400 - Selected Vendor from Pre-Qualified List	1	20,000	1.8%	0.1%
Code 401 - Competition Among Vendors on Pre-Qualified List	0	-	0.0%	0.0%
Code 500 - Purchase from a Corporate Supply Arrangement	2	13,000	3.5%	0.0%
Code 600 - Other Purchase Process	6	136,750	10.5%	0.5%
Analysis of direct awards:	**197**	**45,359,367**	**76.7%**	**36.8%**
Code 200 - Direct Award to Public Sector Organization	7	2,275,794	3.6%	5.0%
Code 201 - Direct Award to Sole Source	23	1,732,607	11.7%	3.8%
Code 202 - Direct Award for Emergency	2	1,065,000	1.0%	2.3%
Code 203 - Direct Award for Security, Order, Etc.	0	-	0.0%	0.0%
Code 204 - Direct Award for Confidentiality	1	21,500	0.5%	0.0%
Code 205 - Direct Award, Notice of Intent	8	1,545,000	4.1%	3.4%
Code 206 - Direct Award Permitted Under Another Corporate Policy or Legislation	0	-	0.0%	0.0%
Code 207 - Direct Award Under $25,000	22	380,950	11.2%	0.8%
Code 208 - Direct Award, Shared Cost Arrangement (Financial Assistance)	111	8,976,819	56.3%	19.8%
Code 209 - Direct Award Shared Cost Arrangement (Competitive Selection Process Not Appropriate)	23	29,361,697	11.7%	64.7%
Other:	**3**	**48,645,000**	**1.2%**	**39.5%**
Code 601 - Other Continuing Service Agreements	0	-	0.0%	0.0%
Code 602 - Other Grants and Entitlements	3	48,645,000	100.0%	100.0%
Code 900	0	-	0.0%	0.0%
Un-coded	0	-	0.0%	0.0%

GENERAL SERVICE AGREEMENT

BRITISH COLUMBIA

For Administrative Purposes Only	
Ministry Contract No.: __GS20MAN0058____ *Requisition No.:* _____ *Solicitation No.(if applicable):* _____ *Commodity Code:* _____ ***Contractor Information*** *Supplier Name: The Bowra Group Inc.* *Supplier No.:* _____ *Telephone No.:* ___1-604-608-6244_____ *E-mail Address:* __mmainella@bowragroup.com__ *Website: www.bowragroup.com*	***Financial Information*** *Client:* ____057____ *Responsibility Centre:* ___27573_____ *Service Line:* _26601____ *STOB:* _____3286____ *Project:* ___27M8004__ ***Template version:*** *December 21, 2018*

Schedule A – Services

PART 1. TERM:

1. Subject to section 2 of this Part 1, the term of this Agreement commences on July 31, 2019 and ends on October 31, 2019.

2. This Agreement may be extended by a further period by written agreement of the Parties.

PART 2. SERVICES:

2.1 Background

(a) Quinsam Coal Corporation ("Quinsam") owns and has been operating a coal mine on Vancouver Island.

(b) On July 3, 2019, Quinsam made an assignment in bankruptcy, appointing PricewaterhouseCoopers Inc. to act as the Trustee in Bankruptcy (the "Trustee").

(c) On July 30, 2019, the Trustee gave the Province written notice that effective midnight July 31, 2019 the Trustee intended to abandon, pursuant to section 14.06(4) of the *Bankruptcy and Insolvency Act*, the real property and any associated immovable property at the Quinsam Coal mine site authorized under the Permit, as herein defined (the "Mine").

(d) The Mine is regulated and governed by the provisions of the *Mines Act*. Pursuant to section 10(4) of the *Mines Act*, the Province holds $7.28 million in security (the "Security") with respect to Quinsam Coal Corporation Permit C-172 (the "Permit") for the Mine.

(e) On July 30, 2019, pursuant to section 10(8)(b) of the *Mines Act*, the Chief Inspector of Mines determined that it was necessary to apply the Security for the protection of, and mitigation of damage to, land and watercourses affected by the Mine.

(f) Further to that determination and pursuant to the authority vested in the Chief Inspector of Mines under the *Mines Act*, on July 31, 2019, the Province retained the Contractor to undertake works for the protection of, and mitigation of damage to, land and watercourses affected by the Mine as described in the letter agreement at Appendix A-1 attached hereto (the "Letter Agreement"). For clarity, the Letter Agreement is replaced by this Agreement and is included as an attachment for the purposes of reference only.

