

Ministry of Energy and Mines

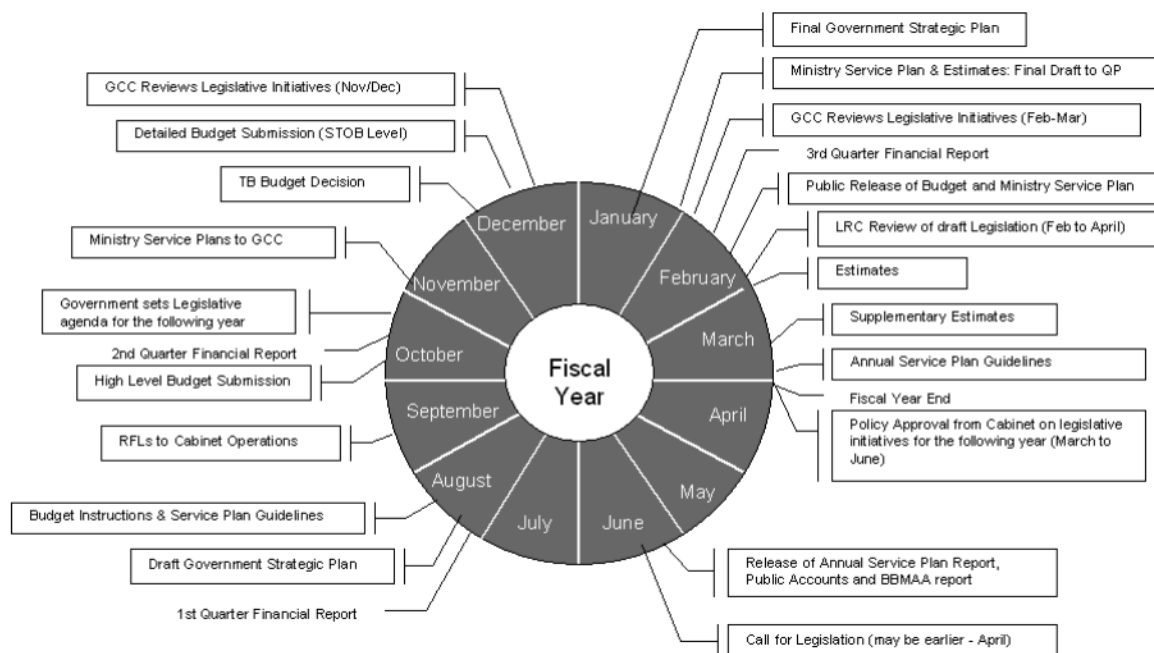
Corporate Initiatives Branch (CIB)

The Corporate Initiatives Branch (CIB) is responsible for issues and processes that transect the Ministry's key lines of business or require a Ministry-wide, corporate approach.

1. **Corporate Services:** CIB delivers a range of corporate services for both MEM and MNGD:
 - a. **Transformation Planning:** ED of CIB is MEM representative on Transformation Planning Committee, on Leading Workplace Strategies, technology planning, etc;
 - b. **Correspondence:** The Correspondence Unit in CIB produces responses to Minister and Deputy Minister Correspondence;
 - c. **Public Service Events:** Premier's Awards call for nominations and ceremony, Public Service Week, Long Service Awards, PECSF, etc;
 - d. **FOI and Records Management:** Key point of contact, and administration of FOI requests and records for the Ministry;
 - e. **Organizational Effectiveness and Regulatory Reform:** CIB is responsible for improving organizational effectiveness for MEM and MNGD. Also, CIB supports the Regulatory Reform Initiative and reports out on regulatory reductions/additions to the Regulatory Reform Office;
 - f. **Communications:** Internal and external communication, Executive blogs, internet and intranet updating; and
 - g. **First Nations Secretariat:** CIB coordinates referrals from MARR to line Divisions.
2. **Corporate Policy and Legislation:** CIB leads and collaborates with Divisions on Ministry policy work that crosses multiple lines of business or is cross-governmental in nature. CIB is the point of contact with other Ministries for consultation on their RFLs.
3. **Strategic Planning and Reporting:**
 - a. Developing the Ministry's Service Plans, Annual Service Plan Reports, and coordinating the Ministry's internal planning process of Division Business Plans that link to staff MyPerformance reports;
 - b. **Crown Corporations:** In collaboration with the Crown Agencies Resource Office and Ministry program areas, ensuring that government policy and administrative guidelines are adhered to in the Crowns' reports, policies and activities, e.g. through the development of Mandate Letters, Service Plans and Annual Reports;
 - c. **Estimates/UBCM/Transition Briefing Binders:** Coordinating and producing Estimates, transition or other corporate briefing binders to support ministers; and
 - d. **Jobs Plan Updates:** Coordinates the Ministry's input to updates for JTST.

The following diagram illustrates the cyclical management of the BC Government's planning, budgeting and legislation process. Many of the Branch's work timelines are set by this process.

CALENDARIZED GOVERNMENT MANAGEMENT PROCESSES - INTEGRATED POLICY FRAMEWORK



4. **Trade Agreements:** In consultation with Divisions, develop and advocate for the Ministry's positions in the negotiation of various trade agreements, e.g. TILMA, Canada-E.U. Trade Agreement, Agreement on Internal Trade.
5. **Inter-governmental Issues and Events:** Leading or supporting intergovernmental policy development and issue management, for example by:
 - a. Serving as the key point of contact between the Ministry and the Intergovernmental Relations Secretariat (IGRS);
 - b. Monitoring initiatives of other governments in Canada or internationally that may impact the Ministry's interests, in order to provide advice on pro-active approaches by the Ministry, e.g. federal budget measures;
 - c. Coordinating with IGRS, the Ministry's support for the Premier's intergovernmental activities, including providing advice and briefing material for federal, provincial and territorial (F/P/T) meetings, such as First Ministers' Conferences, Council of the Federation meetings, and Western Premiers' Conferences, or international events, such as trade missions, the Pacific Northwest Economic Region (PNWER) conferences and meetings of the Western Governors Association; and
 - d. Organizing the Minister's and Ministry's participation in intergovernmental forums, such as the Energy and Mines Ministers' process, New West Partnership and PNWER.

**MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH**

ISSUE: BC-Alaska Cooperation to Protect Transboundary Waters

KEY MESSAGES:

- BC and Alaska are working together to enhance the protection of transboundary rivers and watersheds along the border;
- A Statement of Cooperation (SoC) was signed by BC and Alaska on October 6, 2016 to formalize, build upon and improve the cooperative relationship that currently exists between the two jurisdictions;
- Key elements of the SoC are: 1) establishing a bilateral Technical Working Group on (water) Monitoring; 2) formalizing cross-jurisdictional participation in environmental assessments (EAs) and permitting; and, 3) reporting on mine permitting, discharges, operations and closure;
- The SoC is overseen by a Bilateral Working Group (BWG) of BC Deputy Ministers of Energy and Mines (MEM) and Environment, and Alaska Commissioners of the Departments of Environmental Conservation, Fish and Game and Natural Resources.

BACKGROUND:

- The tailings storage facility failure that occurred at the Mount Polley mine on August 4, 2014 heightened long-standing concerns in Alaska about BC mine development along the border, and that a similar failure could happen there;
- On November 25, 2015, Premier Christy Clark and Alaska Governor Bill Walker signed the Memorandum of Understanding and Cooperation Between The State of Alaska and The Province of British Columbia (MOU). The first part of the MOU is being implemented through a SoC on the Protection of Transboundary Waters. The SoC was signed October 6, 2016 by Minister of Energy and Mines Bill Bennett, Minister of Environment Mary Polak, and Alaska Lieutenant Governor Byron Mallott;
- The SoC is overseen by a Bilateral Working Group (BWG) of BC Deputy Ministers of Energy and Mines and Environment, and Alaska department commissioners of Environmental Conservation, Fish and Game (DFG) and Natural Resources (DNR). In the first year of implementation of the SoC, it is expected the BWG will meet quarterly, then annually after that;
- The BWG will oversee the three main components of the SoC:
 - Technical Working Group on Water Monitoring: Develop a process for collecting and sharing water quality data, from before, during and after mining and other industrial activity. There will be opportunities for collaboration among different agencies, Tribes, First Nations, local governments, industry, organizations and others, in the collection of these data, observations and related information;

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Date: April 19, 2017

Page 1 of 2

- Joint Participation in EAs and Permitting: Formalize reciprocal procedures around the invitation and ongoing involvement of government representatives and technical staff in EAs triggered by provincial or state law; and
- Reporting on Mine Discharges, Operations and Closure: Identifying and sharing information on mine permitting non-compliance, design or construction deficiencies and threat or release of pollutants from mines.
- Other agencies, such as Environment and Climate Change Canada and the Canadian Environmental Assessment Agency, are interested in the BC-Alaska discussions, as they are already partners with BC in a number of monitoring programs for transboundary rivers and regularly participate in joint federal-provincial EAs;
- The BWG met on December 16, 2016, January 26, 2017 and April 20, 2017. The BWG is currently reviewing the draft program description and 2-year monitoring plan submitted by the bi-lateral technical working group on monitoring; the draft reciprocal procedures document on EAs and permitting submitted by senior MEM and Alaska DNR staff; and the draft communications plan prepared by MEM and Alaska DFG staff;
- It is anticipated that once the draft monitoring plan is approved, both jurisdictions will consult its respective stakeholders for input and comment on the plan prior to finalizing and implementing the plan;
- As the BC-Alaska cooperative efforts continue, various letters to the United States State Department, written by United States Senators and Members of Congress, and to Prime Minister Justin Trudeau, written by environmental non-governmental organizations and other groups, are requesting that the United States and Canada invoke the provisions of the Boundary Water Treaty and determine whether a reference from the International Joint Commission would be a more suitable venue to address transboundary concerns relating to mining in BC;
- MEM and Global Affairs Canada are collaborating to enhance confidence, both in Canada and in the U.S., in the sustainable mining practices and oversight in BC. BC has made significant changes to how mining is done in the Province, including new policies, additional resources and funding to improve permitting processes and strengthen compliance and enforcement;
- BC has completed a review of the health and safety portion of mining code review and made updates to the code based on the unanimous recommendations from the Code Review Committee, chaired by the Chief Inspector of Mines, which includes an equal number of representatives from First Nations, mine labour unions and industry;
- BC has also instigated major changes to the management and oversight of tailings storage facilities and has brought into force administrative monetary penalties regulations and related penalties for non-compliance with the *Mines Act* and Mining Code;
- BC has a new Compliance Board and a new strategic plan for compliance and enforcement of mining in BC that outlines Government's three-year vision for mining oversight in the Province;
- BC has also completed of a cross-jurisdictional review of reclamation securities and launched the BC Mine Information website that provides greater openness and transparency around mining operations in BC.

**MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH**

ISSUE: Canadian Energy Strategy

KEY MESSAGES:

- The Canadian Energy Strategy (CES) was built on the collaboration of Canada's provinces and territories (P/Ts) through the Council of Federation (COF), and approved by Premiers at the COF meeting in July 2015;
- The first year of implementation is complete, and a progress report was developed and endorsed by Premiers at the COF meeting in July 2016. Premiers provided recommendations and directed the CES committees to continue to progress work in priority areas;
- The attached Appendix outlines the mandate and progress of each CES committee for 2016/2017;
- BC's energy interests align with all the goals and initiatives found in all areas of focus of the CES, but most directly with the work of the two committees that BC is co-chairing, Energy Efficiency and Climate Change;
- Premiers have reiterated that the CES will remain a P/T led strategy and will collaborate with the federal government in areas of mutual interest;
- A CES Report was drafted to update First Ministers at their December 2016 meeting. The report outlines areas where the federal government participates in the CES in specific areas in support of the Pan-Canadian Framework (PCF);
- Energy Ministers continue to direct work under the five P/T committees that will report back to Premiers in May 2017.

BACKGROUND:

- At the COF meeting in July 2012, Premiers decided to renew the 2007 COF Energy Strategy, A Shared Vision for Energy in Canada. The result of this decision is the current CES, which was approved by the Premiers in July 2015 at the COF Meeting;
- Co-chairing provinces are Alberta, Manitoba, New Brunswick, and Newfoundland and Labrador. Manitoba oversees the functioning of all CES committees and provides the role of Secretariat. BC co-chairs two CES committees (Energy Efficiency and Climate Change) and participates in the remaining three, providing input based on the Province's strategic energy and climate action priorities;
- Progress has been made in the CES priority areas, and P/T Energy Ministers will report progress and next steps for 2017/2018 back to COF in May 2017. The COF will be meeting in Edmonton on July 17-19, 2017;

- The continued collaborative work in the CES will develop and reinforce the P/Ts' shared energy objectives, enhance citizens', stakeholders' and investors' understanding of approaches for developing sustainable energy, and provide greater coherence for advocating and promoting Canada's interests internationally;
- The Delivering Energy to the People Committee was divided into two sub-committees to better address issues unique to each of the two main energy streams delivered to Canadians: electricity transmission and oil and gas infrastructure distribution;
- A fifth CES committee, the Pan-Canadian Task Force on Reducing Diesel in Remote Communities (Task Force), was later established to find alternative ways of providing energy to remote communities not connected to the grid.

Appendix

Energy Efficiency Committee – tasked with reviewing opportunities to implement or expand minimum energy efficiency performance policies, as a means to drive uptake of energy efficiency improvements:

- 1) Energy Efficiency Standards: This includes recommendations for initial priority products for regulation and market transformation, including recommendations to the federal government to inform their regulatory agenda;
- 2) Joint P/T recommendations to the National Research Council and Natural Resources Canada to support continuous improvements to the energy efficiency provisions of the National Energy Code for Buildings and National Building Code (together, referred to as "National Codes"); and
- 3) With the federal government, they will work together to explore options, including cost sharing, to accelerate implementation of recognized energy management systems standards, such as CAN/CSA ISO 50001 in industrial sectors, with a focus on energy intensive sectors.

Delivering Energy to People Committee - tasked with identifying the type, nature and quantity of energy products by provinces and territory which require new and enhanced transportation and transmission infrastructure. This committee has been split into two sub-committees: electricity transmission and oil and gas infrastructure distribution. Both streams developed an inventory of existing and planned transportation and transmission infrastructure by province and territory, followed by a future supply and demand forecast. The inventories and forecasts of both streams of the committee serve as a foundation to further assess gaps and opportunities to better leverage our interprovincial partnerships and maximize our export capabilities.

The Committee is also engaging in the ongoing review of federal environmental approval processes. P/Ts will engage the federal government to ensure P/T perspectives, including issues of environmental protection, Indigenous and local community engagement, delivering economic benefits, competitiveness and timeliness, efficiency, and reduced duplications, are considered.

Climate Change and Transition to a Lower Carbon Economy Committee - tasked with exploring the potential to expand the use of market-based carbon management mechanisms across Canada, particularly in sectors responsible for greenhouse gas (GHG) emissions, such as energy, transportation and manufacturing. In order to ensure consistency between the CES and possible measures related to any carbon pricing mechanisms to be approved by First Ministers, the committee has turned over work on carbon pricing to the PCF process, and individual jurisdictions own modeling processes. The working committee is shifting work to focus on risk and mitigation measures to support GHG reductions in the energy sector, including an understanding how pricing mechanisms and other policies support sector reductions in GHGs. The scope of this work is still being determined by the working committee.

Technology and Innovation Committee - tasked with supporting the development of new energy technologies. The committee will work with the federal government to implement collaborative models to support energy technology and innovation processes across the country. The focus for the CES committee work in 2016/17 is the development of two technology clusters: Zero Emission Vehicles and renewable generation/storage. The goal of the technology clusters is to support enhanced knowledge sharing on innovation, demonstration, production and use of transformational energy technologies and to identify new approaches to support greater adoption of innovation processes, products and services for the energy sector.

Pan-Canadian Task Force on Reducing Diesel in Remote Communities (Task Force) – tasked with finding alternative ways of providing energy to remote communities that are not connected to the grid and are currently dependent on diesel fuel. The Task Force is working to develop an inventory of provincial and territorial initiatives that support affordable, clean, renewable and reliable alternatives to diesel electricity generation in remote communities. A Pan-Canadian Summit on enhancing renewable electricity in remote communities took place in Winnipeg on January 16 to 18, 2017. Recommendations from the summit will be included in a report back to P/T Energy Ministers in the spring 2017.

FPT collaboration on international energy - Additionally, the CES mandate letter directs P/T Energy Ministers to develop a formal mechanism that provides provinces and territories the opportunity to participate in international negotiations, agreements, and forums on energy as an approach to opening new markets for innovative companies.

**MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH**

ISSUE: Energy and Mines Ministers' Conference

KEY MESSAGES:

- The Energy and Mines Ministers' Conference (EMMC) is an annual gathering of federal, provincial and territorial (F/P/T) ministers responsible for energy and mining portfolios. At these meetings, ministers discuss shared priorities for collaborative action to advance energy and mining development across the country;
- Officials from the Ministry of Energy and Mines and the Ministry of Natural Gas Development participate in all of the working groups to represent BC's energy and mining priorities. Executive from both ministries also participate on the higher level steering groups;
- On the energy side, EMMC work supports actions under the Canadian Energy Strategy and Pan-Canadian Framework. The working groups are:
 - Public Confidence: taking a multi-year approach to developing principles for consultation, engagement and participation for governments and stakeholders to build public confidence in the context of energy and mining development. A Joint Action Plan that includes a common narrative is being developed based on four principles committed to at EMMC 2016;
 - Energy Efficiency: report on F/P/T Market Transformation Strategies for Equipment to Support a Net Zero Energy Future in the Built Environment, and develop an Energy Efficient Buildings Strategy;
 - Markets and Trade: develop a multi-year study on the barriers to investment for more value added in the natural gas and related liquids sector in Canada, researching the potential role of natural gas in a low-carbon economy, and initiatives on transportation safety;
 - Energy Technology: develop an action plan on a new technology cluster on renewable power and energy storage for endorsement, and showcase new collaborations in energy technology and innovation;
 - Electricity: overview on essential reliability services and increased integration of renewable energy, progress reports on regional electricity cooperation and strategic infrastructure, a Renewable Integration Study, and collaboration on nuclear energy with select P/Ts; and

- International Energy Collaboration: re-established working group for governments to share information on international energy priorities and increase collaboration and engagement with priority markets.
- On the mining side, working groups are focused on:
 - Junior Mining Sector: seek new opportunities for collaboration to enhance mineral geoscience programs across jurisdictions and expand the availability of public geoscience data to help facilitate grassroots exploration, and renewal of the Intergovernmental Geoscience Accord;
 - Mining Innovation: develop a strategy for national collaboration to accelerate the adoption of innovative green technologies and processes, and pilot an interactive map of mining innovators. For natural resource sectors, develop a Clean Technology Strategy and enhanced capacity for R&D sectors that would advance efforts towards Mission Innovation;
 - Environmental Liability: explore national approaches to transparent, public reporting of reclamation securities, and standards for operators to have adequate liability insurance to cover unintended, catastrophic events at mines;
 - Advancing Regional Approaches: Canada and Manitoba are partnering on a pilot project to lay the groundwork on a regional approach to mineral development; and
 - International: advance cooperation on market access, missions, trade and promotion deliverables and outcomes, including through participation in Canada Pavilion.

BACKGROUND:

- Each year, the process leading up to the annual Ministers' meeting is co-chaired by the Government of Canada (led by Natural Resources Canada), and a provincial or territorial co-chair that rotates on an annual basis. The current provincial co-chair for 2016/2017 is New Brunswick, who will host the annual ministers' conference at St. Andrews from August 13 to 15, 2017;
- In 2018, Nunavut will assume the co-chair role with Canada;
- BC last co-chaired the EMMC at Whistler in 2007 and is planned to co-chair again in 2019;
- The EMMC is not managed by a secretariat. Rather, the secretarial role is performed by the co-chairs. Costs associated with EMMC 2017 will be shared among jurisdictions (25 percent federal, 75 percent provincial/territorial). Previously, the cost was covered by the host province or territory.

**MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH**

ISSUE: Pan-Canadian Framework for Clean Growth and Climate Change

KEY MESSAGES:

- On December 9, 2016, First Ministers announced the Pan-Canadian Framework on Clean Growth and Climate Change, affirming Canada's commitment to the international community that it will reduce emissions to at least 30 percent below 2005 levels by 2030;
- Pricing carbon pollution is a core element of the Framework and builds on BC's carbon tax to reduce greenhouse gas (GHG) emissions, drive innovation, and encourage people and businesses to pollute less;
- The Framework outlines critical actions to grow the economy while reducing GHG emissions. These actions include:
 - developing new building codes to ensure that buildings use less energy, saving money for households and businesses;
 - deploying more electric charging stations to support zero-emitting vehicles, which is an integral part of the future of transportation;
 - expanding clean electricity systems, promoting inter-ties, and using smart-grid technologies to phase out the reliance on coal, make efficient use of existing power supplies, and ensure a greater use of renewable energy;
 - reducing methane emissions from the oil and gas sector;
 - protecting and enhancing carbon stored in forested lands, wetlands and agricultural lands; and
 - setting an example and driving significant reductions in emissions from government operations.
- BC's Climate Leadership Plan addresses many of these actions.
- BC, Alberta, Saskatchewan, Manitoba and Northwest Territories are participating in the Natural Resources Canada funded Regional Electricity Cooperation Strategic Investment initiative to evaluate and rank the most promising electricity infrastructure projects in the Western provinces with the potential to assist Alberta and Saskatchewan to transition to a sustainable electricity generation portfolio.

BACKGROUND:

- On August 19, 2016, the Climate Leadership Plan was announced with 21 action items that span the Province's natural gas, transportation, industrial, built environment and government operations sectors;
- BC participated in four federal working groups to develop a Framework:
 - Clean Technology, Innovation and Jobs;
 - Carbon Pricing Mechanisms;
 - Specific Mitigation Opportunities; and
 - Adaptation and Climate Resilience.
- The Ministry of Energy and Mines actively participated on three sub-groups of the Specific Mitigation Opportunities Working Group: electricity generation; transportation; and the built environment;
- BC is requesting funding for electrification of the upstream oil and gas sector, and transmission infrastructure with Alberta. The Mitigation Working Group references options that could support scaled-up clean electricity generation, including emissions performance standards or regulations, a non-emitting portfolio standard, or financial incentives. Investment in grid infrastructure could also help to connect existing and new clean electricity generation resources with electricity demand, which is of particular interest to BC;
- While BC is a leader in climate change policies, many other provinces do not have policies in place with a similar depth and scope. For example, carbon pricing remains contentious, although the federal government has signaled its intent for some form of national minimum carbon pricing, should provinces not adopt their own carbon pricing regime. Similarly, jurisdictions reliant on coal-fired electricity generation are concerned with the potential for increased electricity prices and compensating existing coal-fired generators;
- The federal government has signaled their intent to provide funding for remote and First Nations communities to replace or augment diesel electric generation with clean and renewable sources.

CROSS-REFERENCE:

14 – Integrated Resource Plan

24 – Remote Community Electrification Policy and Regulation

25 – Electricity Exports

**MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH**

ISSUE: Union of BC Municipalities Annual Convention 2017

KEY MESSAGES:

- The Union of BC Municipalities (UBCM) annual convention is an important avenue for municipalities and the Premier, Cabinet and MLAs to meet, discuss and attempt to resolve issues of local concern.

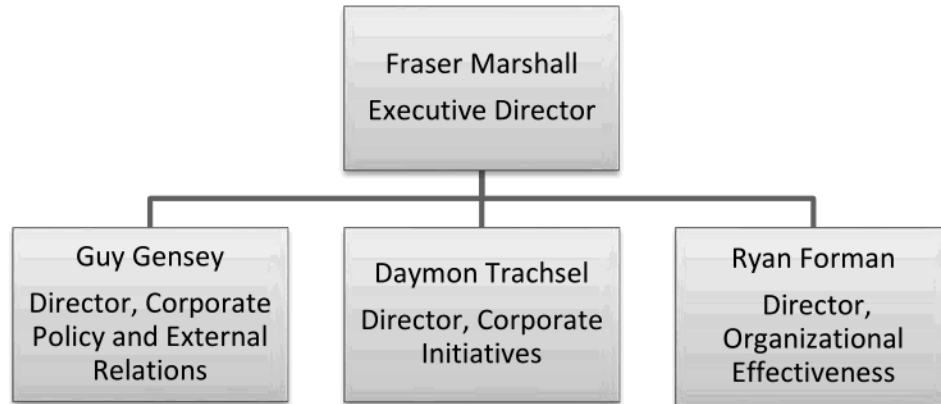
BACKGROUND:

- UBCM is a forum for local government elected officials and those with an interest in municipal affairs, attracting upwards of 2,000 attendees. Although the Minister's meetings are 15 minutes in duration, for some of the smaller communities, this is their annual chance to meet with members of the provincial government Cabinet;
- The 2017 UBCM convention will be held in Vancouver from September 25 to 29. The 2017 convention theme is "Roots to Results," which considers the collaboration among levels of government in addressing common issues and the ease with which modern information is shared among governments via common platforms. Typical subjects raised by local governments include reliability of electricity supply, Independent Power Producers, opposition to or support for mining and electricity infrastructure development, and gravel quarries;
- Ministers will meet with municipal councillors and officials to discuss issues put forward by local government. These appointments will be coordinated through the Premier's Vancouver Office and will typically occur Tuesday through Thursday. The Deputy Minister and the ADMs of Electricity and Alternative Energy and Mines and Mineral Resources are expected to attend and support the Minister.

Contact: Fraser Marshall
Phone: 250 952-0274
Date: June 7, 2017

Page 1 of 1

CORPORATE INITIATIVES BRANCH ORGANIZATIONAL CHART APRIL 2017



Ministry of Energy and Mines
Transition 2017/18

Corporate Initiatives Branch

Branch Detailed Description

CIB Detailed description 1

Intergovernmental

B.C. Alaska 2

Canadian Energy Strategy 3

Energy and Mines Ministers' Conference 4

Pan Canadian Framework for Clean Growth and Climate Change..... 5

Union of BC Municipalities Annual Convention

UBCM Convention..... 6

CIB Organizational Chart

CIB Org Chart 7



CORE BUSINESS/PROGRAM AREAS/BUSINESS PROCESSES

Corporate Initiatives Branch (CIB)

Executive Director Responsible: Fraser Marshall

Core Business/Program Area Description/Critical Business Processes:

The Corporate Initiatives Branch (CIB) is responsible for issues and processes that transect the Ministry's key lines of business or require a Ministry-wide, corporate approach. CIB delivers a range of corporate services for both MEM and MNGD, including Transformation Planning; the Correspondence Unit; public service events such as the Premier's Awards, Public Service Week, and Long Service Awards; FOI and Records Management; Lean and Regulatory Reform; Internal and external communications, including Executive blogs, internet and intranet updating; and supporting MARR on the First Nations file by coordinating Land referrals to line Divisions and participating in the annual FN leaders Gathering.

CIB leads and collaborates with Divisions on Ministry policy work that crosses multiple lines of business or is cross-governmental in nature. Examples include the *Emergency Programs Act*; and the *Natural Resource Roads Act*. CIB is the point of contact with other Ministries for consultation on their Request for Legislation (RFL).

CIB is also responsible for Strategic Planning and Reporting, which includes: developing the Ministry's Service Plans, Annual Service Plan Reports, and coordinating the Ministry's internal planning process of Division Business Plans that link to staff MyPerformance reports; managing the process of Crown Corporation service plan, annual report and mandate letter preparation; ensuring that the Minister and senior Executives are prepared for recurring annual events such as Budget Estimates and the UBCM Convention by coordinating and producing estimates, transition or other corporate briefing binders; and supporting JTST with their annual updates to the BC Jobs Plan.

Budget: \$1,437,000 (2017/18 estimates)

Full Time Equivalents (FTEs): 16



Corporate Services for the Natural Resource Sector (CSNR)

ADM Responsible: Wes Boyd, Executive Financial Officer

Core Business/Program Area Description/Critical Business Processes:

Since November 2010, one integrated entity has provided corporate services for the natural resource sector (NRS) ministries, which include the Ministries of Energy and Mines, Natural Gas Development and Aboriginal Relations and Reconciliation. The organization, Corporate Services for the Natural Resource Sector, is being led by two Assistant Deputy Ministers (ADM)/Executive Financial Officers (EFO) who oversee the following branches: Information Management Branch; People and Workplace Strategies Branch; Financial Services Branch; and Client Services Branch.

The corporate services model is designed to ensure flexibility and build on existing synergies.

Benefits include:

- Enhancing integration and coordination across the sector;
- Streamlining of processes and providing consistent services across the sector;
- Establishing a single accountability for corporate services functions;
- Optimizing use of NRS assets and facilities;
- Synergies in central agency requirements (e.g. sector Workforce Plan, sector Technology and Transformation Plan); and
- Providing a high level financial overview and consistent financial management practices across the sector.

Budget: CSNR chargeback to MEM is \$1.232M

FTEs: 9 (who provide direct support to MNGD, MEM and MARR), **550** (who support the broader NR Sector 6 ministries, including MNGD, MEM and MARR)



Electricity and Alternative Energy Division

ADM Responsible: Les MacLaren, Assistant Deputy Minister

Core Business/Program Area Description/Critical Business Processes:

The Electricity and Alternative Energy Division develops and implements legislation, policies and programs to support all forms of electrical power generation and transmission. The Division is also responsible for de-carbonization of the Province's energy systems through alternative energy resources and technologies, energy efficiency measures and programs, innovative market transformation strategies, and economic development initiatives with local governments and First Nations across BC. The Division facilitates thriving, competitive, reliable, efficient and environmentally responsible electricity and alternative energy sectors for the benefit of British Columbians. The Province is dedicated to striking a balance between the responsible development of conventional sources of energy for electricity, heating/cooling and transportation applications, and encouraging reductions in energy demand and greenhouse gas emissions through policies and programs.

The Division is responsible for regulating the energy efficiency of manufactured building components and equipment, advancing the commercialization and deployment of renewable fuels, lowering the carbon intensity of transportation fuels, and developing and implementing provincial policy with respect to the regulation of electricity, natural gas and alternative energy utilities. The Division also ensures that British Columbia's energy interests in inter-jurisdictional relations are met (e.g. the Columbia River Treaty, North American Mandatory Reliability Standards for electricity systems).

The Division supports the Minister in his/her governance responsibilities for any Crown corporations that may be assigned to the Minister of Energy and Mines (currently BC Hydro, Columbia Basin Trust, and Columbia Power Corporation). The Division is responsible for the Innovative Clean Energy (ICE) Fund, a Special Account funded by a levy on specified energy products, which is used to invest in projects, programs and initiatives that further the energy and environmental priorities of the government.

Budget: \$42,998,000 (2017/18 estimates) Note: This includes a one year \$40M funding for Clean Energy Vehicles programs in 2017/18. The Division's usual budget is around \$3M. The Division also manages spending from the ICE Fund Special Account (\$2.3M in 2017/18).

FTEs: 34

Related Legislation: *Clean Energy Act; Columbia Basin Trust Act; Energy Efficiency Act; Geothermal Resources Act; Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act; Hydro and Power Authority Act; Special Accounts Appropriation and Control Act; Utilities Commission Act (UCA).*



Mines and Mineral Resources Division

ADM Responsible: Peter Robb, Assistant Deputy Minister

Core Business/Program Area Description/Critical Business Processes:

The Mines and Mineral Resources Division (MMRD) manages and facilitates the responsible development of BC's mineral resources. In order to achieve the Province's strategic goals and vision for the mineral exploration and mining sector, MMRD's core businesses are:

1. The regulation of mineral exploration and mining of coal, metals, aggregates and industrial minerals in the Province to ensure the health and safety of workers, the public and the environment. Activities include permitting, inspections, compliance and enforcement for all phases of mineral development: mineral exploration, mine planning and operations, environmental mitigation and management, emergency preparedness, electrical and mechanical engineering, occupational health and safety, reclamation and closure;
2. Geoscience database development, maintenance and publication by the BC Geological Survey and in collaboration with industry and other organizations such as Geoscience BC. Activities include mineral potential assessments and economic information to guide government decisions on land use and First Nations negotiations and help market investment opportunities in BC; and
3. The Division administers Crown mineral and placer mineral tenures using Mineral Titles Online, and manages the disposition process for mineral and placer mineral leases, and coal licenses and leases. It also conducts field inspections of mineral and coal titles for auditing and compliance purposes. The Division also undertakes economic and policy analysis to identify measures to enhance exploration and mining competitiveness in BC.

Budget: \$21,630,000 (2017/18 estimates)

FTEs: 208

Related Legislation: *Mines Act; Mineral Tenure Act; Coal Act*

Ministry of Energy and Mines
Transition 2017/18

Crown Corporations

B C Hydro	1
One Page Overview.....	1A
10 Year Rates Plan.....	1B
Regulatory Accounts and Debt.....	1C
Climate Action.....	1D
Key Capital Projects.....	1E
Site C.....	1F
IT SAP.....	1G
RDA.....	1H
Debt.....	1I
Columbia Basin Trust.....	2
Columbia Power Corporation	3

STAKEHOLDER CONTACTS

Branch	Organization	Contact	Description	Key Issues	Address
EAED	Advanced Biofuels Canada	Contact Name: Ian Thomson Title: President Phone: 604-947-0040 Email: ithomson@advancedbiofuels.ca	Advanced Biofuels Canada (ABFC) is a western-Canadian based association established to promote the production and use of advanced biofuels in Canada, collaborate with other stakeholders to expand market access for sustainable low-carbon biofuels in Canada, and collaborate broadly to decarbonize transportation.	<ul style="list-style-type: none"> Promoting advanced Biofuels in Canada Achieving decarbonized transportation Accessibility to sustainable low-carbon biofuels 	Mailing address: 206-566 Artisan Lane Bowen Island, BC V0N 1G2
EAED	BC Sustainable Energy Association (BCSEA)	Contact Name: Guy Dauncey Title: Communications Director Phone: 250-881-1304 Email: guydauncey@earthfuture.com	The BCSEA is a non-profit society of citizens, professionals and practitioners committed to promoting the understanding, development and adoption of sustainable energy, energy efficiency and conservation in British Columbia. Their Mission is to facilitate the transition to a sustainable energy future through education, advocacy and tangible community projects.	<ul style="list-style-type: none"> Sustainable energy Energy efficiency and conservation 	Mailing address: PO Box 44104 Gorge Plaza 2947 Tillicum Rd. Victoria BC V9A 7K1
EAED	Canadian Electricity Association (CEA)	Contact Name: Sergio Marchi Title: President and CEA Phone: 613-230-9263	The CEA is made up of corporate utility member companies, major electrical manufacturers, corporate consulting companies and several hundred other company and individual members. Founded in 1891, the CEA is the voice	<ul style="list-style-type: none"> Electricity as a safe, secure, reliable, sustainable and competitively-priced economic essential 	Mailing address: 275 Slater Street, Suite 1500 Ottawa, ON

Branch	Organization	Contact	Description	Key Issues	Address
		Email: marchi@electricity.ca	of the Canadian electricity industry, promoting electricity as the critical enabler of the economy and Canadians' expectations for an enhanced quality of life. Their Mission to contribute to the regional, national, and international success of its members is based on the belief that safe, secure, reliable, sustainable and competitively-priced supply of electricity is essential to Canada's prosperity.		K1P 5H9
EAED	Canadian Fuels Association (CFA) formerly the Canadian Petroleum Products Institute	Contact Name: Brian Ahearn Title: Vice-President Phone: 403-266-7565 Email: brian.ahearn@canadianfuels.ca	The CFA represents Canada's transportation fuels industry. Their members process crude oil into products such as transportation fuels and supply those products to market. One of their stated goals is to help their members meet the environmental policy objectives of government and expectations of Canadians without compromising access to a secure, reliable and competitively priced fuel supply.	<ul style="list-style-type: none"> • Transportation fuels • Fuel policy execution and logistics 	Mailing address: 2100, 350 - 7 th Ave. SW Calgary, AB T2P 3N9
EAED	Renewable Industries Canada (RICanada), formerly Canadian Renewable Fuels Association	Contact Name: Andrea Kent Title: President Phone: 613-594-5528 Email: a.kent@greenfuels.org	Renewable Industries Canada, founded in 1984 as the Canadian Renewable Fuels Association, has grown to represent the leaders of Canada's bioeconomy – producers of renewable fuels and value added products that reduce GHG emissions and provide	<ul style="list-style-type: none"> • Renewable fuels • Reducing GHG emissions 	Mailing address: 55 Murray Street Suite 450 Ottawa, ON K1N 5M3

Branch	Organization	Contact	Description	Key Issues	Address
			<p>economic opportunity to the benefit of all Canadians.</p> <p>Members of Renewable Industries Canada provide the public with renewable, clean-burning biofuels such as ethanol and Biodiesel – fuels that help fight climate change and combat pollution and smog. At the same time, they produce value added products from renewable resources and continuously innovate to provide even greater environmental and economic benefits.</p>		
EAED	Clean Energy BC (formerly Independent Power Producers Association of British Columbia)	<p>Contact Name: Paul Kariya</p> <p>Title: Executive Director</p> <p>Phone: 604-568-4778</p> <p>Email: paul.kariya@cleanenergybc.org</p>	<p>Since 1992, the Clean Energy Association of British Columbia (formerly the Independent Power Producers of British Columbia) has been the voice of Clean Energy Producers in BC, to government and the public - when the members have chosen to send a collective signal. Members and non-members also send their own corporate signals. The mandate of the Clean Energy Association of British Columbia is to develop a viable independent power industry in British Columbia that serves the public interest by providing cost-effective electricity through the efficient and environmentally responsible development</p>	<ul style="list-style-type: none"> • Clean energy production • Cost-effective electricity • Energy advocacy and knowledge-sharing with the public, media, and decision makers 	<p>Mailing address: 354-409 Granville Street Vancouver, BC V6C 1T2</p>

Branch	Organization	Contact	Description	Key Issues	Address
			of the Province's energy resources. Clean Energy BC has been active in advocacy with government electricity policy formulation, regulatory processes, permitting procedures, BC Hydro procurement, BCTC services, media coverage, informing the public, local and First Nations governments and resource users throughout BC.		
EAED	Clean Energy Canada	Contact Name: Jeremy Moorhouse Title: Senior Analyst Phone: 604-699-1700 Email: Jeremy@cleanenergycanada.org	Clean Energy Canada is a climate and clean energy think tank within the Centre for Dialogue at Simon Fraser University. Their mission is to accelerate Canada's transition to clean and renewable energy systems by telling the story of the global shift to clean and low-carbon energy sources. They conduct original research, host dialogues and aim to inspire and inform policy leadership. They envision a future in which our nation has one of the most advanced energy systems in the world, having significantly reduced its carbon emissions by the middle of this century. In Clean Energy Canada's vision, Canada has become a leader in clean and renewable energy production, consumption, and innovation—benefiting citizens socially, environmentally and	<ul style="list-style-type: none"> Transition to clean, low-carbon, renewable energy systems 	Mailing address: Suite 721, 602 West Hastings Street Vancouver, BC V6B 1P2

Branch	Organization	Contact	Description	Key Issues	Address
			economically.		
EAED	Canadian Hydrogen and Fuel Cell Association (CHFCA)	Contact Name: Nicolas Hilario Title: Manager, Government Relations & Communications Phone: 604-283-1040 Email: nhilario@chfca.ca	CHFCA is the national industry association dedicated to accelerating Canada's world-leading hydrogen and fuel cell industry. Their Mission is to accelerate Canada's world-leading hydrogen and fuel cell industry. Members cover most types of hydrogen and fuel cell technologies, components, systems supply and integration, fueling systems, fuel storage, and engineering and financial services.	<ul style="list-style-type: none"> Hydrogen and fuel cell technology development and supply logistics 	Mailing address: 660 - 475 West Georgia Street Vancouver, BC V6B 4M9
EAED	Electric Mobility Canada (EMC)	Contact Name: Chantal Guimont Title: President and CEO Phone: 514-916-4165 Email: Chantal.guimont@emc-mec.ca	EMC is the national industry association dedicated to the promotion of electric mobility as a readily available and important solution to Canada's emerging energy and environmental issues.	<ul style="list-style-type: none"> Electric mobility 	Mailing address: 38 place du Commerce 11-530 Ile des Sœurs, QC H3E 1T8
EAED	Association of Major Power Consumers (AMPC)	Contact Name: Richard Stout Title: Principal Consultant Phone: 604-564-2012 Email: ronin	AMPC represents about 25 industrial operators including pulp and paper mills, mining companies and chemical manufacturers who annually account for about one-third of total power consumed in BC.	<ul style="list-style-type: none"> Industrial power use in BC 	Mailing address: Unit 15 3459 River Road West Ladner, BC V4K 4Y6