2.2 Outputs

The Contractor will use best commercial efforts to do the following:

(a) continuously pump water from the underground areas at the Mine to

(i) prevent or minimize seepage into Long Lake and subsequently the Quinsam River; and

(ii) retain the coverage over the potential acid generating rock (PAG) stored in the underground PAG storage areas in accordance with the requirements under the Permit;

(b) monitor and manage water to

(i) mitigate unauthorized discharges to the environment and

(ii) prevent overflow into No Name Lake and subsequently the Quinsam River;

(c) at the underground mines

(i) ventilate all the underground areas to prevent gas accumulation;

(ii) prevent access to the two portals, exhaust vent raise and PAG disposal bore hole located at 7 South; and

(iii) prevent access to the two portals, two vent raises and 4 boreholes located at 2 North.

(d) at the surface,

(i) isolate electricity to all non-essential buildings and plant;

(ii) dispose of stockpiled PAG at the coal wash plant as set out in the Permit, subject to directions by the Province;

(iii) monitor Tailings Storage Facilities (TSF) and Dams as per the Health, Safety and Reclamation Code for Mines in BC.

(iv) retain the water cover over the PAG stored in surface locations in accordance with requirements under the Permit.

(e) prepare a 90-day work plan and budget for the delivery of the Services for the period July 31, 2019 to October 31, 2019 within two weeks of the signing of this Agreement to be attached as Appendix A-2;

(f) provide other directly related activities as agreed to by the Contractor and the Province; and

(g) provide ongoing progress reports on the delivery of the Services, including revisions to the work plan and budget, in a form and manner as agreed to by the Contractor and the Province.

2.3 Inputs

The Contractor must use best commercial efforts to provide the following personnel, who will have the following roles and functions:

(a) 1 x Mine Manager – as required by the *Health, Safety and Reclamation Code for Mines in British Columbia* (the "Code"). The Mine Manager will also act as an alternate for the Fire Boss;
(b) 1 x Fire Boss – to check the underground pumping and reticulation. The Fire Boss will act as an alternate for the Mine Manager;
(c) 1 x Environmental Coordinator – to monitor the surface water, tailing storage facility (TSF) and rehabilitation in accordance with the Permit and all applicable legislation;
(d) 4 x Security/First Aid – on a 24-hour basis, on a 4 days on, 4 days off cycle, to provide security and medical services;
(e) 1 x Electrician – to isolate power and distribute to different areas, as directed; and
(f) 1 x Mechanic – to conduct maintenance work as needed and to assist with other tasks.

2.4 Outcomes

(a) Through the delivery of the Services the Province wishes to realize the following outcomes and, without limiting the obligation of the Contractor to comply with other provisions of this Part, the Contractor must use best commercially reasonable efforts to achieve them:

(i) Protect and mitigate damage to land and watercourses affected by the Mine while ensuring public safety, including the safety of workers at the Mine.

PART 3. RELATED DOCUMENTATION:

The Agreement replaces the Letter Agreement attached hereto as Appendix A-1.

PART 4. KEY PERSONNEL:

The Contractor's Professional Employees:

Mario Mainella	President
Gordon Brown	Vice President
Michael Busch	Associate
Sofie Parker	Estate Administrator
Administration staff	

The Contractor's Legal Counsel (Gowlings WLG)

John McLean	Partner
Colin Brousson	Partner
Maxwell Brunette	Partner
Jonathan Ross	Partner

The Contractor's Mine Management Personnel (hired for Delivery of Services)

Neil Matheson	Mine Manager
Ruiping (Sarah) Shi -	Geologist
John McCormac	Site manager
Richard Harvey	Acting Mine Manager
Breanne Heatley	Environmental Assistant
Kathleen Anne Russell	Environmental Scientist
Alan Egan	Mine Manager (Alternate)

Other Union/Non Union Mine Operational Personnel (hired for Delivery of Services)

s.22	First Aid/Security
	First Aid/Security
Rescue One (Independent contractor)	First Aid/Security
s.22	Electrician (on call)
	Mechanic (on call)

Other Union/Non Union Mine Operational Positions (to be hired for Delivery of Services)

a) Security / First Aid (up to 1 additional position), and
b) Such other positions as may from time to time be considered necessary by the Contractor on agreement of the Province)

The Contractor may, with the Province's prior written consent, not to be unreasonably withheld, engage Subcontractors to replace the above Key Personnel provided the Subcontractors are of the same expertise and experience as the Key Personnel.