Branch	Organization	Contact	Description	Key Issues	Address
		consult@live.com			
Multi-Sectoral	Energy Council of Canada	Contact Name: Greg Schmidt Title: President Phone: 613-232-8239 Email: greg.schmidt@energy.ca	The Energy Council of Canada is the Canadian national member of the World Energy Council, and is made up of representatives from all facets of Canada's energy sector. The Energy Council is a vehicle for strategic thinking, networking and action by senior executives in the private and public sectors that have a broad interest in national, continental and global energy issues. The Energy Council seeks to forge a better understanding of energy issues, in order to optimally shape the energy sector for the benefit of all Canadians.	<ul style="list-style-type: none"> National, Continental, and Global energy issues Strategic thinking around the topic of energy 	Mailing address: 608-350 Sparks St Ottawa, ON K1R 7S8
Multi-Sectoral	Public Interest Advocacy Centre (PIAC)	Contact Name: Leigha Worth Title: Executive Director Phone: 604-687-3063 Email: support@bcpiac.com	PIAC is a non-profit organization that provides legal and research services on behalf of consumer interests, and, in particular, vulnerable consumer interests, concerning the provision of important public services.	<ul style="list-style-type: none"> Providing important public services to all consumers 	Mailing address: ONE Nicholas Street, Suite 1204 Ottawa, ON K1N 7B7

Branch	Organization	Contact	Description	Key Issues	Address
MMRD	Aggregate Producers Association of British Columbia	Contact Name: Paul Allard Title: Executive Director Phone: 778-571-2670 Email: grave_lbc@telus.net	The Aggregate Producers Association of BC is a not-for-profit association representing members comprised of aggregate producers, suppliers, and associates throughout the province of British Columbia. The Association works with governing bodies and seeks to ensure the industry has an effective and lasting contribution to the economy and to the building of British Columbia. Their Mission is to encourage government policy development to support sustainable development of the aggregate resource, provide a network for the exchange of information (provincially and nationally), communicate with the public and government, and provide cost effective service to their members.	<ul style="list-style-type: none"> • Production industry • Exchanging information with a view to growing a sustainable aggregate economy on both provincial and national levels 	Mailing address: Box 36065 Hillcrest Village PO Surrey, BC V3S 7Y4
MMRD	Association for Mineral Exploration British Columbia (AMEBC)	Contact Name: Gavin Dirom Title: President and CEO (until mid-May 2017) Phone: 604-630-3920 Email: gdirom@amebc.ca	AME BC (formerly the BC & Yukon Chamber of Mines) was established in 1912 and represents over 4,000 members including geoscientists, prospectors, engineers, entrepreneurs, exploration companies, suppliers, mineral producers, and associations who are directly or indirectly engaged in mineral exploration in British Columbia and throughout the world. Through	<ul style="list-style-type: none"> • Provincial and global Mineral exploration endeavors • Providing a sustainable environment and business climate for the industry 	Mailing address: Suite 800 - 889 West Pender Street Vancouver, BC V6C 3B2

Branch	Organization	Contact	Description	Key Issues	Address
			leadership, partnerships, and advocacy, AME BC promotes a sustainable environment and business climate for the mineral exploration industry on behalf of its members.		
MMRD	Regional Mining Associations in British Columbia - Kamloops Exploration Group (KEG)	Contact Name: Jane McCaw Title: President Phone: 250-578-2068 Email: Jane.Mccaw@newgold.com	Kamloops Exploration Group is a registered, non-profit society that generally promotes the interests of mining and prospecting for minerals, metals, and petroleum to the general public; furthers members' knowledge of mineral exploration and mining by offering informational lectures; holds prospecting classes and promotes other educational projects in connection with mining and prospecting; and furthers the general public's knowledge on the subject of Geoscience.	<ul style="list-style-type: none"> • Mining and prospecting for minerals, metals, and petroleum • Furthering education surrounding mineral exploration, prospecting and Geoscience 	Mailing address: 432 Royal Avenue Kamloops, BC V2B 3P7
MMRD	Regional Mining Associations in British Columbia - Smithers Exploration Group	Contact Name: Rob Maurer Title: President Phone: 250-877-7883 Email: info@smithersexplorationgroup.com	Formed in 1971, Smithers Exploration Group serves and promotes the mineral industry in Northwest British Columbia. They work to advance geology, exploration and mining in the northwest. Membership includes prospectors, geologists, miners, engineers, pilots, expeditors, contractors, line-cutters, drillers and many people from supporting professions.	<ul style="list-style-type: none"> • Mineral industry in BC's Northwest • Geology • Exploration • Mining 	Mailing address: 102 – 3423 Fulton Ave Smithers, BC V0J 2N0

Branch	Organization	Contact	Description	Key Issues	Address
MMRD	Regional Mining Associations in British Columbia - Chamber of Mines of Eastern British Columbia	Contact Name: Bob Denny Title: President Phone: 250-352-5242 Email: chamberofmines@netidea.com	The Chamber of Mines of Eastern British Columbia is a non-profit organization providing information to the general public and the mining industry. Our members include everyone from individual prospectors to large mining and engineering companies. They advocate for the mining industry, especially for prospectors and explorationists, as well as serve as an information and resource library with an extensive collection of geological information and maps, as well as rock and mineral specimens. They host elementary to high school classes as well as provide prospecting and other courses.	<ul style="list-style-type: none"> Providing information to the general public regarding the mining industry 	Mailing address: 215 Hall Street Nelson, BC V1L 5X4
MMRD	Coal Association of Canada (CAC)	Contact Name: John Schadan Title: President and CEO Phone: 403-262-1544 Email: info@coal.ca	The CAC represents companies engaged in the exploration, development, use and transportation of coal. Its members include major coal producers and coal-using utilities, the railroads and ports that ship coal, industry suppliers of goods and services, and municipalities that have an interest in furthering the objectives of the Coal Association. The Vision of the CAC is "A world which recognizes coal as the vital energy source because it is abundant, safe, reliable, economic and environmentally acceptable."	<ul style="list-style-type: none"> Coal exploration, development and transportation 	Mailing address: 10240 – 124 Street, Suite 302 Edmonton , Alberta T5N 3W6

Branch	Organization	Contact	Description	Key Issues	Address
MMRD	Geoscience BC	Contact Name: Carlos Salas Title: Vice President of Energy, Acting President and CEO Phone: 604-662-4147 Email: archdekin@geosciencebc.com	Geoscience BC is an industry-led, not-for-profit, applied geoscience organization. Geoscience BC works in partnership with industry, academia, government, First Nations, and communities to fund applied geoscience projects with the objective to attract mineral and oil & gas exploration to British Columbia. Geoscience BC's mandate includes the collection, interpretation, and delivery of geoscience data and expertise, to promote investment in resource exploration and development in British Columbia.	<ul style="list-style-type: none"> • Applied Geoscience project funding • Provincial mineral, oil & gas exploration • Collection and interpretation of data 	Mailing address: 1101-750 W. Pender St. Vancouver, BC V6C 2T7
MMRD	Mining Association of Canada (MAC)	Contact Name: Pierre Gratton Title: President and CEO Phone: 613-233-9391 Email: communications@mining.ca	MAC was originally incorporated in 1935 (as the Canadian Metal Mining Association) and is a national organization of the Canadian mining industry. It comprises companies engaged in mineral exploration, mining, smelting, refining and semi-fabrication. Member companies account for the vast majority of Canada's output of metals and major industrial minerals. MAC's mission is to promote, through the collective action of members, the growth and development of Canada's mining and mineral-	<ul style="list-style-type: none"> • National Mineral exploration, mining, smelting, refining and semi-fabrication 	Mailing address: 275 Slater Street, Suite 1100 Ottawa, ON K1P 5H9

Branch	Organization	Contact	Description	Key Issues	Address
			processing industry, for the benefit of all Canadians.		
MMRD	Mining Association of British Columbia (MABC)	Contact Name: Karina Brino Title: President and CEO Phone: 604-681-4321 Email: kbrino@mining.bc.ca	Established in 1901, MABC represents the interests of BC's mining industry. Maintaining mining as BC's second largest resource industry is a primary goal of the MABC which represents the collective needs and interests of operating coal, metal and industrial mineral mining companies. MABC liaises with government legislators, lobbies for regulatory advancement and publicly promotes the economic and social value of mining. In addition, they provide member companies services such as: participation in key government/industry committees, updates on regulatory change, information exchange opportunities, joint industry action on issues of common concern, and the availability of staff expertise on the areas of greatest interest.	<ul style="list-style-type: none"> Provincial Mineral exploration, mining, smelting, refining and semi-fabrication The collective needs and interests of operating coal, metal and industrial mineral mining companies Regulatory change and joint industry action 	Mailing address: 900-808 West Hastings St. Vancouver, BC V6C 2X4
MMRD	Prospectors and Developers Association of Canada (PDAC)	Contact Name: Robert Schafer Title: President Phone: 416-362-1969	The PDAC exists to protect and promote the interests of the Canadian mineral exploration sector and to ensure a robust mining industry in Canada. The PDAC encourages the highest standards of	<ul style="list-style-type: none"> Canadian Mineral exploration and development industries Standards of technical, 	Mailing address: 135 King Street East Toronto, ON M5C 1G6

Branch	Organization	Contact	Description	Key Issues	Address
		Email: info@pdac.ca	technical, environmental, safety and social practices in Canada and internationally. The PDAC is a national association representing the interests of the mineral exploration and development industry. The association, which includes individual and corporate members, was established in March 1932. The association's activities can be classified broadly under the following headings: advocacy, information, and networking and are summarized in PDAC Activities, an annual publication. The association is best known for its annual convention, trade show, and investors exchange. In 2008, this event attracted over 20,000 attendees from more than 100 countries.	<p>environmental, safety and social practices</p> <ul style="list-style-type: none"> • Industry advocacy, information, and networking 	

Ministry of Energy and Mines Transition 2017/18

Contacts and Events

GCPE Calendar.....	1
Stakeholder Contacts	2

**Ministry of Energy and Mines
and Minister Responsible for Core Review**

**2015/16
ANNUAL SERVICE PLAN REPORT**



For more information on the Ministry of Energy and Mines contact:

Deputy Minister's Office
PO BOX 9319
STN PROV GOVT
VICTORIA, BC
V8W 9N3

or visit our website at
<http://www.gov.bc.ca/ener/>

Minister's Message and Accountability Statement



British Columbia has abundant natural resources to drive its economic prosperity. The Ministry of Energy and Mines plays a critical role in supporting responsible industrial development. This annual report highlights the Ministry's efforts during 2015/16 to support mining and mineral exploration, as well as electricity generation, distribution and conservation in British Columbia.

British Columbia's electricity system provides affordable, clean and reliable power, helping to foster our province's economic growth. To ensure key sectors in the BC Jobs Plan continue to have the clean, renewable electricity they need to prosper and grow BC Hydro is investing, on average, \$2.4 billion per year to expand, upgrade and maintain the province's electricity generation, transmission and

distribution infrastructure.

Minerals and coal are important provincial natural resources. Mining and mineral exploration provide significant employment opportunities for British Columbians. On February 5, 2016, Government announced action to help keep thousands of B.C.'s metal and coal mines workers on the job by allowing mining companies to temporarily defer a portion of their hydro bills – supporting families and communities during the current slowdown in the sector due to low commodity prices. Under the five-year term of the program, which is being delivered by BC Hydro, companies operating metal and coal mines in B.C. will be able to defer a portion of their BC Hydro electricity payments and repay different amounts as commodity prices recover.

Proposed new major mines (e.g., coal and metal), major expansions/upgrades to existing mines, and some large-scale exploration/development projects require approval under the *Mines Act*. Major mines require approvals/authorizations from many ministries/agencies. The Major Mine Permitting Office, launched in spring 2015, has improved the governance and co-ordination of major mine authorizations across government. The Major Mine Permitting Office brings clear accountability to both industry and government to ensure timely, high-quality decisions are made with respect to permitting major mine projects.

The Ministry of Energy and Mines 2015/16 Annual Service Plan Report compares the Ministry's actual results to the expected results identified in the 2015/16 - 2017/18 Service Plan. I am accountable for those results as reported.

A handwritten signature in black ink, appearing to read 'Bill Bennett'.

Honourable Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

June 20, 2016

Table of Contents

Minister's Message and Accountability Statement.....	3
Purpose of the Ministry	5
Strategic Direction and Context.....	5
Report on Performance	6
Goals, Objectives, Strategies and Performance Results	6
Financial Report.....	14
Appendix A: Contact Information and Hyperlinks.....	15
Appendix B: List of Crowns, Agencies, Boards and Commissions	16
Appendix C – Minister's Mandate and Actions Summary	16

Purpose of the Ministry

The Ministry of Energy and Mines¹ is responsible for British Columbia's electricity, alternative energy, energy efficiency, mining and mineral exploration sectors. These sectors are made up of diverse interests that explore for and produce coal and other valuable minerals and that develop electricity, clean or renewable energy sources, including biomass, biogas, geothermal, hydro, solar, ocean, wind and low-carbon transportation fuels. The Ministry is also responsible for the Columbia River Treaty. Through teamwork and positive working relationships with its clients and stakeholders, the Ministry facilitates thriving, safe, environmentally responsible and competitive energy and mining sectors in order to create jobs and economic growth in communities across the province. In fulfilling its mandate, the Ministry consults with other ministries and levels of government, energy developers and marketers, mineral exploration and mining companies, First Nations, communities, environmental and industry organizations, and the public. The Ministry is responsible for the following Crown Corporations: British Columbia Hydro and Power Authority (BC Hydro), Columbia Power Corporation (CPC) and Columbia Basin Trust (CBT).

Strategic Direction and Context

The Minister's Mandate Letter from the Premier, dated June 10, 2014, included a number of key deliverables relating to electricity policy, rates and infrastructure, as well as mines, mineral exploration and development. Appendix C provides a report out on the specific deliverables in the Letter. The Ministry supports the direction in the Taxpayer Accountability Principles to reinvigorate the Government's commitment to an accountable and cost consciousness culture. Following the August 2014 tailings storage facility (TSF) breach at the Mount Polley mine, the Ministry continued its work to restore public confidence in B.C.'s TSF regulatory framework. A Code Review Committee was appointed in June 2015 to determine how best to implement the recommendations of the independent technical panel that investigated the Mount Polley breach, and the Code Review is now well underway. The Ministry continued to work with BC Hydro to deliver the Site C project on time and on budget. Construction commenced July 2015, with major procurement results, such as worker accommodation, main civil works, and turbines and generators, being in line with the project budget. Key risk parameters, such as interest rates and worker availability, are more favourable than assumed in the project budget.

During 2015/16, the Ministry focused on increasing efficiency standards, reducing the carbon intensity of transportation fuels, expanding electric vehicle infrastructure, and coordination with utilities on programs to reduce energy use. The Ministry also worked with BC Hydro to ensure that British Columbians continued to receive benefits from the low-cost electricity generated through the Province's heritage assets through capital investments, system expansion, conservation and efficiency programs, and adherence to the 10-year BC Hydro Rates Plan. Construction of the Site C hydroelectric dam commenced in July 2015.

During 2015/16, the Ministry's Major Mine Permitting Office (MMPO) was established. Key staff were hired, and a multi-ministry governing Board was put in place. As of March 2016, MMPO was managing over 15 active projects through the coordinated permitting process. To enhance efficiency, the Southeast Coal Pilot Project was amalgamated with MMPO in March 2016, and a centralized project management centre was created.

¹ http://www.bclaws.ca/Recon/document/ID/freeside/00_96298_01

Report on Performance

Minister Bennett's June 10, 2014 Mandate Letter contained direction from the Premier to meet thirteen objectives relating to electricity policy, rates and infrastructure, as well as mines, mineral exploration and development. Appendix C provides a report on how each of these objectives was met.

The Ministry's 2015/16 goals supported the Taxpayer Accountability Principles by focusing on outcomes for citizens and effective communication. The recently created MMPO exemplifies the principles of service, efficiency and accountability to government and industry. The Ministry's responses to the tailings storage facility breach at the Mount Polley mine demonstrated integrity, transparency and ethics. During 2015/16, Minister Bennett and the Deputy Minister met regularly with BC Hydro's Chair and CEO to discuss Ministry objectives and BC Hydro's strategic priorities, and to ensure the alignment of BC Hydro's activities with the spirit and intent of the Taxpayer Accountability Principles. Similar meetings occurred with CPC and CBT.

The Ministry has completed a review of the Columbia River Treaty in the lead up to discussions with the United States on the future of the Treaty. This review involved, and continues, consultation with Columbia Basin residents and First Nations who were impacted by the creation of the Treaty dams. This review supported the principle of respect, Ministry Mandate Letter Item 2, and was a 2015 Premier's Award Winner.

Goals, Objectives, Strategies and Performance Results

The Ministry's Goals directly supported the *BC Jobs Plan*, the Minister's June 10, 2014 Mandate Letter, and Government's strategic priorities. Goal 1 focused on job creation and economic growth and Mandate Letter item 11 to support the development on new mines and major mine expansions. Goal 2 supported the strategic priorities of a strong economy and a secure tomorrow as well as Mandate Letter item 6 to build infrastructure while keeping rates affordable. Goal 3 supported safe communities under the strategic priority of a secure tomorrow and Mandate Letter item 7 for renewable energy opportunities in British Columbia.

Goal 1: A globally competitive mining sector that creates jobs and grows the economy.

Objective 1.1: New mineral resource projects that support the creation of family-supporting jobs in B.C.

Strategies

- Support the development of roads and other infrastructure required for industrial activity, including new mines and mine expansions.
- Continue to develop a coordinated, transparent and predictable permitting and approval process for all industrial projects, including natural resource development projects.

- Continuously improve geological and resource assessments for geothermal, coal, minerals and aggregate through collaboration with industry, associations, and academic and research institutes.
- Work closely with the Ministry of Jobs, Tourism and Skills Training to ensure that skills gaps in the workforces of the mineral exploration and mining sectors are identified and filled.
- Establish a Major Mine Permitting Office to ensure a coordinated and efficient government wide approach to major mine permits and amendments.

Performance Measures 1 and 2: Number of new and expanded mines.

Performance Measure	2013/2014 Actual	2014/15 Actual	2015/16 Target	2015/16 Actual	2016/17 Target†	2017/18 Target
Number of new mines in operation since release of <i>Jobs Plan</i> *	3	5	8	6	N/A	N/A
Number of expansions to existing mines since release of <i>Jobs Plan</i>	7	7	9	8	N/A	N/A

Data Source: Ministry of Energy and Mines, internal tracking system. **Canada Starts Here: The BC Jobs Plan* was released September 22, 2011. † This performance measure has been revised in the 2016/17 Service Plan because the *BC Jobs Plan* sets targets only until the end of 2015/16. The 2016/17 measures are “Number of new mines permitted each year”, and “Number of expansions to existing mines permitted each year.”

Discussion

The annual targets are cumulative and build on the commitments in the *BC Jobs Plan* for new and expanded mines. While low commodity prices resulted in fewer mines opening than targeted, in addition to the six mines that have opened, two more new mines (Brucejack and Silvertip) were permitted/under construction as of the end of 2015. The Quintette, Roman and Kitsault projects have also been permitted since the *Jobs Plan* was released.

Objective 1.2: B.C. is positioned as an attractive jurisdiction for investment in the mining sector and related businesses.

Strategies

- Further establish B.C. as a recognized centre of excellence for mining expertise, innovation and technology in collaboration with industry, post-secondary institutions, the federal government and provincial agency partners.
- Improve the competitiveness of B.C.’s mining sector by providing leadership, information, investing in infrastructure, and developing new policies, regulations and programs.
- Conduct geoscience research and technical assessments to promote industry investment.

- Continue to work with the Ministry of Forests, Lands and Natural Resource Operations to sustain an average 60-day turnaround time for processing Notice of Work permit applications for mineral and coal exploration activities.
- Continue to work with the federal government to develop a single, effective environmental review process, maintaining the highest standards while eliminating costly and time-consuming duplication.
- Contribute to trade missions and marketing initiatives led by the Ministry of International Trade to attract investment in B.C. mineral projects and business opportunities.

Performance Measure 3: Average turnaround time for Notices of Work issued by the Ministry.

Performance Measure	BC Jobs Plan Benchmark	2014/15 Actual	2015/16 Target	2015/16 Actual	2016/17 Target	2017/18 Target
Turnaround time for Notices of Work	60 Days	40 days	Under 60 days	41 days	Under 60 days	Under 60 days

Data Source: Ministry of Energy and Mines

Discussion

The Ministry's regional offices accept permit applications under the Mines Act for exploration and small-scale mining activities called "Notices of Work." This performance measure and its targets support commitments from the BC Jobs Plan. Processing times are also a measure of competitiveness. The target is to maintain an average 60-day turnaround time for Notices of Work as committed to in the Jobs Plan. This includes all sand and gravel, placer, industrial mineral and rock quarries, as well as mineral and coal exploration. Tracking Notice of Work turnaround time helps the Ministry assess its progress in streamlining its authorization processes, and in providing efficient, predictable and transparent permit application review services. The Notice of Work turnaround time of 41 days exceeded 2015/16 target.

Objective 1.3: Optimal revenue from the development of B.C.'s mineral resources.

Strategies

- Provide the government services needed to respond to increasing economic activity, in particular delivering sound, timely decisions on exploration and mining, and related water, Crown land and other permits, authorizations and tenures.
- Optimize the mineral tax system to enhance B.C. mining competitiveness while generating revenues to the Crown from the production of its resources.

Objective 1.4: Efficient and effective mining policy, legislation and regulation in the public interest of British Columbians.

Strategies

- In cooperation with other levels of government, continue to review legislation and regulations to ensure B.C. remains competitive, while enhancing the integrity of environmental, health and safety standards.
- In consultation with other ministries and stakeholders, develop and implement new acts and regulations that support the responsible development and use of mineral resources.

Goal 2: Affordable, reliable and diverse sources of energy, serving British Columbians, their communities, and sustaining competitive businesses and industries.

Objective 2.1: Electricity policy, programs, legislation and regulation that serve the public interest of British Columbians.

Strategies

- Prepare for and enter into negotiations with Canada and the United States on changes to the Columbia River Treaty.
- Develop and implement policies to keep electricity rates affordable for B.C. families and respond to B.C.'s other energy objectives.
- Develop and implement policies to ensure reliable electricity supply through mandatory reliability standards and participation in the Western Electricity Coordinating Council.
- Implement BC Hydro's 10-year rates plan and Integrated Resource Plan.
- Work with Clean Energy BC and First Nations to promote opportunities in clean energy projects.

Objective 2.2: British Columbia's economic and environmental priorities are served through sustainable energy use and development across all sectors of the economy.

Strategies

- Work with Clean Energy BC and First Nations to promote opportunities in clean energy projects.
- Work with all public and private stakeholders to continue development and implementation of policies, programs, regulations, codes and standards to advance energy efficiency and conservation.

- Support energy utilities with the planning and implementation of coordinated, cost effective demand side management measures.
- Work with BC Hydro to develop the Site C Clean Energy Project and with Columbia Power/BC Hydro to cost-effectively redevelop BC Hydro assets in the Columbia Basin.
- Participate in and support long-term clean energy planning initiatives at the regional and national level, including the Pacific Coast Collaborative, Pacific NorthWest Economic Region, and Canadian Energy Strategy.

Performance Measure 4: Ranking of BC Hydro residential monthly bills compared to North American jurisdictions.

Performance Measure	2013/2014 Actual	2014/15 Actual	2015/16 Target	2015/16 Actual	2016/17 Target	2017/18 Target
Ranking of BC Hydro residential monthly bills (625 kWh use)	3 rd lowest	3 rd lowest	3 rd lowest	3 rd lowest	3 rd lowest	3 rd lowest

Data Source: BC Hydro annual filings with the BC Utilities Commission.

Discussion

This measure provides a comparison of BC Hydro's monthly bills and average prices for residential customers with other North American utilities including those in Alberta, Quebec, Ontario, Manitoba, Washington, Oregon and California in Canadian funds as of April 1, 2015, and therefore includes BC Hydro's 4% rate increase that was effective on that date. BC Hydro's monthly bills and average prices were among the lowest when compared with these utilities, with low rates providing a competitive advantage to customers in BC Hydro's service area. According to the information BC Hydro filed with the BC Utilities Commission on November 4, 2015, BC Hydro residential rates (625 kWh) were the third lowest in North America. The 2016 report has not been issued yet. The measure has been updated in the 2016/17 Service Plan where 1,000 kWh use replaced 625 kWh use, as 1,000 kWh is closer to the residential average.

Performance Measure 5: Cumulative energy savings achieved each year through utility and provincial conservation policies, programs and regulations.

Performance Measure	2013/14 Actual	2014/15 Actual	2015/16 Target	2015/16 Actual	2016/17 Target	2017/18 Target
Cumulative energy savings achieved each year through energy utility and provincial conservation policies, programs, and regulations since 2007/08	22,847,647	22,847,647	28,007,870	32,425,929	36,950,404	41,273,664

Data Source: Utilities' annual reports and internal tracking by the Ministry of Energy and Mines. ¹Measured in Gigajoules to include both gas and electricity savings. The savings from energy utilities are from BC Hydro, FortisBC Electric and FortisBC Gas. Data on conservation rates is from BC Hydro and FortisBC Electric. FortisBC stats are based on calendar year due to reporting differences.

Discussion

This measure reports cumulative energy savings achieved through utility demand-side management programs, conservation rates, and regulated codes and standards, starting in 2007/08. It is an indicator of the energy efficiency and conservation policies of *The BC Energy Plan* of 2007 and the *Clean Energy Act* objectives for BC Hydro to offset at least 66% of demand growth with efficiency and conservation measures. It also includes natural gas savings resulting from FortisBC Gas efficiency and conservation initiatives. Targets are set based on planned utility and Government spending.² The target was exceeded because it was set conservatively, ahead of utility planning timelines.

Goal 3: Safe, environmentally and socially responsible electricity, alternative energy and mineral resource development and use.

Objective 3.1: Practices that protect workers, the public and the environment.

Strategies

- Work with industry and other natural resource sector agencies to improve environmental and safety regulation compliance at mine sites through inspections and audits.
- Continue to support the annual British Columbia Mine Reclamation Awards to recognize outstanding achievements in mine reclamation in this province.

² BC Hydro's energy savings are drawn from its demand side management (DSM) plan and align with recommendations from the 2013 Integrated Resource Plan approved by the Government on November 26, 2013. These savings targets have been reduced primarily due to electricity market conditions. The targets are based on recent annual savings achievements, and meet the Clean Energy Act objectives.

- Support mine rescue competitions and the annual Mines Safety Awards.
- Work with BC Hydro to upgrade the Province's heritage generation, transmission and distribution assets.
- Work with BC Hydro, Clean Energy BC, and First Nations to explore opportunities for clean and renewable energy development.

Performance Measure 6: Mine Inspections by Ministry Staff.

Performance Measure	Benchmark 2009-2013 average	2013 Actual	2014 Actual	2015 Target	2015 Actual	2016 Target	2017 Target
Mine Inspections	775	904	1,228	1,200	1,168	1,250	1,300

Data Source: Internal tracking by the Ministry of Energy and Mines.

Discussion

The Ministry's inspectors of mines conduct inspections of mine sites to ensure compliance with the *Mines Act*, the Health, Safety and Reclamation Code for Mines in British Columbia, and individual permit conditions. Inspections can be multi-faceted or specifically focused, i.e., on health and safety, permitting, reclamation, electrical, mechanical or geotechnical. The benchmark in the table above represents the five-year average calculated with inspection figures from 2009 to 2013 inclusive. The results are noted in calendar years to comply with the requirements of the *Mines Act*. Inspection numbers for a given calendar year are finalized in the Annual Report of the Chief Inspector of Mines for that year and are thus subject to change until that report is released.

The Ministry substantially met its 2015 target. In addition to the reported inspections, Ministry staff were on site at Mount Polley frequently in 2015 as the mine worked to resume operations. This increased site presence, along with an extensive audit of Mount Polley operations, is not reflected in the inspection count. Furthermore, throughout 2015, several Ministry inspectors worked full time on the Chief Inspector's investigation into the Mount Polley breach.

Objective 3.2: The Ministry, stakeholders, First Nations and industry are engaged and working cooperatively for the responsible development and use of B.C.'s energy and mineral resources.

Strategies

- Foster working relationships among industry, the public, First Nations and landowners by clarifying and simplifying resource exploration and development management processes, enhancing dispute resolution methods, and offering more support and information.
- Continue to collaborate with other ministries, agencies and Crown corporations to provide information to promote greater public understanding of the exploration and development of resources.

- Support the development and continuous improvement of Strategic Engagement Agreements with First Nations to make consultation processes more predictable.
- Support the development of Revenue Sharing Agreements that provide First Nations communities with economic benefits based on energy and mining activities in their traditional territories.
- Continue to support the annual Mining and Sustainability Award to recognize the diverse companies, communities, First Nations, non-governmental organizations, government agencies and individuals committed to advancing and promoting sustainable development in B.C. mining.

Financial Report

Financial Report Summary Table

	Estimated	Other Authorizations ¹	Total Estimated	Actual	Variance ³
Operating Expenses (\$000)					
Mines and Mineral Resources	17,114	7,464	24,578	23,502	(1,076)
Electricity and Alternative Energy	2,965	1,416	4,381	4,183	(198)
Executive and support Services	5,445	896	6,341	7,615	1,274
Innovative Clean Energy Fund	2,301	13,416	15,717	15,717	0
Sub-Total	27,825	23,192	51,017	51,017	0
Adjustment of Prior Year Accrual	0	0	0	(44)	(44)
Total	27,825	23,192	51,017	50,973	(44)
Ministry Capital Expenditures (Consolidated Revenue Fund) (\$000)					
Executive and Support Services.....	556	0	556	497	(59)
Total	556	0	556	497	(59)

¹ "Other Authorizations" include Supplementary Estimates, Statutory Appropriations and Contingencies. Amounts in this column are not related to the "estimated amount" under sections 5(1) and 6(1) of the *Balanced Budget and Ministerial Accountability Act* for ministerial accountability for operating expenses under the Act.

² The Adjustment of Prior Year Accrual of \$0.044 million is a reversal of accruals in the previous year.

³ "Variance" represents "Actual" minus "Total Estimated". If the Actual is greater than the Total Estimated, the Variance will be displayed as a positive number.

Appendix A: Contact Information and Hyperlinks

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Appendix B: List of Crowns, Agencies, Boards and Commissions

The Ministry is responsible for the following Crown Corporations:

BC Hydro <https://www.bchydro.com/index.html>

Columbia Power Corporation <http://columbiapower.org/>

and the Columbia Basin Trust. <http://www.cbt.org/>

Appendix C – Minister’s Mandate and Actions Summary

In the Premier’s annual Mandate Letter to the Minister dated June 10, 2014, the Minister of Energy and Mines and Minister Responsible for Core Review received direction on strategic priorities for the 2015/16 fiscal year. These priorities and the ministry’s resulting actions are summarized below:

Mandate Letter Direction	Ministry’s Action
1. Balance your ministerial budget in order to control spending and ensure an overall balanced budget for the Province of British Columbia.	Ministry met its fiscal 2015/16 budget, including approved contingencies.
2. Work with the Ministry of Intergovernmental Affairs to ensure the Canadian negotiating position on the Columbia River Treaty is reflective of British Columbia’s position on any re-negotiation of the treaty.	1. Developed Joint Work Agreement with federal government; 2. Developed detailed negotiation mandate; 3. Completed evaluation of U.S. benefits from the Treaty; 4. Consulted First Nations on any potential changes to the Treaty; and 5. Continued outreach with key U.S. agencies and stakeholders.
3. Work with the Ministry of Aboriginal Relations and Reconciliation to continue to conclude mineral tax sharing agreements to encourage mine development across the province.	As of the end of March 2016, 22 Economic and Community Development Agreements and one Revenue Sharing Agreement had been signed with First Nations.
4. Continue to develop the Site C dam project through the environmental assessment review process.	Cabinet made a final investment decision in December 2014. Worked with the Ministries of Forests, Lands and Natural Resource Operations and Aboriginal Relations and Reconciliation on Treaty 8 consultation process for the permits necessary to commence construction in June 2015. Worked with Justice and BC Hydro on Judicial Review applications challenging environmental certification. Worked with BC Hydro on advancing Interim Benefit Agreements and with the Ministry of Aboriginal Relations and Reconciliation Government to Government Agreement with the Sauleau.
5. Complete the Northwest Transmission	The Northwest Transmission Line was completed

Line and Iskut Extension.	June 7, 2014. AltaGas' Forrest Kerr and Volcano Creek Projects in commercial operation. Responsibility for constructing the Iskut Extension was transferred to Imperial Metals, which constructed the Extension to BC Hydro's standards. Iskut was linked to the grid on December 18, 2014.
6. Implement the 10-year electricity plan that will continue to find efficiencies at BC Hydro, build required infrastructure and keep rates affordable for British Columbians, reporting these outcomes to Cabinet.	BC Hydro's 10-year Rates Plan announced November 26, 2013, and Directions 6 and 7 were issued to the BC Utilities Commission. The BC Utilities Commission has approved BC Hydro's rate increases for 2014 and 2015.
7. Work with the Clean Energy sector to ensure that there remain cost-effective opportunities for renewable energy companies to provide power in British Columbia.	Standing Offer Program consultations proceeded with respect to increasing First Nations participation. BC Hydro hosted a series of First Nations and stakeholders meetings in Terrace, Kamloops, Nanaimo, Vancouver, and Prince George in 2014. Over 80 First Nations and 100 stakeholders participated in these meetings and provided feedback. BC Hydro planned another round of engagement for 2015.
8. Work with the Ministry of Education to improve mine apprenticeship opportunities for B.C. students	Worked with the Ministry of Education on current apprenticeship programs and "BC's Skills for Jobs Blueprint" as they related to mining jobs.
9. Work with the Ministry of Finance to extend the New Mine Allowance and other credits to 2020 as committed in Strong Economy, Secure Tomorrow.	The New Mine Allowance was extended for four years in Budget 2015, meaning it will be available to new mines and those with major expansions that start production by Dec. 31, 2019. Budget 2015 also extended for one year the B.C. mining flow-through share tax credit, which provides incentive for mineral exploration.
10. Work with Geoscience BC to establish long-term, predictable funding to foster oil, gas and mineral exploration and development in B.C.	\$5 million provided to Geoscience BC in spring 2015.
11. Support the development of new mines and major mine expansions by working with industry and the natural resource ministries to ensure that B.C.'s mines permitting process is the best in Canada.	Improvements to major mine permitting coordination and accountability in progress with establishment of Major Mine Permitting Office in spring 2015.
12. Receive and review the recommendations of the British Columbia Utilities Commission independent review panel before making recommendations for reform to cabinet on how to restore a strong and	Report and government response released February 4, 2015. The Ministry worked with the British Columbia Utilities Commission, the Board Resource Development Office, and the Ministry of Finance on implementation.

independent BCUC.	
13. Complete the Core Review process by December 31, 2014	Core Review is complete consistent with the published schedule. The Core Review financial target was met.

**Ministry of
Energy and Mines and
Minister Responsible for Core Review**

**2017/18 – 2019/20
SERVICE PLAN**

February 2017



For more information on the British Columbia
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Published by the Ministry of Energy and Mines and Minister Responsible for Core Review

Minister Accountability Statement



The Ministry of Energy and Mines and Minister Responsible for Core Review 2017/18 - 2019/20 Service Plan was prepared under my direction in accordance with the *Budget Transparency and Accountability Act*. I am accountable for the basis on which the plan has been prepared.

A handwritten signature in black ink, appearing to read 'W. Bennett', with a long horizontal stroke extending to the right.

Honorable Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core
Review
February 10, 2017

Table of Contents

Minister Accountability Statement.....	3
Purpose of the Ministry	5
Strategic Direction and Context	6
Goals, Objectives, Strategies and Performance Measures.....	7
Resource Summary	14
Appendix: Ministry Contact Information	15

Purpose of the Ministry

The Ministry of Energy and Mines¹ is responsible for British Columbia's electricity, alternative energy, mining and mineral exploration sectors. These sectors are made up of diverse interests that explore for and produce coal and other valuable minerals and that develop electricity, clean or renewable energy sources, including biomass, biogas, geothermal, hydro, solar, ocean, wind and low-carbon transportation fuels. Through teamwork and positive working relationships with its clients and stakeholders, the Ministry facilitates thriving, safe, environmentally responsible and competitive energy and mining sectors in order to create jobs and economic growth in communities across the province. In fulfilling its mandate, the Ministry consults with other ministries and levels of government, energy developers and marketers, mineral exploration and mining companies, First Nations, communities, environmental and industry organizations, and the public.

The Ministry supports the Minister in his governance responsibilities for the following Crown Corporations: British Columbia Hydro and Power Authority (BC Hydro); Columbia Power Corporation; and the Columbia Basin Trust.

¹ http://www.bclaws.ca/Recon/document/ID/freeside/00_96298_01

Strategic Direction and Context

Strategic Direction

Minister Bennett's Mandate Letter from Premier Christy Clark, dated July 30, 2015, includes a number of key deliverables relating to electricity policy, rates and infrastructure, as well as mining, mineral exploration and development. The Ministry supports the direction in the Taxpayer Accountability Principles for citizen-focused service and respectful communication with clients and the public. The Ministry regularly assesses the external risks and opportunities within the context described below as part of its strategic planning process.

Strategic Context

In the energy sector, the Ministry focuses on increasing product and appliance efficiency, reducing the carbon intensity of transportation fuels, expanding electric vehicle infrastructure, and coordination with utilities on programs to reduce energy use, greenhouse gas emissions and power bills for residential, commercial and industrial ratepayers. BC Hydro is investing more than \$2 billion per year in capital projects, and the Ministry strives to ensure that British Columbians continue to receive benefits from the low-cost electricity generated through the Province's heritage assets. The Site C project is on budget and on time, and BC Hydro has submitted its Revenue Requirements Application and Rate Design Application to the BC Utilities Commission for approval. BC Hydro projects 40% electricity demand growth over the next 20 years, based on forecasts of population growth and industrial activity. At least 66% of this growth will be met through efficiency and conservation, with the balance from new generation, including Site C. Changing patterns of generation and use of electricity, and aging infrastructure, will require that the Province and BC Hydro safeguard these public heritage assets through capital investments, system expansion, conservation and efficiency programs. The Greenhouse Gas Reduction Regulation has resulted in commitments for more than 600 vehicles and marine vessels that will reduce carbon dioxide emissions by 74,000 tonnes per year. As noted in the Climate Leadership Plan, Government intends to support the reduction of GHG emissions in the marine sector and position British Columbia as a global marine bunkering centre on the west coast.

Mining is a key driver of B.C.'s economy. More than 30,000 people work in mineral exploration, mining and related sectors, which include non-metallic mineral product and primary metal manufacturing. Between 2011 and 2015, over \$2 billion was spent on exploration projects. Spending remains strong, with two new mines under construction in the province: the \$900 million Brucejack gold-silver mine in northwestern B.C.; and the \$75 million Silvertip silver-lead-zinc mine in northern B.C. Together, these mines will employ approximately 500 people when operational in 2017. A Deputy Ministers Mining Compliance and Enforcement (C&E) Board was established to oversee C&E planning and delivery across B.C. in all aspects of mineral exploration and development. The Board's mandate includes overseeing strategic improvements that enhance C&E effectiveness. The BC Mine Information website, launched in 2016, makes information on permitted major mine sites in B.C. more accessible. Information posted to date includes permits and amendments, inspection reports, and dam safety inspections/reviews for major mines. In future, this site will deliver a comprehensive picture of government's integrated oversight of the mining sector.

Goals, Objectives, Strategies and Performance Measures

The Ministry's goals have changed from the Ministry's *2016/17 – 2018/19 Service Plan* published in February 2016. Goals were reordered to group the two mining goals together. Goal three (formerly goal two) now references clean instead of diverse sources of energy, and goal two (formerly goal 3) removes the references to electricity and alternative energy. This service plan contains three new performance measures: B.C.'s share of Canadian mineral resource development investments; coordinated inspections with Ministry of Environment and the Environmental Assessment Office; and the number of Zero Emission Vehicles registered in B.C. The energy savings measure was removed because the Ministry is implementing the Climate Leadership Plan actions, one of which commits to fuel switching (to electric vehicles). With the resulting increase in electricity sales, it would be difficult to separate out energy savings.