PART 5 OTHER PERSONNEL OR SUBCONTRACTORS

Following the employment of any personnel or Subcontractor under this Part, or as soon as reasonably possible the Contractor will advise the Province on the name of the person and position the person has been hired to fill.

Appendix A-1: Letter Agreement

(attached)

July 31, 2019

The Bowra Group, Inc. ("Bowra")

Attention: Mario Mainella

Quinsam Coal Corporation ("Quinsam") owns and has been operating coal mines on Vancouver Island (collectively, the "Mine").

The Mine is regulated and governed by, *inter alia*, the provisions of the *Mines Act* RSBC 1996 c. 293 (the "Act").

Quinsam is bankrupt and PricewaterhouseCoopers Inc. ("PWC") is the Trustee in Bankruptcy of Quinsam. PWC have given notice to the Province that as Trustee of Quinsam PWC is abandoning the Mine and is quit claiming its interest in the Mine as of midnight July 31, 2019.

The Chief Inspector of Mines (the "CIM") is concerned that an abandonment of the Mine poses a danger to persons and a risk of pollution to land and watercourses. Pursuant to sections 10 (4), 8(b) and 12 of the Act, the CIM has determined that work at the Mines is necessary for the protection of, and mitigation of, damage to land and water courses affected by the Mine.

Bowra agrees that it will best commercial efforts to perform the services set out in Schedule A hereto and will administer the Labour Agreement, a draft of which is attached as Schedule B hereto.

Her Majesty the Queen in right of the Province of British Columbia (the "Province") as represented by the Minister of Energy Mines and Petroleum Resources agrees to pay Bowra's reasonable fees and expenses in the performance of the services in Schedule A.

The Ministry of Energy Mines and Petroleum Resources will seek approval by the Ministry of Finance of an indemnity, on terms satisfactory to the Province and Bowra.

The parties intend to replace this letter agreement with a General Services Agreement on terms acceptable to the parties and this letter agreement will form a part of that General Services Agreement.

IN WITNESS whereof each of the parties hereto has executed and this letter agreement as of the ____ day of _____, 2019.

#OYLWLQ7M0D1DGPv1

THE PROVINCE OF BRITISH COLUMBIA, as represented by the Minister of Energy Mines and Petroleum Resources

By: _____
Name: Nathanial Amann-Blake
Title: Assistant Deputy Minister

The Bowra Group Inc.

By: _____ 7/31/19
Name: Mario Mainella
Title: PRESIDENT

Schedule A

Schedule A – Services

PART 1. TERM:

1. The term of this Agreement commences on July 31, 2019 and ends on October 31, 2019.

PART 2. SERVICES:

2.1 Outputs

The Contractor will use best commercial efforts to do the following:

(a) continuously pump water from the underground areas at the two Quinsam Coal Mines (collectively, the "Mine") to

(i) prevent or minimize seepage into Long Lake and subsequently the Campbell River; and

(ii) retain the coverage over the potential acid generating rock (PAG) stored in the 2 South Pit;

(b) monitor water flow and create a water balance for a water management program to prevent overflow into No Name Lake and subsequently the Campbell River;

(c) underground,

(i) ventilate underground areas to prevent build-up of explosive gases;

(ii) run fans at the Mine to ventilate underground areas to prevent gas accumulation;

(iii) seal or close the two portals, exhaust vent raise and PAG disposal bore hole located at 7 South;

(iv) seal or close the two portals, two vent raises and 4 boreholes located at 2 North; and

(v) continue pumping from underground.

(d) at the surface,

(i) isolate electricity to all non-essential buildings and plant;

(ii) stockpile PAG material at the plant;

(iii) properly store PAG disposal bins underground in 7 South and 2 North areas; and

(iv) conduct tailings facility monitoring;

(e) assess the value of the Mine and recommend long term options for the Mine site.

2.2 Inputs

The Contractor use best commercial efforts to provide the following personnel, who will have the following roles and functions:

(a) 1 x Mine Manager – as required by the *Health, Safety and Reclamation Code for Mines in British Columbia* (the "Code"). The Mine Manager will also act as an alternative for the Fire Boss.