The Government's strategic priorities for the mining and energy natural resource sectors are directly supported by Ministry Goals 1, 2 and 3. Ministry goals support the Taxpayer Accountability Principles of Service by focusing on outcomes for citizens, and of Respect by including effective communication. Our consultative and collaborative strategies under Goal 3 support the principle of Integrity. The Ministry's performance measures were updated to reflect the principles of Accountability and Efficiency.

Goal 1: A globally competitive mining sector that creates jobs and grows the economy.

Objective 1.1: New mineral resource projects that support the creation of family-supporting jobs in B.C.

Strategies

- Utilize the Major Mines Permitting Office to improve the co-ordination of major mine permits across government, and for timely and high quality review of mines.
- Leverage opportunities through collaboration with industry, associations, and academic and research institutions to expand geological and resource assessments for geothermal, coal, minerals and aggregate resources.
- Work closely with the Ministry of Jobs, Tourism and Skills Training to ensure that skills gaps in the workforces of the mineral exploration and mining sectors are identified and filled.
- Support the development of infrastructure required for new mines and mine expansions.

Performance Measures 1 and 2: Number of new and expanded mines.

Performance Measure	Benchmark*	2016/17 Forecast	2017/18 Target	2018/19 Target	2019/20 Target
Number of new mines permitted each year	2	0	2	2	2
Number of expansions to existing mines permitted each year	2	5	2	2	2

*Annual average from 2011 to 2014

Data Source: Ministry of Energy and Mines

Discussion

These new annual targets were adapted from commitments in the *BC Jobs Plan*. The new targets for two new mines permitted and two expansions permitted each year are representative of the Ministry's estimate of the expected growth in the mining sector for the stated years. The 2016/17 forecast of five expansions permitted is in response to a number of applications received from a single major mining company in B.C.

Objective 1.2: B.C. is positioned as an attractive jurisdiction for investment in the mining sector and related businesses.**Strategies**

- Further establish B.C. as a recognized centre of excellence for mining expertise, innovation and technology in collaboration with industry, post-secondary institutions, the federal government and provincial agency partners.
- Engage the mining sector to identify opportunities to improve the competitiveness of B.C.'s mining sector.
- Continue government's commitment to competitive taxation regimes to support the exploration sector.
- Conduct geoscience research and technical assessments to promote industry investment.
- Continue to work with the Ministry of Forests, Lands and Natural Resource Operations to sustain an average 60-day turnaround time for processing Notice of Work permit applications for mineral and coal exploration activities.
- Contribute to trade missions and marketing initiatives led by the Ministry of International Trade to attract investment in B.C. mineral projects and business opportunities.
- Work with the Government of Alaska to implement the Memorandum of Understanding and Cooperation between the state and province.

Performance Measures 3 and 4: Turnaround time for Notices of Work and B.C.'s share of Canadian mineral resource development investments.

Performance Measure	Benchmark	2016/17 Forecast	2017/18 Target	2018/19 Target	2019/20 Target
Turnaround time for Notices of Work	60 days	45 days	Under 60 days	Under 60 days	Under 60 days
B.C.'s share of Canadian mineral resource development investments	13%*	12%	13%	14%	15%

Data Sources: Ministry of Energy and Mines and Natural Resources Canada

* Annual average from 2013 to 2015

Discussion

The Ministry's regional offices accept permit applications under the *Mines Act* for exploration and small-scale mining activities called "Notices of Work." The performance measure and its targets for the Turnaround time for Notices of Work support commitments in the *BC Jobs Plan*. Processing times are also a measure of competitiveness. The target is to maintain an average 60-day turnaround time for Notices of Work as committed to in the *Jobs Plan*. This includes all sand and gravel, placer, industrial mineral and rock quarries, as well as mineral and coal exploration. Tracking Notice of Work turnaround time helps the Ministry assess its progress in streamlining its authorization processes, and in providing efficient, predictable and transparent permit application review services.

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. A key challenge to achieving investment targets is that the markets for mineral commodities are cyclical and are driven by global economic factors. However, government can help to reduce risk and sustain investment levels through streamlined processes for mine project permitting and environmental assessment.

Natural Resources Canada produces annual estimates of mineral resource development investments, which include expenditures on mineral exploration, deposit appraisal and mine complex development. In 2015/16, B.C.'s total mineral resource development investments were approximately \$1.6 billion or 11% of the Canadian total. B.C.'s share is expected to gradually increase over the 2016/17 to 2019/20 period given the anticipated level of mineral exploration and development in the province and other jurisdictions.

Objective 1.3: Efficient and effective mining policy, legislation and regulation in the public interest of British Columbians.

Strategies

- In cooperation with other levels of government, continue to review legislation and regulations to ensure B.C. remains competitive, while enhancing the integrity of environmental, health and safety standards.

- In consultation with other ministries and stakeholders, develop and implement new legislation and regulations that support the responsible development and use of mineral and coal resources.

Goal 2: Safe, environmentally and socially responsible mineral resource development.

Objective 2.1: Practices that protect workers, the public and the environment.

Strategies

- Work with industry and other natural resource sector agencies to improve environmental and safety regulation compliance at mine sites through inspections and audits.
- Continue to support the annual British Columbia Mine Reclamation Awards to recognize outstanding achievements in mine reclamation in this province.
- Support mine rescue competitions and the annual Mines Safety Awards.

Performance Measures 5: Mine Inspections by Ministry Staff.

Performance Measure	Benchmark 2009-2013 average	2016 Forecast	2017 Target	2018 Target	2019 Target
Mine Inspections and follow up	775	1,300	1,300	1,300	1,300

Data Source: Manually compiled by the Ministry Energy and Mines.

Discussion

The Ministry's Mines Inspectors conduct inspections of mine sites to ensure compliance with the *Mines Act*, the Health, Safety and Reclamation Code for Mines in B.C., and individual permit conditions. Inspections can be multi-faceted or specifically focused, i.e., on health and safety, permitting, reclamation, electrical, mechanical or geotechnical. The benchmark in the table above represents the five-year average calculated with inspection figures from 2009 to 2013 inclusive. The targets for this measure have been set in accordance with the Chief Inspector's annual report to maintain a steady level of inspection that the Ministry deems appropriate for the maintenance of mine safety.

Performance Measure 6: Coordinated Mine Inspections

Performance Measure	2015/16 Baseline	2016/17 Forecast	2017/18 Target	2018/19 Target	2019/2020 Target
Number of mine inspections coordinated with the Environmental Assessment Office and the Ministry of Environment ¹	N/A	N/A	5	10	15

Data Source: Manually compiled by the Ministry of Environment, Ministry of Energy and Mines, the Environmental Assessment Office.

¹ Inspections include in office reviews and on site examinations.

Discussion

While each agency conducts inspections under their respective legislation, the Ministry of Environment, the Ministry of Energy and Mines and the Environmental Assessment Office have created a new performance measure that formally tracks their joint inspections. This is the result of an increased emphasis on coordinated compliance and enforcement efforts with respect to mining.

Objective 2.2: The Ministry, stakeholders, First Nations and industry are engaged and working cooperatively for the responsible development of B.C.'s mineral resources.

Strategies

- Continue to enhance working relationships among industry, the public, First Nations and landowners.
- Continue to collaborate with other ministries and agencies to provide information to promote greater public understanding of the exploration and development of mineral resources.
- Support the development and continuous improvement of agreements with First Nations to make consultation processes more streamlined and predictable.
- Work with the Ministry of Aboriginal Relations and Reconciliation to continue to conclude mineral tax sharing agreements to encourage mine development across the province.
- Continue to support the annual Mining and Sustainability Award to recognize the diverse companies, communities, First Nations, non-governmental organizations, government agencies and individuals committed to advancing and promoting sustainable development in B.C. mining.

Goal 3: Affordable, reliable and clean sources of energy, serving British Columbians, their communities, and sustaining competitive businesses and industries.

Objective 3.1: Energy policy, programs, legislation and regulation that serve the public interest of British Columbians.

Strategies

- Implement the 10 Year Rates Plan for BC Hydro in order to keep rates as low as possible for British Columbians while continuing to invest in new generation and critical infrastructure upgrades.
- Implement projects, programs and initiatives through the Innovative Clean Energy Fund to deliver upon government's energy, environmental and economic priorities and build leveraged funding partnerships with other levels of government.
- Maximize opportunities for workers in B.C., the Peace Region, and First Nations in the delivery of the Site C Clean Energy Project.
- Develop and implement policies to ensure reliable electricity supply through mandatory reliability standards and participation in the Western Electricity Coordinating Council.
- Work with BC Hydro to upgrade the Province's heritage generation, transmission and distribution assets.
- Ensure any negotiations on the Columbia River Treaty reflect the British Columbia position on the future of the Treaty.
- Achieve government's goal of reducing the carbon intensity of B.C.'s gasoline and diesel transportation fuels under the Renewable and Low Carbon Fuel Requirements Regulation, including the development of Part 3 Agreements and Credit Trading.
- Accelerate the market transformation of the light-duty vehicles used in B.C. to zero emission vehicles through effective delivery of government's Clean Energy Vehicle Program and associated policy development.

Objective 3.2: British Columbia's economic and environmental priorities are served through sustainable energy use and development across all sectors of the economy.

Strategies

- Work with all public and private stakeholders to continue development and implementation of policies, programs, regulations, codes and standards to advance energy efficiency and conservation and the use of clean energy.

- Support energy utilities with the planning and implementation of coordinated, cost effective demand side management measures including efficient electrification.
- Work with BC Hydro to deliver the Site C project on time and on budget.
- Participate in and support long-term clean energy planning initiatives at the regional and national level, including the Pacific Coast Collaborative, Pacific NorthWest Economic Region, and Canadian Energy Strategy.
- Implement climate leadership policy actions to reduce and avoid GHG emissions, while growing the BC economy.

Performance Measures 7 and 8: **Ranking of BC Hydro residential monthly bills and Number of BC Zero Emission Vehicles.**

Performance Measure	Benchmark	2016/17 Forecast	2017/18 Target	2018/19 Target	2019/20 Target
Ranking of BC Hydro residential monthly bills (1,000 kWh use)	3 rd lowest	3 rd lowest	3 rd lowest	3 rd lowest	3 rd lowest
Number of Zero Emission Vehicles registered in B.C.	3,628	4,746	5,946	7,446	9,246

Data Sources: Compiled by the Ministry of Energy and Mines staff from BC Hydro, ICBC and ZEV sales.

Discussion

Measure 7 provides a comparison of BC Hydro's monthly bills and average prices for residential customers with other North American utilities including those in Alberta, Quebec, Ontario, Manitoba, Washington, Oregon and California in Canadian funds as of April 1, 2016. BC Hydro's monthly bills and average prices are among the lowest when compared with these utilities.

Measure 8 indicates the number of Zero Emission Vehicles (ZEVs) on the road in B.C. A ZEV is defined as a battery electric vehicle, plug-in hybrid or hydrogen fuel cell vehicle. This measure has been selected as it demonstrates the impact of the Ministry's Clean Energy Vehicle (CEV) Program through vehicle adoption success. The CEV Program was designed to reduce barriers to the adoption of ZEVs, including the cost and availability of new vehicles and the availability of charging and fuelling infrastructure. Increased use of ZEVs helps to shift spending on imported transportation fuels to locally produced electricity and hydrogen, while stimulating jobs and economic development in the local clean technology sector. The benchmark is the number of ZEVs on the road in BC at the end of fiscal 2015/16.

Resource Summary

Core Business Area	2016/17 Restated Estimates ¹	2017/18 Estimates	2018/19 Plan	2019/20 Plan
Operating Expenses (\$000)				
Mines and Mineral Resources	16,939	21,630	22,479	22,369
Electricity and Alternative Energy ²	2,967	42,998	3,033	3,033
Executive and Support Services	6,082	7,331	7,498	7,485
Innovative Clean Energy Fund	2,299	2,299	2,303	2,303
Total	28,287	74,258	35,313	35,190
Ministry Capital Expenditures (Consolidated Revenue Fund) (\$000)				
Executive and Support Services	755	409	409	409
Total	755	409	409	409

¹For comparative purposes, amounts shown for 2016/17 have been restated to be consistent with the presentation of the 2017/18 Estimates.

² One year \$40M funding for Clean Energy Vehicles programs in 2017/18

*Further information on program funding and vote recoveries is available in the [Estimates and Supplement to the Estimates.](#)"

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Ministry of Energy and Mines Transition 2017/18

Publications and Reports

MEM 2015/16 Annual Report.....	1
MEM 2017/18 Service Plan	2

MINISTRY OF ENERGY AND MINES 2016/17 BUSINESS PLAN

The Ministry of Energy and Mines' mission is to facilitate a positive climate for the economic, environmental and socially responsible development of B.C.'s energy and mineral resources for the benefit of British Columbians.

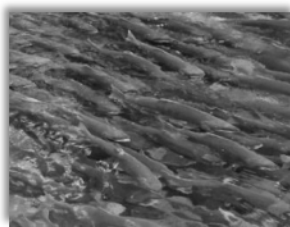


Table of Contents

DEPUTY MINISTER'S OVERVIEW	2
HOW TO READ THIS BUSINESS PLAN	3
CONTEXT FOR MEM BUSINESS PLANNING	4
MINISTRY LEVEL PRIORITIES	5
Full List of Ministry Level Priorities	6
Electricity and Alternative Energy	7
Mines and Mineral Resources	12
DIVISION LEVEL PRIORITIES.....	20
Full List of Division Level Priorities.....	21
Alternative Energy	22
Electricity Policy	24
Geological Survey.....	27
Health and Safety & Permitting	28
Major Mine Permitting Office	29
Mineral Titles	30
Policy, Legislation & Issues Resolution	31

DEPUTY MINISTER'S OVERVIEW

The Ministry of Energy and Mines has an operating budget of \$28.21 million, with 167 staff in Victoria and another 52 in regional offices across the province. That makes us a relatively small Ministry, yet we are projected to generate over \$562 million in revenue this fiscal and have the responsibility for delivering on major economic drivers, including the largest capital project in the province's history.

The challenge we face is how to meet the weight of expectations. Our resources are limited but we have a growing number of priorities. We need to ensure our Minister meets the 15 commitments in his mandate letter, including the first one which states he will control spending.

This business plan is designed to keep our Ministry focused. It defines priorities, marks their timelines, and clarifies who is accountable. There is a companion document, the Executive Dashboard, which is updated every month and reviewed by Senior Executive. It allows us to see what is moving smoothly and where there is strain on the system.

On top of these priorities which are essentially projects with set deliverables, there are the support mechanisms behind them, such as Freedom of Information requests, communications, staff development, cabinet submissions, and much more important work you each do on a daily basis.

The Ministry of Energy and Mines can run most efficiently when we have the tools to determine our priorities and resource them appropriately. This business plan is the key tool Senior Management and I will be using to support our Minister, our staff, and the people of B.C.



Elaine McKnight, Deputy Minister
Ministry of Energy and Mines

HOW TO READ THIS BUSINESS PLAN

Two distinct groups of priorities have been established:

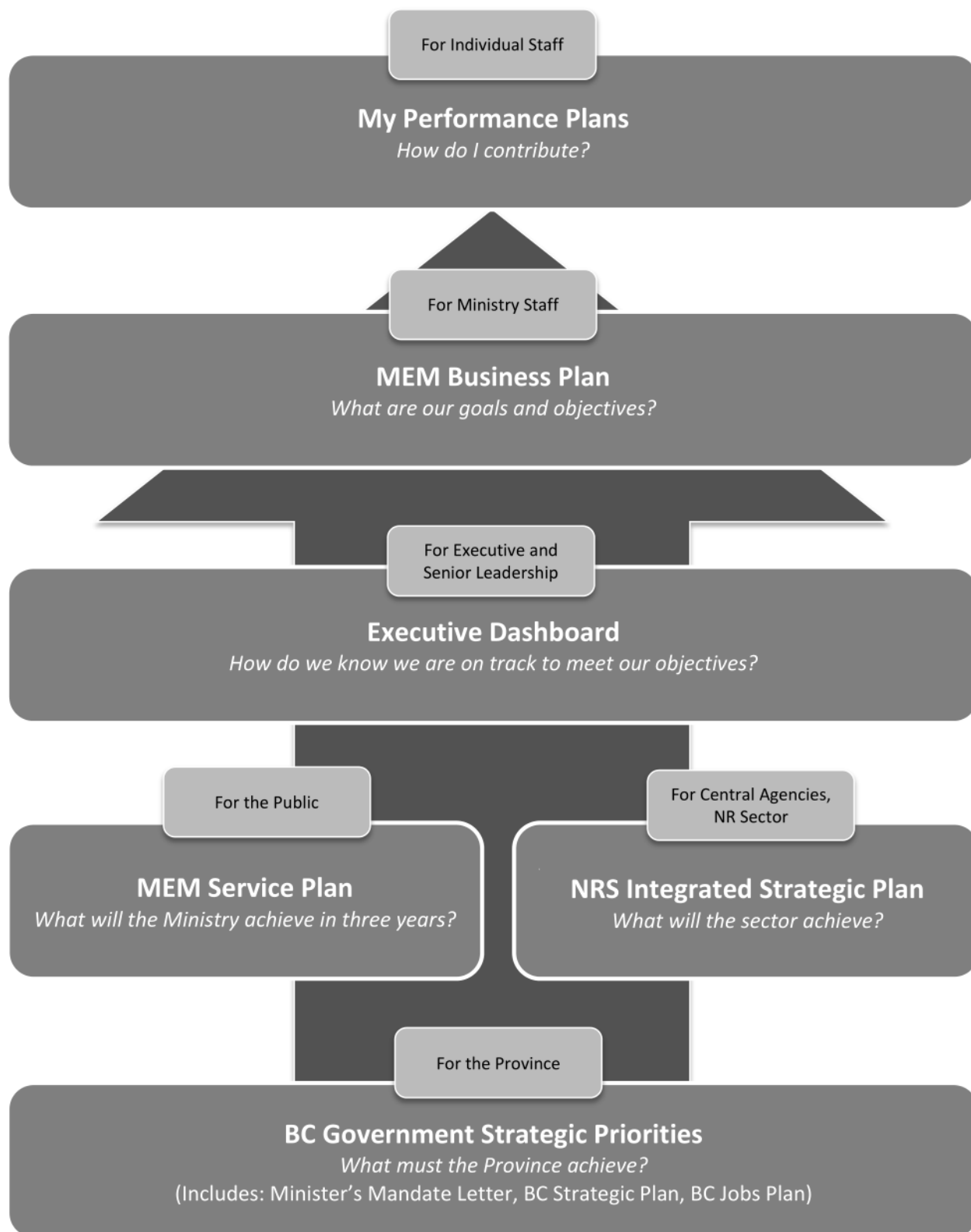
- 1. Ministry Priorities:** These have a direct link to public facing commitments and impact one or more ministries. These items are tracked and reviewed monthly in the [Executive Dashboard](#), a companion document which is updated monthly and reviewed by Executive to track progress.
- 2. Divisional Priorities:** These items have direct links to internal priorities and may have indirect links to public facing commitments.

This business plan is structured to define our Ministry Priorities followed by divisional.

Each priority has the following information:

Priority: Ministry or Divisional? What is the priority called?			
Description: What does this actually mean?			
Accountability: Who is responsible for delivery?			
Strategic Link: What commitments does it link to?		End Date: When will it be completed by?	
2016/17 Quarterly Milestones:			
Q1	What is happening from April to June 2016?	Q2	What is happening from July to September 2016
Q3	What is happening from October to December 2016?	Q4	What is happening from January to March 2017?

CONTEXT FOR MEM BUSINESS PLANNING



MINISTRY LEVEL PRIORITIES



Full List of Ministry Level Priorities

Electricity and Alternative Energy

1. Amend the Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act and Regulation
2. Conduct Ongoing BC Hydro Oversight
3. Develop and Implement Climate Leadership Plan
4. Develop Strategy for Increased Transmission with Alberta
5. Ensure Transportation Fuel Reporting System (TFRS) is Developed and Operational
6. Implement Canadian Energy Strategy
7. Implement Northeast Electrification Incentives for Upstream Natural Gas Sectors
8. Negotiate Improvements to the Columbia River Treaty

Mines and Mineral Resources

1. Complete Exploration and Mining Sector Competitiveness Review
2. Develop Mine Permitting and Resource Forecast Tool (MMPO)
3. Develop Mine Project Information Website
4. Establish a Mining Compliance and Enforcement Team and Board
5. Implement 16 Recommendations from Auditor General Report
6. Implement 19 Recommendations from Chief Inspector of Mines Report
7. Implement 7 Recommendations from Independent Expert Panel
8. Implement the Statement of Cooperation on Protection of Transboundary Waters
9. Review MMRD Policy Including Reclamation, Securities and Bonding
10. Revise Existing MEM-FLNRO Consultation MOU and Develop a Replacement Service Agreement
11. Submit Budget Request including Permit Fee Revision

Electricity and Alternative Energy

Ministry Priority Amend the Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act and Regulation			
Description: The Act and Regulation are evolving; amendments are needed to address policy and operational issues. The requirements are a significant part of the 2008 Climate Action Plan.			
Accountability: Michael Rensing, Director Low Carbon Fuels Alternative Energy Branch			
Strategic Link: Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act 2008 Climate Action Plan Premier's commitment under the Pacific Coast Collaborative		End Date: October, 2017	
2016/17 Quarterly Milestones:			
Q1	OIC is signed by the Lieutenant Governor.	Q2	Discussion paper on compliance pathways for 2017 review is released to stakeholders for input.
Q3	Consultations on policy amendments to the Act completed.	Q4	Consultations on carbon intensity targets scheduled (for after election).

Ministry Priority			
Conduct Ongoing BC Hydro Oversight			
Description:			
Conduct ongoing oversight of BC Hydro’s financial and capital plans. Engage with BC Hydro and BCUC on major regulatory processes.			
Accountability:			
Les MacLaren, Assistant Deputy Minister Electricity and Alternative Energy Division			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 7, 8, 13 Service Plan: 2.1, 2.2, 3.1, 3.2		Site C: 2024 RDA and RRA: June, 2017	
2016/17 Quarterly Milestones:			
Q1	Engage with BC Hydro on Load Resource Balance (mining and LNG Load).	Q2	Engage with BC Hydro to file full RRA.
Q3	Submit TB submission on Site C.	Q4	—

Ministry Priority			
Develop and Implement Climate Leadership Plan			
Description:			
BC's updated Climate Leadership Plan is expected to be announced in early summer 2016. The EAED will assume responsibility for those actions or deliverables related to its areas of responsibility or as otherwise directed by Government.			
Accountability:			
Les MacLaren, Assistant Deputy Minister Electricity and Alternative Energy Division			
Strategic Link:		End Date:	
Service Plan: 2.2 Ministry of Environment's Ministerial Mandate Letter		Ongoing (Subject to annual review and direction from government.)	
2016/17 Quarterly Milestones:			
Q1	Continue to support development of the Climate Leadership Plan through stakeholder consultations, ADMs Climate Change Committee, DMs Climate Change Committee and input to the Cabinet Committee on Climate Change.	Q2	Develop a business plan to identify and prioritize implementation actions that arise from the announced Climate Leadership Plan.
Q3	—	Q4	—

Ministry Priority			
Develop Strategy for Increased Transmission with Alberta			
Description:			
The province would like to increase electricity trade capacity with Alberta to sell electricity and reduce Alberta's GHG emissions.			
Accountability:			
Les MacLaren, Assistant Deputy Minister Electricity and Alternative Energy Division			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 13 BC Hydro 10 Year Rates Plan Climate Leadership Plan Jobs Plan LNG Strategy		March, 2017	
2016/17 Quarterly Milestones:			
Q1	Meet with Alberta Energy and Alberta Electricity System Operator (AESO).	Q2	BCHydro and PowerEx make a submission to AESO on renewable energy to serve Alberta.
Q3	Update business case for intertie(s) including application for Federal funding.	Q4	Approval in principle of expanded electricity transmission.

Ministry Priority			
Ensure Transportation Fuel Reporting System (TFRS) is Developed and Operational			
Description:			
TFRS will enable electronic reporting by fuel suppliers to significantly reduce errors and reduce Ministry staff time requirements.			
Accountability:			
Michael Rensing, Director Low Carbon Fuels Alternative Energy Branch			
Strategic Link:		End Date:	
Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act 2008 Climate Action Plan Premier's commitment under the Pacific Coast Collaborative		March 15, 2018	
2016/17 Quarterly Milestones:			
Q1	Scoping and business needs analysis is complete.	Q2	Development of reporting capacity is underway with funding in place.
Q3	Development continues on schedule.	Q4	TFRS is online, capable of receiving fuel supplier compliance reports.

Ministry Priority Implement Canadian Energy Strategy			
Description:			
<p>The Canadian Energy Strategy (CES) was developed by provincial and territorial (PT) Energy Ministers, and endorsed by all Premiers at the July 2015 Council of the Federation meeting. At that time, Premiers tasked PT Energy Ministers with achieving progress on four key implementation areas:</p> <ul style="list-style-type: none">• Climate change and transition to a low carbon economy (co-chair Alberta and British Columbia);• Energy efficiency (co-chair British Columbia and Ontario);• Delivering energy to people (co-chair New Brunswick and Newfoundland and Labrador); and• Technology and innovation (chair Manitoba) <p>EAED leads are working with PT colleagues to develop joint actions to advance CES priorities. The action items will be included in a progress report to Canada's Premiers on May 31st, 2016.</p>			
Accountability:			
Les MacLaren, Assistant Deputy Minister Electricity and Alternative Energy Division			
Strategic Link:		End Date:	
Service Plan: 1.2, 2.2, 3.2		May 31, 2016	
2016/17 Quarterly Milestones:			
Q1	Finalize CES action items, develop progress report to Premiers.	Q2	—
Q3	—	Q4	—

Ministry Priority			
Implement Northeast Electrification Incentives for Upstream Natural Gas Sectors			
Description:			
Exemptions on regulatory changes for an economic framework to incent electrification in the upstream gas sector.			
Accountability:			
Julie Chace, Director Transmission and Interjurisdiction Electricity Policy Branch			
Strategic Link:		End Date:	
Service Plan: Goal 2		TBD	
2016/17 Quarterly Milestones:			
Q1	Presentation to Deputy Ministers Council for LNG and cabinet working group (as part of the LNG competitiveness presentation). Agreement in Principle on developing an economic supportive framework.	Q2	Exemptions for transmission lines(this may be delayed, depends on needs of proponent).
Q3	Economic support framework approved by cabinet.	Q4	Directions to the BCUC or other regulatory support issued to support an economic framework.

Ministry Priority			
Negotiate Improvements to the Columbia River Treaty			
Description:			
Work with Canada to prepare for and conduct negotiations with the US. Continue engagement with First Nations and local communicates within the Basin to address their interests.			
Accountability:			
Les MacLaren, Assistant Deputy Minister Electricity and Alternative Energy Division			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 1, 2 Service Plan: 2.1 Cabinet decision on Columbia River Treaty review		July, 2018	
2016/17 Quarterly Milestones:			
Q1	Present Cabinet submission.	Q2	Develop negotiating mandate, strategy and options.
Q3	Obtain First Nations' agreement on negotiation participation.	Q4	Achieve consistency between federal and provincial mandates.

Mines and Mineral Resources

Ministry Priority: Complete Exploration and Mining Sector Competitiveness Review			
Description: The Review will provide practical, implementable recommendations to government on actions that could be undertaken to address short term challenges while increasing the long term competitiveness of BC's exploration and mining sector.			
Accountability: Peter Robb, Assistant Deputy Minister Mines and Mineral Resources Division			
Strategic Link: Industry sustainability		End Date: Decemb31, 2016	
2016/17 Quarterly Milestones:			
Q1	Begin consultant selection process.	Q2	Select consultant.
Q3	A report and actionable recommendations to government.	Q4	—

Ministry Priority Develop Mine Permitting and Resource Forecasting Tool (MMPO)			
Description: This priority will see the Major Mines Permitting Office develop a mine permitting and resource forecast tool for the purposes of identifying available resources to undertake major mine project reviews, and flag “pinch-points” for resourcing.			
Accountability: Amy Avila, Executive Director Major Mines Permitting Office			
Strategic Link: Ministerial Mandate Letter		End Date: March, 2017	
2016/17 Quarterly Milestones:			
Q1	Identify and acquire appropriate tool to develop project resource forecasting capacity in MMPO.	Q2	Develop resource forecasting capacity and assign project activities to staff in FLNRO, MoE, MEM with assistance of said Ministries.
Q3	Expand tool usage to all MMPO projects and identify performance measures/metrics to support business/organizational/sector strategic decision making and governance.	Q4	Identify future opportunities for utilization and develop a strategy to address current limitations such that the practices, processes and benefits can be more broadly applied within the NR sector.

Ministry Priority			
Develop Mine Project Information Website			
Description:			
Develop Mine Project Information website and update it on an ongoing basis. Continue to develop the platform so that it can be used by the Major Mines Permitting Office to project manage the authorizations process. (linkage with EAO and NRPP)			
Accountability:			
Peter Robb, Assistant Deputy Minister Mines and Mineral Resources Division			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 5, 11 Service Plan: 1.4, 3.2 Public commitment to increased transparency following Mount Polley breach. Auditor General's report on compliance and enforcement in the mining sector.		March 2017	
2016/17 Quarterly Milestones:			
Q1	Implement website soft launch (post permits and inspection reports from 2013 onwards for all operating and some recently closed metal coal mines – approximately 20).	Q2	Post permits and 2014 dam safety inspection information for all permitted major mines (approximately 70).
Q3	Reach decision on whether or not to make public comment tool available.	Q4	Develop strategy for phase two of project (including integration with other agencies like EAO, MOE and FLNRO, and using EAO project management workspace).

Ministry Priority: Establish a Mining Compliance and Enforcement Team and Board			
Description: A compliance and enforcement board will strengthen government’s regulatory oversight of the mining sector and government. This board will create greater integration between Ministry of Energy and Mines and the Ministry of Environment, as well as with the Environmental Assessment Office.			
Accountability: Peter Robb, Assistant Deputy Minister Mines and Mineral Resources Division			
Strategic Link:		End Date:	
OAG Mining Compliance and Enforcement Audit		July 29, 2016	
2016/17 Quarterly Milestones:			
Q1	–	Q2	Mining Compliance and Enforcement Team and Board Established.
Q3	–	Q4	–

Ministry Priority			
Implement 16 Recommendations from Auditor General Report			
Description:			
This priority will see sixteen recommendations from the Auditor General’s Report implemented.			
Accountability:			
Peter Robb, Assistant Deputy Minister Mines and Mineral Resources Division			
Strategic Link:		End Date:	
OAG Mining Compliance and Enforcement Audit		March 31, 2017	
2016/17 Quarterly Milestones:			
Q1	Develop action plan.	Q2	TBD.
Q3	TBD.	Q4	TBD.

Ministry Priority			
Implement 19 Recommendations from Chief Inspector of Mines Report			
Description:			
As part of government’s response to Mount Polley, we are undertaking a review of the Health, Safety and Reclamation Code for Mines in British Columbia. We are committed to implementing the recommendations that were made by the Chief Inspector of Mines that investigated the Mount Polley tailings storage facility (TSF) failure.			
19 Recommendations:			
1-1. Mine Dam Safety Manager			
1-2. Water Balance Management			
1-3. TSF Operations, Maintenance and Surveillance Manual			
1-4. Mine Emergency Response Plan			
1-5. Risk Recognition and Communication			
2-1. Design Objectives			
2-2. Independent Technical Review Board			
3-1. Professional Reliance Standards			
3-2. Integration of Standards			
4-1. Review of the Code			
4-2. Life-of-Mine Planning for Permitting			
4-3. Investigation, Compliance and Enforcement Review			
4-4. Geotechnical Oversight			
4-5. Organizational Review of Inspectorate			
5-1. Internal Records Management			
6-1. Alignment of Regulatory Objectives			
6-2. Permitting Process Alignment			
7-1. Collaborative Education			
7-2. Research and Development			
Accountability:			
TBD			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 10 Service Plan: 3.1 Regulatory requirements of Permit, Mines Act, Regulation and Code.		TBD	
2016/17 Quarterly Milestones:			
Q1	Complete Tailings Storage Facilities code review.	Q2	Review and update internal operational Health, Safety and Permitting policies and procedures.
Q3	Develop Annual Compliance and Enforcement Plan.	Q4	Develop implementation plan for Mt. Polley investigation recommendations.

Ministry Priority			
Implement 7 Recommendations from Independent Expert Panel			
Description:			
As part of government’s response to Mount Polley, we are undertaking a review of the Health, Safety and Reclamation Code for Mines in British Columbia. We are committed to implementing the recommendations of the independent expert panel that investigated the Mount Polley tailings storage facility (TSF) failure.			
Recommendations:			
<div><div>1.</div><div>Implement Best Available Technologies (BAT) using a phased approach.</div></div> <div><div>2.</div><div>Improve corporate governance.</div></div> <div><div>3.</div><div>Expand corporate design commitments.</div></div> <div><div>4.</div><div>Enhance validation of safety and regulation of all phases of a TSF.</div></div> <div><div>5.</div><div>Strengthen current regulatory operations.</div></div> <div><div>6.</div><div>Improve professional practice.</div></div> <div><div>7.</div><div>Improve dam safety guidelines.</div></div>			
Accountability:			
Peter Robb, Assistant Deputy Minister Mines and Mineral Resources Division			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 10 Service Plan: 3.1 Regulatory requirements of Permit, Mines Act, Regulation and Code.		March 31, 2017	
2016/17 Quarterly Milestones:			
Q1	Complete Tailings Storage Facilities code review.	Q2	Review and update internal operational Health, Safety and Permitting policies and procedures.
Q3	Develop Annual Compliance and Enforcement Plan.	Q4	Develop implementation plan for Mt. Polley investigation recommendations.

Ministry Priority			
Implement the Statement of Cooperation on Protection of Transboundary Waters			
Description:			
The SoC is being developed to formalize existing BC-Alaska cooperation. The SoC seeks to establish baseline water testing for the transboundary region, define each government’s involvement in the environmental assessments and permitting for significant projects and the involvement of BC First Nations and Alaska Indian Tribes.			
Accountability:			
Guy Gensey, Director, Corporate Policy and External Relations Corporate Initiatives Branch			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 3, 11 Service Plan: 1.1, 1.2, 1.4, 3.2		June, 2016 to finalize the signing of the SoC, and multi-year ongoing cooperation.	
2016/17 Quarterly Milestones:			
Q1	Finalize negotiations of SoC, ensure First Nations input and have the SoC officially signed by BC and Alaska. Initialize structures and project plans for each working group and first meeting of the Bilateral Working Group (BWG) [BC DMs and Alaska Commissioners].	Q2	BWG second meeting to approve processes and procedures for the water testing W-G, reciprocal EA procedures and communications plan and discuss objectives any new required actions. Seek Minister and Lieutenant Governor approval on these actions.
Q3	BWG third meeting to discuss progress of the SoC components and any required issues/ decisions. The BWG to ensure communications and information sharing commitments are working as agreed, and that engagement with First Nations, communities, the public and the federal government occurring effectively.	Q4	BWG fourth meeting to wrap-up first year quarterly meeting process and expected outcomes for the next 12 months. The BWG to discuss the longer term outlook and expectations for the water testing W-G and other commitments.

Ministry Priority: Review MMRD Policy Including Reclamation, Securities and Bonding			
Description: MMRD is beginning a formal policy review. For a select number of major mining jurisdictions (Canadian and some foreign for comparison), review is including: <ul style="list-style-type: none">• How reclamation security works, how it is calculated and what it is used for in each province and territory in Canada so as to highlight the options available to manage the on-site, off-site, immediate and long-term hazards of mining.• The requirements for mining companies and mine-site contractors to have environmental liability insurance to cover unintended and catastrophic events at mine sites during and post-mining operations.			
Accountability: Nathaniel Amann-Blake, Executive Director Policy, Legislation and Issues Resolution Branch			
Strategic Link: Service Plan Regulatory requirements of Permit, Mines Act, Regulation and Code.		End Date: March 31, 2017	
2016/17 Quarterly Milestones:			
Q1	Begin consultant selection process.	Q2	Select consultant.
Q3	Inter-jurisdictional review begins.	Q4	Inform formal policy review.

Ministry Priority Revise Existing MEM-FLNRO Consultation MOU and Develop a Replacement Service Agreement			
Description: MEM and FLNRO need to revise their arrangement with respect to how FLNRO delivers consultation services regarding MEM’s business.			
Accountability: Nathaniel Amann-Blake, Executive Director Policy, Legislation and Issues Resolution Branch			
Strategic Link: Service Plan: 3.2		End Date: April 30, 2016	
2016/17 Quarterly Milestones:			
Q1	Develop internal Service Agreement.	Q2	Engage FLNRO.
Q3	Engage FLNRO.	Q4	Finalize Service Agreement.

Ministry Priority:			
Submit Budget Request Including Permit Fee Revision			
Description:			
This priority includes changes to the mining fee structure and requesting a base budget lift in quarter three.			
Accountability:			
Ranbir Parmar, Executive Director and CFO Financial Services Branch		Nathaniel Amann-Blake, Executive Director Policy, Legislation and Issues Resolution Branch	
Strategic Link:		End Date:	
OAG Mining Compliance and Enforcement Audit		October 31, 2016	
2016/17 Quarterly Milestones:			
Q1	Draft 1 of Treasury Board submission.	Q2	Begin industry consultation on fees.
Q3	Treasury Board submission.	Q4	Budget decisions.

DIVISION LEVEL PRIORITIES



Full List of Division Level Priorities

Alternative Energy

1. Design and Implement the Clean Energy Vehicle Program
2. Strategically Manage the Innovative Clean Energy (ICE) Fund

Electricity Policy

3. Amend the Greenhouse Gas Reduction Regulation
4. Implement BC Utilities Commission (BCUC) Core Review
5. Implement Regulatory Amendments to Facilitate LNG Development in the Lower Mainland
6. Provide Direction to BC Utilities Commission to Undertake a Section 5 inquiry on Tariff Supplement 5 and 6
7. Review and Approve BC Hydro's Current and Future Integrated Resource Plan (IRP)

Geological Survey

8. Generate and Distribute Geoscience Information
9. Technical Marketing of Mineral and Coal Opportunities

Health and Safety & Permitting

10. Complete Mining Dialogue Deliverables
11. Provincial Placer and Sand and Gravel Mining Strategy

Major Mine Permitting

12. Develop Principled Approach with the Environmental Assessment Office (EAO) to Coordinate Environmental Assessments (EA) and Mine Permitting
13. Permitting of Major Mines

Mineral Titles

14. Mineral Resources Automation and Systems Integration Project

Policy, Legislation & Issues Resolution

15. Development of Regulations for Administrative Monetary Penalties (AMP)
16. Track the Economic Performance of the BC Mining Industry

Division Priority			
Strategically Manage the Innovative Clean Energy (ICE) Fund			
Description:			
<p>The ICE Fund Special Account directly supports the achievement of government’s energy and environmental priorities. The EAED prepares and delivers annual spending plans that support clean energy projects, programs and initiatives delivered across government and throughout British Columbia, including the following:</p> <ul style="list-style-type: none">• Clean Energy Vehicle Program;• Clean Energy Leadership Program;• Home Energy Coach Program;• Oil Furnace to Heat Pump Program;• High Performance Window R&D Incentive; and• ISO 50001 Industrial Energy Management Incentive.			
Accountability:			
Daniel Green, Executive Director Innovative Clean Energy Fund Branch			
Strategic Link:		End Date:	
Service Plan: 1.2, 2.2, 3.2 Jobs Plan / Jobs Blueprint Climate Leadership Plan BC Energy Plan Natural Gas Strategy BC Bioenergy Strategy BC Technology Strategy BC Green Economy Strategy Research and Innovation Strategy		Ongoing	
2016/17 Quarterly Milestones:			
Q1	Oversee approved spending plan projects, programs and initiatives; identify policy initiatives related to the ongoing strategic management of the ICE Fund Special Account.	Q2	Oversee approved spending plan projects, programs and initiatives; identify policy initiatives related to the ongoing strategic management of the ICE Fund Special Account.
Q3	Develop year-end and three-year spending plan proposals for approval by the Minister of Energy and Mines and Treasury Board.	Q4	Implement year-end spending approvals and prepare for delivery of approved three-year spending priorities.