(b) 1 x Fire Boss – to check the underground pumping and reticulation. The Fire Boss will act as an alternative for the Mine Manager

(c) 1 x Environmental Coordinator – to monitor the surface water, tailing storage facility (TSF) and rehabilitation

(d) 4 x Security/First Aid – on a 24-hour basis, on a 4 days on, 4 days off cycle, to provide security and medical services

(e) 1 x Electrician – to isolate power and distribute to different areas, as directed; and

(f) 1 x Mechanic – to conduct maintenance work as needed and to assist with other tasks

2.3 Outcomes

Through the delivery of the Services the Province wishes to realize the following outcomes and, without limiting the obligation of the Contractor to comply with other provisions of this Part, the Contractor must use commercially reasonable efforts to achieve them:

(i) Protect and mitigate damage to land and watercourses affected by the Mine while ensuring public safety, including the safety of workers at the Mine.

GENERAL SERVICE AGREEMENT

BRITISH COLUMBIA

For Administrative Purposes Only	
Ministry Contract No.: GS20MAN0012 *Requisition No.:* _____ *Solicitation No.(if applicable):* _____ *Commodity Code:* _____ ***Contractor Information*** *Supplier Name: Four Directions Management Services Ltd.* *Supplier No.:* _____ *Telephone No.:* _____ *E-mail Address:* _____ *Website:* _____	***Financial Information*** *Client: 057* *Responsibility Centre: 27015* *Service Line: 26280* *STOB: 6001/ 6002* *Project: 2724237/39/44* ***Template version:*** *December 21, 2018*

Schedule A – Services

PART 1. TERM:

1. The term of this Agreement commences on April 1, 2019 and ends on March 31, 2021.

PART 2. SERVICES:

Outputs

The Contractor shall work with the Provincial team for the Environmental Stewardship Initiative (ESI) to complete the following deliverables:

- Provide neutral facilitation for meetings, as required, between the Province and Indigenous government members of ESI projects as well as the Governance Working Group (GWG) and Governance Working Group Executive (GWGE);
- Prepare agendas and provide advice, as requested, in preparation for meetings;
- Provide strategic advice to the Province as it pertains to the delivery of ESI, negotiation approaches or issues that arise that might impact the successful delivery of the ESI;
- Work with Indigenous ESI member governments, to promote the ESI, help address issues, seek solutions and reach consensus on ESI deliverables;
- Provide other project support, as requested, for the ESI, including special reports, communications, meeting summaries and other products.
- Provide support for other stewardship initiatives related to the ESI as requested by the ESI Executive Director.

Inputs

The Contractor shall receive advice and direction from the Province, represented by the ESI Project Leads and the Executive Director of the ESI.

The Contractor must use Dan George, President of Four Directions Management Services, Ltd. (FDMS) as primary for this work. Any other FDMS staff attending ESI meetings must be pre-approved by the ESI Project Teams.

Contractor work with ESI Indigenous Partners:

The Contractor may initiate discussions with Indigenous partners of the ESI without prior approval of the Province for services up to a total of $15,000 per Fiscal Year (based on the same hourly fees in Schedule B). Work beyond this amount will require express written approval from the Province. The Province's reporting requirements on this work are listed below.

Reporting requirements

The Contractor will:

- Report to and receive direction from the Project Teams and the ESI Executive Director;
- Provide advice; briefings; presentations; progress reports as directed by the ESI Executive Director or such other person as the ESI Executive Director may designate;

- Attend monthly meetings (in person/or phone) to provide ESI staff advice based on the Contractor's promotional/issues resolution work with Indigenous ESI partners. The Contractor will remain neutral and respect the confidentiality of his conversations with Indigenous partners;
- Provide other related services, as may be mutually agreed to by the Contractor and the ESI Executive Director.

The Contractor shall work with Mark Graham, ESI Executive Director, and the ESI Provincial Project Leads, as the primary points of contact.