Electricity Policy

Division Priority			
Amend the Greenhouse Gas Reduction Regulation			
Description:			
Amend the Greenhouse Gas Reduction Regulation to facilitate development of new market opportunities for natural gas lines in the transportation sector by increasing the total spending cap and extending the program to March 2022. Support emerging natural gas market opportunities that may reduce GHG emissions.			
Accountability:			
Julie Chace, Director Transmission and Interjurisdiction Electricity Policy Branch			
Strategic Link:		End Date:	
Service Plan: Goal 2 Climate Leadership Plan Jobs Plan		December 31, 2016	
2016/17 Quarterly Milestones:			
Q1	Make amendments to the Greenhouse Gas Reduction Regulation.	Q2	Research and analyze next set of proposed amendments.
Q3	Complete additional round of Greenhouse Gas Reduction Regulation amendments (pending results of Q2 analysis).	Q4	—

Division Priority			
Implement BC Utilities Commission (BCUC) Core Review			
Description:			
Implement BC Utilities Commission (BCUC) Core Review.			
Accountability:			
Chris Trumpy, Director Generation and Regulatory Electricity Policy Branch			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 6 Service Plan: 2.1, 3.1 BCUC Core Review Climate Leadership Plan Industrial Electricity Policy Review		November, 2016	
2016/17 Quarterly Milestones:			
Q1	Examine MOU with BCUC.	Q2	Determine alignment between Climate Action Plan and proposed UCA/CEA amendments.
Q3	Obtain approval of UCA/CEA amendments.	Q4	—

Division Priority			
Implement Regulatory Amendments to Facilitate LNG Development in the Lower Mainland			
Description:			
Amendments to Direction 5 in the BC Utilities Commission are required to create a regulatory framework for the expansion and transfer of phase(s) of Tilbury LNG to an unregulated entity and possibly other amendments to support Woodfibre’s regulatory requirements for connection to Fortis BC natural gas grid.			
Accountability:			
Julie Chace, Director Transmission and Interjurisdiction Electricity Policy Branch			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 13 Service Plan: Goal 2 BC Hydro 10-Year Rates Plan Natural Gas Plan: Goal 2 Natural Gas Strategy		March 31, 2017	
2016/17 Quarterly Milestones:			
Q1	Waiting for FID from Fortis BC on expansion of Tilbury LNG, amendments may be required to support Woodfibre LNG – TBD.	Q2	Waiting for FID from Fortis BC on expansion of Tilbury LNG, amendments may be required to support Woodfibre LNG – TBD.
Q3	FID from FortisBC on Tilbury expansion.	Q4	Amendments to Direction No. 5.

Division Priority			
Provide Direction to BC Utilities Commission to Undertake a Section 5 Inquiry on Tariff Supplement 5 and 6			
Description:			
BC Hydro would like to update the electricity supply agreement and facilities agreements for transmission service to BC Hydro industrial customers as part of the 2015 Rate Design Application. Government must approve amendments to these tariffs, and as such is referring the matter to the BCUC for recommended changes to the tariffs.			
Accountability:			
Julie Chace, Director Transmission and Interjurisdiction Electricity Policy Branch			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 13 Service Plan: Goal 2 BC Hydro 10 Year Rate Plan Industrial Electricity Policy Review		March 31, 2017	
2016/17 Quarterly Milestones:			
Q1	Draft Terms of Reference for BCUC and undertake stakeholder consultation as required.	Q2	Issue OIC for Terms of Reference to BCUC.
Q3	BCUC undergoes Section 5 Inquiry.	Q4	BCUC Completes Section 5 Inquiry.

Division Priority			
Review and Approve BC Hydro’s Current and Future Integrated Resource Plan (IRP)			
Description:			
Review and approve BC Hydro’s current and future IRP.			
Accountability:			
Chris Trumpy, Director Generation and Regulatory Electricity Policy Branch			
Strategic Link:		End Date:	
Service Plan: 2.1, 2.2, 3.1, 3.2		December 1, 2018	
2016/17 Quarterly Milestones:			
Q1	Engage with BC Hydro on their load resource balance.	Q2	Attend Technical Advisory Committee Meeting.
Q3	Determine need to update existing IRP.	Q4	Engage on scoping discussions for 2018 IRP.

Geological Survey

Division Priority			
Generate and Distribute Geoscience Information			
Description:			
The collection, interpretation and dissemination of new and archived geoscience data on an annual basis.			
Accountability:			
Stephen Rowins, Chief Geologist and Executive Director Geological Survey Branch			
Strategic Link:		End Date:	
Service Plan: 1.2		Ongoing	
2016/17 Quarterly Milestones:			
Q1	Collect (primary) and interpret (secondary) geoscience data (technical staff field season).	Q2	Interpret and collect geoscience data (technical staff field season).
Q3	Interpret geoscience data.	Q4	Deliver and market main technical geoscience material at Roundup.

Division Priority			
Technical Marketing of Mineral and Coal Opportunities			
Description:			
The Mineral Development Office (MDO) distributes GSB data and provides technical information and expertise about mineral opportunities to the investment community. It also coordinates the “Provincial Overview of Exploration and Mining in BC” volume.			
Accountability:			
Stephen Rowins, Chief Geologist and Executive Director Geological Survey Branch			
Strategic Link:		End Date:	
Service Plan: 1.2		January, 2017 (Ongoing with multiple deliverables determined by partner agreements.)	
2016/17 Quarterly Milestones:			
Q1	Complete publication of annual Fieldwork volume and MDO Mineral Exploration Overview volume and deliver geoscience products at the Mineral Exploration Roundup (Vancouver) and the PDAC (Toronto).	Q2	Provide oral and poster presentations of technical geoscience at the Kamloops Exploration Group (KEG) Conference.
Q3	—	Q4	Provide oral and poster presentations of technical geoscience products at meetings including the American Association of Mineral Exploration (Reno), GSB Open House (Victoria), and China Mining (Beijing).

Health and Safety & Permitting

Division Priority			
Complete Mining Dialogue Deliverables			
Description:			
Complete mining dialogue activities with FNs on identified priorities including: Code Review, review of mineral tenure system and FNs involvement in EA process. Work collaboratively with directly affected FNs to complete permitting processes related to the Mount Polley Mine and return future permitting to regular business processes.			
Accountability:			
Peter Robb, Assistant Deputy Minister Mining and Mineral Resources Division			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 4, 10, 11 Service Plan: 1.4, 3.1, 3.2		TBD	
2016/17 Quarterly Milestones:			
Q1	Complete the Tailings portion of the Code Review for enactment, and refer Mount Polley Mine's return to full operations Mines Act permit amendment application to the statutory decision maker.	Q2	Complete interim discussion papers on mining dialog activities for all chief's meeting.
Q3	—	Q4	Finalize discussion papers on mining dialogue, complete Health and Safety portion of Code Review and print and distribute final version of updated Code.

Division Priority Provincial Placer and Sand and Gravel Mining Strategy			
Description: This strategy is to provide Best Management Practises to placer mining and address temporary high wall excavation issues.			
Accountability: Katherine Wagar, Regional Director South East Health and Safety & Permitting Branch			
Strategic Link: Mines Act – Code Review – changes in the code to reflect the issue with high walls within excavation. Guidance Document – Best Management Practises in placer mining to instruct miners		End Date: April, 2017	
2016/17 Quarterly Milestones:			
Q1	Provide Code Review team with recommendations and provide Critical path.	Q2	Review BMPs with team and outline stakeholder engagement.
Q3	Review of policy and prepare implementation plan.	Q4	Execution of final plan.

Major Mine Permitting Office

Division Priority Develop Principled Approach with the Environmental Assessment Office (EAO) to Coordinate Environmental Assessments (EA) and Mine Permitting			
Description: Finalize and agree to principled approach for drafting EA conditions and engaging MEM technical staff in review of conditions and imparting permitting process knowledge to EAO mines staff.			
Accountability: Jennifer Anthony, Director Major Mines Permitting Office			
Strategic Link: Service Plan: 1.1		End Date: Ongoing	
2016/17 Quarterly Milestones:			
Q1	Finalize principle paper for drafting of EA conditions.	Q2	Create agreed to pool of candidate EA conditions.
Q3	Successful roll out of workshop between EAO and MEM to engage in concepts of principled approach and detailed permitting process discussion.	Q4	Review and revisit approach, modify as necessary and continuously improve.

Division Priority			
Permitting of Major Mines			
Description:			
The ministry is committed to permitting a variety of Major Mines in 2016/17. Some examples are: Ajax, Blackwater and Kemess.			
Accountability:			
Amy Avila, Executive Director Major Mines Permitting Office			
Strategic Link:		End Date:	
Service Plan: 1.1		March, 2017	
2016/17 Quarterly Milestones:			
Q1	Pre-Application: Engaging with all relevant parties, and drafting appropriate documentation.	Q2	Screening: Ensuring appropriate and complete information is captured and prepared in the Application Package.
Q3	Review: Review of the Application Package to identify and address issues raised through the review and through public comment.	Q4	Decision: Review and render decision on the major mine Application and summary of consultation with First Nation-Statutory Decision Makers determine if permits will/not be issued.

Mineral Titles

Division Priority			
Mineral Resources Automation and Systems Integration Project			
Description:			
Develop and implement 2016/2017 work plan for the Mines and Mineral Resources Automation and Systems Integration (MMRASI) project. Develop work plan for 2017/2018 consistent with the approved capital funding.			
Accountability:			
Chris Smith, Director Resource Development Mineral Titles Branch			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 10 Service Plan: 1.1, 1.2, 1.3		March 2017	
2016/17 Quarterly Milestones:			
Q1	Approve workplan for 2016/17 and complete “Mines Information to Go” subproject.	Q2	Complete design phase of “Coal Titles Management System” subproject .
Q3	Complete “Offline Inspection Report Writing Tool” subproject.	Q4	Complete “Coal Titles Management System” subproject.

Policy, Legislation & Issues Resolution

Division Priority			
Develop Regulations for Administrative Monetary Penalties (AMP)			
Description:			
Proposed changes to the Act (Bill 8, <i>Mines Amendment Act</i> , introduced February 25, 2016) will put in place the statutory elements required for an AMP program.			
Accountability:			
Nathaniel Amann-Blake, Executive Director Policy, Legislation and Issues Resolution Branch			
Strategic Link:		End Date:	
Ministerial Mandate Letter: 11, 16		January, 2017	
2016/17 Quarterly Milestones:			
Q1	Complete consultation and policy work.	Q2	Develop regulations.
Q3	Government approvals and operational readiness.	Q4	Finalize internal processes and identify decision maker(s).

Division Priority			
Track the Economic Performance of the BC Mining Industry			
Description:			
Provide a two to three page summary report of the economic performance of the BC mining industry to Executive on a quarterly basis. Include trends in metal and coal prices, mine announcements, and other key economic and financial developments.			
Accountability:			
Nathaniel Amann-Blake, Executive Director Policy, Legislation and Issues Resolution Branch			
Strategic Link:		End Date:	
Service Plan: 1.2		Ongoing	
2016/17 Quarterly Milestones:			
Q1	Provide quarterly update to Executive on the economic performance of the BC mining industry.	Q2	Provide quarterly update to Executive on the economic performance of the BC mining industry.
Q3	Provide quarterly update to Executive on the economic performance of the BC mining industry.	Q4	Provide quarterly update to Executive on the economic performance of the BC mining industry.

COLUMBIA POWER CORPORATION

Overview

Established in 1994, Columbia Power Corporation (Columbia Power), a commercial Crown corporation, operates under an agency agreement with the Province to develop power projects within British Columbia. In partnerships, Columbia Power currently owns and operates hydro power assets in the Columbia Basin.

A small organization based in Castlegar, Columbia Power focuses on asset management activities while engaging private-sector firms to provide construction, plant operation and specialist consulting services. Columbia Power is one of the larger producers of electricity in British Columbia.

Columbia Power oversees the operations of the Brilliant Dam and Generating Station, the Arrow Lakes Generating Station, the Brilliant Expansion Generating Station and the Brilliant Terminal Station, as well as the activities leading up to the Final Acceptance of the Waneta Expansion Project.

Columbia Power uses its portion of income generated from these hydroelectric facilities to pay dividends to our shareholder, the Province of British Columbia. Columbia Power also uses a portion of its income to sponsor community groups and events, offer bursaries and scholarships to secondary schools and community colleges, and develop and deliver environmental stewardship programs.

Mandate

- Continue to enhance the asset management process and management systems to ensure long term profitability and reliability of facilities through effective and efficient plant operation and maintenance, including improved accountability of staff and third party service providers.
- As Owner's Representative for the Waneta Expansion project, bring the project to Final Acceptance in 2018 and complete the transition to the Waneta Expansion Limited Partnership Operating Committee, providing operational and financial oversight.
- Work with the Ministry of Energy and Mines, Ministry of Finance, and the Columbia Basin Trust to explore structural options to further enhance value to both the Province and Basin residents while mitigating risk.

Board

- Lee Doney – Chair
- Tim Stanley – Vice Chair
- Lillian White – Director
- Rick Jensen – Columbia Basin Trust appointee
- Greg Deck – Columbia Basin Trust appointee

Executive

- Sue Dyer – VP, Operations
- Giulio Ambrosone – Vice President, Capital Projects
- Frank Marino – Director, Human Resources and Corporate Services
- David de Git – Director, Finance
- Brandon Haney – Manager, Technical Services
- Marie Chanton - Controller

SUPPLEMENTAL INFORMATION CROWN CORPORATIONS

Name: Columbia Power Corporation (CPC)

Governance:

CPC is wholly owned and controlled by the Province of British Columbia. Pursuant to the 1995 Columbia Basin Accord, the primary mandate of CPC is to undertake power project investments as an agent of the Province in partnership with Columbia Basin Trust (CBT). This mandate includes:

- Develop the Arrow Lakes Generation Station, Brilliant Expansion Project, and Waneta Expansion Project as commercially viable power developments.
- Enhance power project asset management to ensure long-term profitability and reliability of facilities through effective and efficient plant operations and maintenance.
- Through Columbia Power's role as the Owner's Representative for the Waneta Expansion Project, successfully close out the Design-Build construction contract to Final Acceptance in April 2018. Complete the transition to operational oversight by FortisBC through the involvement in the Waneta Expansion Limited Partnership Operating Committee.
- Work with the Ministry of Energy and Mines, Ministry of Finance, and CBT to explore structural options to further enhance value to both the Province and Basin residents while mitigating risk.

Financial Information (high level):

CPC currently manages operating assets in excess of \$800 million with installed capacity of 785 megawatts. These assets generate revenues for CPC totaling \$64 million with net income of just over \$40 million (Forecast 2016/17).

On a projected basis, revenues are forecasted to be \$66 million, with net income of \$50 million by 2019/20.

2017/18 Service Plan , 2015/16 Annual Report

Issue(s) and Priorities:

- **30 day issue:** Columbia Power's annual report will need approval by the Minister in June.

Organizational Structure:

1. Board of Directors

The Board has a primary responsibility to foster the Corporation's short-and long-term success; consistent with the Board's responsibility to the Corporation's shareholder, the Province of British Columbia, while giving consideration to the legitimate interests held by

other stakeholders including employees, customers, suppliers, communities and the public. The Directors are stewards of the Corporation. The Board has the responsibility to oversee the conduct of the Corporation's business and management, which is responsible for the day-to-day operation. In overseeing the conduct of the business, the Board, through the President and Chief Executive Officer will set the standards of conduct for the Corporation.

CHAIR Lee Doney

VICE CHAIR Tim Stanley

DIRECTORS

Greg Deck
Lillian White
Rick Jensen

2. Executive Team

At present, Columbia Power does not have a CEO. The Chief Operation Officer is Sue Dyer.

Remaining Board Appointment Status:

- The authorized number of Directors for CPC is six. Currently there is one vacancy. The Board includes two nominees from CBT. During 2016 Budget Estimates, then Minister Bill Bennett committed to work with the local MLA and CPC's Board to explore the possibility of adding a representative from the local West Kootenay area.

Biographies of Board Members:

Lee Doney, Board Chair



Lee Doney has held a series of senior provincial public sector positions, serving as a Deputy Minister for 17 years, under four different administrations. He has served twice as the Deputy Minister of Labour and Consumer Services, and once as the Deputy Minister of Forests. He has also served as CEO of the BC Labour Force Development Board, and Chair of the Workers' Compensation Board.

Tim Stanley, Vice Chair



Tim Stanley is a Partner and Senior Vice President of MMM Group Limited, which is responsible for the management of the firm's Greater Vancouver, Lower Mainland, and British Columbia operations. Throughout his career extending over 28 years, he has planned and managed the design and construction of complex multidisciplinary projects in the heavy civil, institutional, commercial, and industrial sectors. Mr. Stanley has previously served as Chair and Director of the Country Day School Board in King City, Ontario, a member of the Canadian Construction Association, a Chair with the Council of the Canadian Design Build Institute, and a President of AMICI, a charitable organization that sends children to summer camps.

Rick Jensen



Rick Jensen moved his family to Cranbrook in 1976, where he and his wife Marguerite raised their two children. Rick served as Mayor of Cranbrook from 1983 to 1990. He also served as a Director of the Regional District of East Kootenay for seven years. Rick was a Board member, and President and CEO of Panorama Mountain Village Inc. from 2010 to 2014. For the past 24 years, he has been the President of Canadian Institute of Excellence, an educational company that delivers management and personal development training. Rick, together with his son Chad, built New Dawn Developments into the largest construction and development company in the East Kootenay. Rick is active in the management of and as a Board member and Chairman of New Dawn. He is also the Chair of the Columbia Basin Trust Board and is one of the two Columbia Basin Trust appointees as a Director of Columbia Power.

Greg Deck



Greg Deck grew up in the Radium Hot Springs area, and after education and employment in the U.S. and France, returned to the region in 1979. He served as Mayor of Radium from its incorporation in 1990 until his retirement in 2008. He also served as the Chair of the Regional District of East Kootenay for six years and most recently as a Trustee of the BC Municipal Finance Authority. Greg was a founding director of Columbia Basin Trust, serving on the Board from 1995 – 2015, including as Vice-Chair and Chair. He is one of the two Columbia Basin Trust appointees as a Director of Columbia Power.

Lillian White



Lillian White is President of Treen Safety, a company that provides safety solutions, services and products. Previously, she was VP Finance for Gordon Food Service for 35 years. Lillian was board chair of BC assessment Authority from 2006 to 2009 and served on the Royal BC museum board from 2009 to 2011. She is currently chair of the Finance Committee for Columbia Power Corporation and was appointed to the WorkSafe BC board in January 2015. She is Treasurer of the Canadian Society of Safety Engineering Lower Mainland chapter and a member of the Women Presidents Organization (WPO) and the Forum for Women Entrepreneurs (FWE).

Columbia Basin Trust

Mandate: Columbia Basin Trust (Trust) is mandated under *the Columbia Basin Trust Act* to manage its assets for the ongoing economic, environmental and social benefit of the region, without relieving governments of any obligations in the region.

The Trust has two core functions: invest capital and manage the assets of the Trust, and use the income earned from the Trust's investments to deliver benefits to the Columbia Basin.

Overview: The Trust was created in 1995 to support efforts by the people of the Basin to create a legacy of social, economic and environmental well-being in the Canadian portion of the Columbia River Basin—the region most affected by the Columbia River Treaty (CRT).

During the creation of the CRT, Basin residents weren't adequately consulted for their views, concerns or solutions. In the early 1990s, residents, local officials and representatives from regional districts and tribal councils joined together to coordinate efforts, forming the Columbia River Treaty Committee. Reflecting the desires of the people of the Basin, the committee approached the Province of BC and successfully negotiated:

- that funds be allocated to the region, representing a fair share of the ongoing benefits being realized outside of the Basin as a result of the CRT;
- that a regional organization, governed by a board of Basin residents, be created to manage those funds.

A binding agreement was established resulting in the Province providing:

- \$276 million to finance power project construction;
- \$45 million, which the Trust used as an endowment;
- \$2 million per year from 1995 to 2010 for operations.

The *Columbia Basin Trust Act* also established the Trust's dual accountability to both the residents of the Columbia Basin and to the Province, its shareholder. The Trust sets its priorities and goals in consultation with the residents of the region, and the Trust makes decisions related to its investments and Delivery of Benefits activities without direction from the Province. The unique role of the Trust and its relationship with the Province is captured in a recently negotiated Memorandum of Understanding.

Using the income from its investments, the Trust develops, implements and manages programs and initiatives that respond to community and regional needs, working closely with Basin organizations and residents throughout the process.