PART 3. RELATED DOCUMENTATION:

1. Not Applicable

PART 4. KEY PERSONNEL:

1. The Key Personnel of the Contractor are as follows:

   (a) Kelly Mortimer – Communications and Facilitation Support

   (b) Heidi Dunstan – Graphic Design

   (c) Amanda Hayhurst – Administrative Support

GENERAL SERVICE AGREEMENT
Lawyers-Cheni Spillway



For Administrative Purposes Only	
Ministry Contract No.: GS20MAN0061 Requisition No.: _____ Solicitation No. (if applicable): _____ Commodity Code: _____ Contractor Information Supplier Name: Golder Associates Ltd. Supplier No.: _____ Telephone No.: (604) 296-4344 E-mail Address: Ben_Wickland@golder.com Website: www.golder.com	Financial Information Client: 057 Responsibility Centre: 27580 Service Line: 26012 STOB: 3262 Project: 2700000

Schedule "A" – Services

PART 1. TERM:

1. The term of this Agreement commences on August 26, 2019 and ends on December 31, 2019.
2. The contract may be extended to March 31, 2020, subject to available funding and satisfactory contractor performance.

PART 2. SERVICES:

Background

The Ministry of Energy, Mines and Petroleum Resources (EMPR) requires the services of a contractor with experience in dam construction to conduct an emergency upgrade to the spillway associated to the Lawyers-Cheni dam located in Northern BC. Recent Inspections noted an increase in erosion to the spillway channel on the downstream face of the north limb and increase in erosion rills on the south limb. Erosion of the spillway are a risk to dam safety and upgrades are required to be completed before the end of October 2019 prior to the onset of freezing conditions.

Deliverables

The overall scope of work for construction consists of doing the necessary upgrades of the existing spillway to reduce erosion and repair existing erosion rills on the south limb by filling them with local material. The basis for the overall cost estimate considers the base width of the spillway needing to be increased from 2.0 m to 7.0m (because of updates to the hydrological predictions) for a length of approximately 80 m (approximately 1,600m^2).

Activities included in the scope of work include:

- Preparation of Construction Health, Safety and Environmental Plan,
- Coordination with engineering consultants and development of a procedure to moving equipment across two bridges (Firesteel river bridge and Finlay river bridge), currently downgraded to a 5-ton capacity,
- Coordination with sub-contractors and vendors for planning the execution of the work,
- Site mobilization/demobilization for Golders staff, subcontractors, equipment and materials,
- Daily transportation of crew to/from site by vehicle transport to nearby camp accommodations,
- Labour, equipment and materials to execute the spillway upgrade and rill repairs as per IFC drawings,
- Project management and supervision, and
- Completion of record drawings.

The Contractor's proposal titled "Proposal for Upgrade of Spillway as part of Erosion Control Cheni Mine BC, Canada", Ref # P19128913-001-P-Rev0, dated August 12, 2019, will become an integral part of this agreement.

Any changes to the approved program based on site visits shall be approved in writing by a provincial representative (listed below) prior to commencing work.

The Contractor will:

1. Review IFC drawings, technical specifications, material take-offs, and design basis memorandum, prior to the start of mobilization and submit a final construction record report by October 31, 2019, that documents the work, observations and any data for future considerations, signed by a Qualified Professional registered in good standing with a BC professional Association. Note detailed interpretation and recommendations will not be required to be provided.
2. Adhere to the company Health and Safety Plan as documented in the proposal entitled "Proposal for Upgrade of Spillway as part of Erosion Control Cheni Mine BC, Canada", Ref # P19128913-001-P-Rev0, dated August 12, 2019.
3. A certified person from the Contractor shall act as the "Project Manager" while its personnel, sub-consultants or sub-contractors are on site performing the services listed hereunder. The Project Manager, for the purposes of this contract, is responsible for ensuring the safety of the Contractor or its personnel or sub-consultants or sub-contractors while on site and are acting in accordance with the requirements of the *Mines Act*, regulations and Code as it pertains to the services listed hereunder.
4. Schedule and organize all meetings with EMPR as work progresses and as conditions change.

PART 3. RELATED DOCUMENTATION

The Ministry will compile all documentation on hand relevant to the work and provide to Golder.

PART 4. KEY PERSONNEL:

1. The Key Personnel for the Contractor are as follows:
   - (a) Fernando Famania, Construction Project Manager, (Golder)
   - (b) Jonathan Doutaz, Site Superintendent, (Golder)
   - (c) David Siddle, Project Director, (Golder)
   - (d) Ben Wickland, Senior Geotechnical Engineer (Golder)
   - (e) Leila Ang, Project Engineer, (Golder)
   - (f) Kirk van den Boogaard, Senior Estimator, (Golder)
   - (g) Others (Golder)
   - (h) Bear Creek Contracting (Sub-Contractor)

2. The Key Personnel for the Province are as follows:
   - (a) Diane Howe, Deputy Chief Inspector of Mines, Abandoned Mines Program

GENERAL SERVICE AGREEMENT

BRITISH COLUMBIA

For Administrative Purposes Only	
Ministry Contract No.: _GS20MAN0005 *Requisition No.: _____* *Solicitation No.(if applicable): _____* *Commodity Code: _____* ***Contractor Information*** *Supplier Name: BC Hydro and Power Authority* *Supplier No.: 073007-031* *Telephone No.: 604-528-1898* *E-mail Address: heather.matthews@bchydro.com* *Website: _____*	***Financial Information*** *Client: 057_____* *Responsibility Centre: 27711_____* *Service Line: 26314_____* *STOB: 6001/6002____* *Project: 2700000_____* ***Template version:*** *December 21, 2018*

Schedule A – Services

PART 1. TERM:

1. Subject to section 2 of this Part 1, the term of this Agreement commences on April 01, 2019 and ends on March 31, 2020.
2. This Agreement may be renewed for a further Term of 12 months by written agreement of the parties, subject to satisfactory performance by the Contractor and the availability of funding by the Province.

PART 2. SERVICES:

The Contractor will provide a yearly work plan of projects, including schedules, resources and budget, to support CRT negotiations. The work plan will be reviewed and updated quarterly with the Province. Regular status updates of project activities will be provided to the Province during the term of this Agreement, at specific times as requested by the Province or as identified in the work plan.

The Contractor will complete technical studies and provide strategic advice in support of decisions related to the CRT negotiations.

The Contractor will continue to provide technical support as required to the First Nations consultation and stakeholder engagement processes, and other tasks related to CRT negotiations at the request of the Province.

The Contractor will continue to be involved in technical discussions with the U.S. Entity on operating scenarios, and other discussions relating to power generation and flood risk management. The Province will continue to be involved in those discussions as appropriate, particularly in relation to policy issues that arise.

Through the delivery of the Services the Province wishes to realize the following outcomes and, without limiting the obligation of the Contractor to comply with other provisions of this Part, the Contractor must use commercially reasonable efforts to achieve them:

1. The Province is adequately prepared for, and supported, during Columbia River Treaty negotiations with United States.

The parties acknowledge that the Contractor does not warrant that these outcomes will be achieved.

PART 3. RELATED DOCUMENTATION:

1. The Contractor must perform the Services in accordance with the obligations set out in this Schedule A including any engagement letter, Solicitation document excerpt, proposal excerpt or other documentation attached as an Appendix to, or specified as being incorporated by reference in, this Schedule.
2. The following are Appendices to this Schedule A:

Appendix 1 – BC Hydro Technical Work Plan for F19/20 **ATTACHED**

PART 4. KEY PERSONNEL:

1. The Key Personnel of the Contractor are as follows:

(a) Heather Matthews
(b) Jeremy Benson
(c) Herbert Louie
(d) Jian Li
(e) Doug Robinson
(f) Tim Blair
(g) Gillian Kong
(h) Jiji Zhou

BC Hydro Tasks
Negotiation Support Modeling

Standard Labour Rates (P4, Specialist)	
Cost per hour	Cost per day
$ 113.45	$ 851

Task	Description	Effort (Days)		Cost
B	FRM Workgroup	120	$	*102,106*
C	Other Objectives Option Development	90	$	*76,580*
D	Power Workgroup	160	$	*136,142*
	F20 Negotiation Technical Support	*370*	$	*314,828*

Travel (for modeling, preparation and negotiation purposes)

Negotiation Travel, $1500 pp.	8	$	*12,000*
BC-Can Travel, $1500 pp.	6	$	*9,000*
BC: Travel to Victoria for day, $250 pp.	14	$	*3,500*
Other Travel Within BC, $750 pp.	14	$	*10,500*
F20 Total travel estimate		$	*35,000*

F20

F20 Total Expected Labour	370	$	314,828
F20 Total Expected Travel		$	35,000
Contingency	0%	$	172.00
F20 Total Expected Labour, Travel and Contingency		**$**	**350,000**