We serve the region by:

- investing in Basin power projects, businesses and real estate;
- engaging with residents to understand priorities;
- facilitating, convening and providing access to information to deepen the collective understanding of issues;
- partnering with organizations that have complementary objectives and expertise in particular issues or sectors to attain common goals;
- developing programs that address specific needs linked to our strategic objectives, delivered by the Trust or partners;
- providing grants to a wide range of community projects, as well as to the social, economic, environment, youth, and arts and culture sectors, administered by the Trust or by partners.

The Trust has two operating subsidiaries. Columbia Basin Broadband Corporation is working with Basin communities and rural areas to improve high-speed connectivity through a region-wide fibre optic cable network. Columbia Basin Development Corporation is leading and supporting efforts to advance economic growth, job creation, innovation and entrepreneurial opportunity for a prosperous and sustainable Basin economy.

The Trust also has eight holding companies that hold our interests in investments.

Chair and CEO:

The Trust's Chair is Rick Jensen.

The President and CEO is Johnny Strilaeff.

SUPPLEMENTAL INFORMATION CROWN CORPORATIONS

Name: Columbia Basin Trust (Trust)

Governing Legislation Synopsis:

The Trust is mandated under the *Columbia Basin Trust Act* to manage its assets for the ongoing economic, environmental and social benefit of the region. The Trust is also mandated under the Columbia Basin Management Plan to include the people of the Basin in planning for the management of its assets, and to work with others to coordinate activities related to the purposes of the Trust.

The Trust has two core functions:

1. Invest capital and manage the assets of the Trust.
2. Spend the income earned from the Trust's investments to deliver benefits to the Columbia River Basin.

Financial Information (high level):

Total revenues: \$58.8 million (2016/17 forecast)

Total delivery of benefits: \$ 38.9 million (2016/17 forecast)

Total new investments: \$10 million (2016/17 forecast)

Accumulated surplus \$441 million (2016/17 forecast)

2017/18 Service Plan, 2015/16 Annual Report

Major Issue(s):

- **30 day issue:** The Trust's annual report will need approval by the Minister in June 2017.
- **90 day issue:** The Trust's service plan and mandate letter will need approval by the Minister by August 2017.
- **90 day issue:** If the Trust's board supports bringing forward its asset management proposal, it will require a decision by the Minister and Treasury Board

Organizational Structure:

1. Board of Directors

The Trust is governed by a 12-member Board of Directors. The five regional districts in the Basin and Ktunaxa Nation Council each nominate a minimum of one and a maximum of four directors and the Province of BC nominates the remaining six directors. The Lieutenant Governor in Council makes all final appointments to the Board. All directors must reside in the Basin.

2. Executive Committee

The Trust's Executive Committee acts on behalf of the Board between meetings, oversees governance policies and processes, oversees human resources and addresses any other matters referred to it by the Board.

Members: Rick Jensen (Chair), Wendy Booth, Am Naqvi, Laurie Page, Rhonda Ruston

The President and Chief Executive Officer of the Trust is Johnny Strilaeff. Following the policies and directives of the Board, the President and Chief Executive Officer is responsible for the day-to-day operations of the Trust.

Remaining Board Appointment Status:

- No Board appointments are required within 30/60/90 days.

Biography of President and CEO:

Johnny Strilaeff



Johnny Strilaeff was born and raised in Castlegar. He joined the Trust in 2005 after working for several years with CIBC, and has been involved in every aspect of Trust business in a senior leadership role. He became Vice-President and Chief Operating Officer in 2012. The Board of Directors appointed him President and CEO in November 2016. He is also the Acting President and Chief Executive Officer for Columbia Power Corporation. Johnny is a graduate of Selkirk College (Diploma in Liberal Arts & Sciences) and the University of Calgary (Bachelor of Commerce degree with a concentration in Finance). He is also a Chartered Financial Analyst (CFA) charterholder.

Biographies of Board Members:

Chair: Rick Jensen



Rick Jensen (Cranbrook) moved his family to Cranbrook in 1976 where he and his wife Marguerite raised their two children and are actively involved with their five grandchildren. Rick served as Mayor of Cranbrook for 3 terms, 1983 to 1990. He served as a Director of the Regional District of East Kootenay for 7 years and was involved with numerous community groups, including being on the Board of the Cranbrook and District Hospital. Rick served as a Board member of Crestbrook Forest Industries Ltd., a wholly owned subsidiary of Tembec, until CFI was wound up into Tembec. He was a Board member, and President and CEO of Panorama Mountain Village Inc. from 2010 to 2014. Rick is a Board member of New Dawn Restorations Ltd. For the past 24 years, he has been the President of Canadian Institute of Excellence, an educational company that delivers management and personal development training. While he has owned many businesses his passion is with construction and development and together with his son Chad, they have built New Dawn Developments into the largest construction and development company in the East Kootenay, specializing in residential and commercial construction of all sizes. Rick is active in the management and is a Board member and Chairman of New Dawn. He is also a Board member of Columbia Power Corporation.

His term expires on December 31, 2017.

Vice-Chair: Laurie Page



Laurie Page (Nakusp) is a veterinarian in Nakusp. She and her husband Bill Sones have operated their business, Nakusp Veterinary Clinic, and raised two children since moving there in 1990. Laurie is past Chair of Arrow & Slocan Lakes Community Services and has worked on projects involving affordable housing, seniors services, youth empowerment and supporting mental health. As former Chair and present Vice-Chair of the Nakusp and Area Development Board, she is currently facilitating community engagement, organizational development and projects to enhance the area's economic self-sufficiency.

Her term expires on December 31, 2018.

Larry Binks



Larry Binks (Creston) has a strong educational and work background that has benefited him in his role as the RDCK Area C Director, a position he has held since 2008. He has degrees in Business Administration and Emergency Medicine Management and diplomas in Financial Administration, Conflict Resolution and dealing with troublesome employees, as well as Life Skills Level 4. Larry is also a certified alcohol and drug counsellor. After working 34 years with the BC Ambulance service, 18 of those as a senior manager, he retired and relocated to Creston. Larry demonstrates an ongoing and passionate dedication to the community he represents. He serves as an advisor for the East Kootenay, Central Kootenay and Boundary districts on pre-hospital care and medical evacuations. He also chairs the Creston Valley Services Committee and was past Chair of the East Waste Management Committee. He is Vice-Chair of the East Kootenay Regional Hospital District Board. Larry volunteers his time speaking to Prince Charles Senior Secondary High School students and College of the Rockies nursing students about the dangers of alcohol and drug consumption and addiction.

His term expires on December 31, 2018.

Wendy Booth



Wendy Booth (Fairmont Hot Springs) has lived in the Columbia Valley for 20 years. She currently sits as a director and Vice-Chair of the Regional District of East Kootenay, representing Electoral Area F, including the communities of Windermere, Fairmont Hot Springs and Panorama Mountain Village; is currently serving in her first term on the Union of British Columbia Municipalities executive; and is a director of the Columbia Basin Broadband Corporation. She remains involved in many local community initiatives, including as past President of the Fairmont Business Association and director of the Fairmont and Area Recreations and Trails Society and the Lake Windermere Ambassadors. As a former owner of a whitewater rafting company, she has a strong entrepreneurial spirit. She and her husband currently own a business in Fairmont Hot Springs.

Her term expires on December 31, 2017.

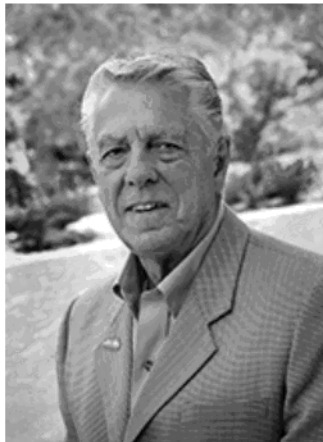
Michael Delich



Michael Delich (Fernie) was born and raised in Rossland and is an active entrepreneur, community leader and sport leader. With a Masters in Business Administration from the Ivey School of Business, he returned to Rossland, then moved to Fernie, to establish a career and raise a family. He was a professional engineer in the Elk Valley mines for 10 years, and then operated his own businesses for 25 years. He led the development of the tourism industry in Fernie by pioneering the development of condominium lodges, townhomes and log homes at Fernie Alpine Resort and operating businesses to attract destination travellers and guests to Fernie. He has also coached successful ski programs and teams, directed World Cup ski races and guided athletes to skiing careers and other endeavors beyond sport.

His term expires on December 31, 2018.

Gord DeRosa



Gord DeRosa (Trail) left a family baking business to start his career with Cominco Ltd. as an electrician/motor winder. He finished his employment with Cominco, functioning as a senior industrial relations officer supervising its WCB Claims and Rehabilitation departments. He also worked for the union as a health and safety coordinator and a substance abuse counsellor. He has served as a councillor for the City of Trail for 27 years and has chaired both the Regional District of Kootenay Boundary and the Association of Kootenay Boundary Local Governments. Throughout his career, he has been involved with many environmentally focused associations. He is a past Board member of the Southern Interior Development Trust and is Chair of the Canadian Columbia River Forum. He has been happily married to Beverly for 53 years.

His term expires on December 31, 2017.

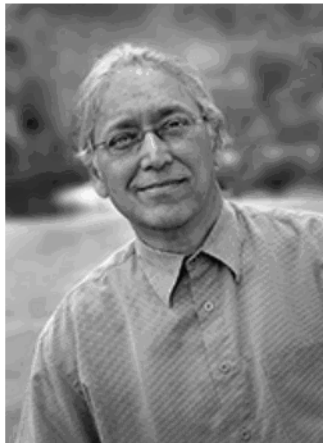
John Dooley



John Dooley (Nelson) emigrated from Ireland in 1967 after training as a tradesman and worked throughout BC and the Yukon. He ran two successful businesses in the Nelson area. He served for six years on Nelson City Council, nine years as Mayor of the City of Nelson and nine years as a director for the Regional District of Central Kootenay. He served on numerous boards over the years, including the Southern Interior Development Trust, Premier's Committee on Climate Change and Federation of Canadian Municipalities, the latter of which he served on for six years, including two years as Chair of the BC Caucus. John has a long history as a volunteer, including Rotary International, Kinsmen, Capitol Theatre Restoration Society, Canadian Cancer Society, Nelson Minor Hockey, Nelson Youth Soccer and Nelson Friends of the Family. He has been married to Pat for 36 years and they have three children and four grandchildren.

His term expires on December 31, 2017.

Am Naqvi



Am Naqvi (Nelson) is a chartered accountant and member of the Institute of Chartered Accountants of BC, which he served as President in 2005/06. Am is currently a partner in the firm of Berg Naqvi Lehmann, Chartered Accountants, in Nelson, and has been in public practice for over 35 years. During the past 30 years, he has served on several boards, including those of the Nelson & District Credit Union, the Nelson Regional Library and the Community First Health Cooperative. Currently he serves as a director for the Columbia Basin Broadband Corporation, an advisor on the Board of the Community First Health Cooperative and Vice-Chair on the Kootenay Savings Credit Union Board.

His term expires on December 31, 2018.

Loni Parker



Loni Parker (Revelstoke) was born and raised in Revelstoke. She is a retired small-business owner and has held the office of Regional Director, Area B (Rural Revelstoke, Mica Creek to Trout Lake) of the Columbia Shuswap Regional District since 1993. She is currently a Board member of the Southern Interior Development Initiative Trust, Revelstoke Community Forest Corporation and Revelstoke Community Housing Society. She founded the first Bear Aware program in BC and is President of the Revelstoke Bear Aware Society. She previously served for eight years as a member of the Board of Columbia Basin Trust (1998 - 2004 and 2008 - 2010). Loni is married with one son, Jeff, and currently resides with her husband Larry in rural Revelstoke.

Her term expires on December 31, 2018.

Rhonda Ruston



Rhonda Ruston (Kaslo) was born and raised in Lethbridge, Alberta. After obtaining her Bachelor of Arts degree at the University of Lethbridge, she was granted a law degree from the University of Ottawa and worked as a lawyer in Lethbridge for almost three decades. She has a strong connection to the West Kootenay, having maintained a home near Kaslo since 1998 and becoming a full-time BC resident in March 2008. She is a member of the Law Society of British Columbia and conducts a general law practice from her office in Kaslo. Rhonda has dedicated much of her life to volunteer endeavors, both as a community member and lawyer, and was appointed Queen's Counsel in the Province of Alberta in recognition of her contributions to the legal profession and public service. Her commitment to volunteerism has continued in BC, having served as Commissioner and Chair of Area D's Advisory Planning Commission and on the boards of directors of the Kaslo InfoNet Society and Kaslo Institute.

Her term expires on December 31, 2017.

Vickie Thomas



Vickie Thomas (?aq'am) was born and raised in ?aq'am and has demonstrated commitment to her community in the form of continuous community involvement and advocacy. She holds a diploma in Business Administration and has over 22 years of experience working within the Ktunaxa Nation, most of which were spent in the capacity of Chief Operating Officer for ?aq'am. Vickie had a crucial role in leading the strategic development for ?aq'am, which is the guiding document to all present and future projects within the community. Vickie has also advocated for First Nations communities as part of both the Aboriginal Capital Committee and the Aboriginal Housing Committee. She has been elected as a Council member for her community and brings with her a wealth of experience, commitment and passion for ?aq'am. Vickie is a proud mom of three children and wife to Mark Thomas.

Her term expires on December 31, 2019.

Jeannette Townsend



Jeannette Townsend (Valemount) was one of the Trust's founding Board members, and served as a director from 1995 to 2010. She is Mayor of the Village of Valemount, a role she also held from 1990 to 2008, plus served as Alderman from 1989 to 1990. She is a director with the Regional District of Fraser Fort George, and also served from 1990 to 2008. She serves on the Columbia Basin Regional Advisory Committee and was Vice-Chair of the Valemount and Area Chamber of Commerce. She has been involved with many boards and committees, including the Omineca Beetle Action Coalition, Prince George Regional Advisory for the Northern Development Initiative Trust, the Union of British Columbia Municipalities, the North Central Municipal Association and the Trans Canada Yellowhead Highway Association. Jeannette has lived in Valemount for nearly 30 years, working in real estate since 1989, and is currently Managing Broker at Valemount Real Estate.

Her term expires on December 31, 2018.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION**

**ISSUE: Clean Energy Vehicle Program and Zero Emission
Vehicles**

KEY MESSAGES:

- British Columbia is a leader in clean transportation, with a world-leading hydrogen and fuel cell industry, the highest electric vehicle adoption rates in Canada, and the largest public charging network in Canada.
- The Clean Energy Vehicle (CEV) Program has been highly successful in reducing market barriers, encouraging the adoption of CEVs by British Columbians, leveraging private, municipal and federal investment in CEVs and infrastructure in British Columbia, and supporting new economic opportunities in the CEV sector.
- Under the Climate Leadership Plan, the CEV Program is being expanded to support new vehicle incentives and infrastructure, as well as education and economic development initiatives.
- Budget 2017 committed an additional \$40 million in 2017/18 towards the CEV Program, including: vehicle incentives; public charging and hydrogen fuelling infrastructure; residential and workplace charging programs; outreach and training; and economic development projects.
- In December 2015, British Columbia joined 13 jurisdictions from around the world and signed the International Zero-Emission Vehicle (ZEV) Alliance. Members of the Alliance will work to increase the adoption of ZEVs and strive to make all new passenger vehicles in their jurisdictions ZEVs by 2050.
- In October 2013, the Province signed a Pacific Coast Action Plan on Climate and Energy under the Pacific Coast Collaborative. In that Plan, jurisdictions have developed the West Coast Electric Fleets Pledge and supporting tools to encourage private and public fleets to adopt a 10 percent zero emission vehicle target.

BACKGROUND:

- British Columbia introduced the CEV Program in 2011, and has since committed more than \$71 million to make ZEVs more affordable and reduce greenhouse gas emissions.
- The CEV Program's vision is to stimulate and transition the market such that, by 2020, 5 percent of new light-duty vehicle purchases in British Columbia are ZEVs.

Contact: Les MacLaren
Cell Phone: 250-889-3479
Date: June 1, 2017

Transition Note: 1

Page 1 of 2

- To date the CEV Program has delivered:
 - over 4,800 new CEVs on the road;
 - over 1,100 charging stations, including 30 DC Fast Charging stations, with another 27 to be installed by March 31, 2018;
 - one new hydrogen fuelling station;
 - 10 research, electrician training and new academic curriculum projects; and
 - delivery of Emotive, an outreach and awareness program.
- The CEV Program has supported the growth of the ZEV sector in British Columbia, which now has 198 companies employing over 3,850 FTEs, producing \$702 million in total economic output and contributing \$373 million to the provincial GDP.
- The CEV Program provides up to \$5,000 off the pre-tax sticker price up to \$77,000 for electric and plug-in hybrid vehicles, and up to \$6,000 for hydrogen fuel cell vehicles.
- The funding approved in Budget 2017 will be distributed as follows:
 - \$27 million for the CEVforBC point-of-sale incentives for light duty vehicles, and dealer and sales staff training and incentives;
 - \$2.5 million for the Specialty Use Vehicle Incentive program that offers incentives to vehicles that do not fit in the CEVforBC vehicle categories;
 - \$0.75 million for Scrap-It incentives for the purchase of an e-bike, car share credit, transit pass, or e-mobility scooter when an older vehicle is scrapped;
 - \$7 million for public charging infrastructure, public hydrogen fuelling infrastructure, and new residential / workplace charging programs;
 - \$2.5 million for a CEV Advanced Research and Commercialization Program to support new economic development in the ZEV sector; and
 - \$1.5 million for job training, public outreach, and program analysis to help grow a provincial clean transportation technology sector.
- In March 2016, British Columbia began offering HOV Lane exemption decals for all clean energy vehicles. To date over 2,967 decals have been granted.
- To date, 38 fleets in British Columbia have signed the West Coast Electric Fleets Pledge, including the provincial fleet, City of Vancouver, City of Surrey and District of Saanich. The provincial fleet is at the “on-ramp” level of the Pledge, committing to evaluate ZEVs as part of all fleet purchases. There are no electric vehicles in the provincial fleet.
- A “Part 3 Agreement” under the Renewable and Low Carbon Fuel Requirements Regulation was signed that allows 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. The incentive is able to be combined with the CEV program incentive allowing a total incentive of up to \$12,000 for hydrogen fuel cell electric vehicles, and up to \$11,000 for battery electric vehicles.

CROSS-REFERENCE:

4 – Renewable and Low Carbon Fuel Requirements Regulation

26– Innovative Clean Energy (ICE) Fund

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 Date: June 1, 2017

Transition Note: 1

Page 2 of 2

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION**

ISSUE: Geothermal Energy

KEY MESSAGES:

- Electricity generated from geothermal resources could provide a significant source of both renewable energy and firm capacity for British Columbia.
- British Columbia has several promising geothermal electricity generation prospects. Potential project sizes may vary from 100 to 200+ megawatts (MW) in the Coast Mountains, and approximately 5 to 15 MW for interior projects.
- In March 2017, the Ministry and the BC Oil and Gas Commission (OGC) brought into force updated regulations that streamline the regulatory framework for geothermal exploration.
- The Ministry is currently considering three geothermal tenure requests. Two are for new permits adjacent to active exploration permits, and one is for the conversion of a permit to a lease. All three requests will require an Order in Council for approval.
- The Ministry has been working with BC Hydro and Geoscience BC to coordinate research into the geothermal energy potential in British Columbia. Improving the knowledge of the geothermal energy potential, should reduce some of the upfront exploratory risks. These high upfront costs and risks have precluded commercial development to date.

BACKGROUND:

- 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 regulations:
 - vest ownership of all geothermal resources in British Columbia with the Crown;
 - set out a framework for the disposition of geothermal resources based on the bid system used for petroleum and natural gas; and
 - regulate exploration for, and the development and use of, these resources through permits and leases.
- 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. Permit holders may apply for a Geothermal Lease which allows development and production of the resource.

Streamlining of the Regulatory Process

- Consequential amendments to the GRA, written in 2008 within the *Oil and Gas Activities Act*, came into force March 31, 2017. The primary impact of these amendments is to transfer to the OGC the regulatory authority for geothermal drilling and geophysical exploration activities.
- The Ministry and the OGC have developed supporting regulations to the GRA. These supporting regulations will be brought into force with the amendments to the GRA.

Current Activity

- There are three active geothermal permits and a geothermal lease in British Columbia.
- The most recent disposition for a geothermal permit was held on January 21, 2014 at Lakelse Lake near Terrace to L.L. Geothermal, a joint venture between the Kitselas Development Corporation and Borealis Geopower.
 - L.L. Geothermal has requested, through a direct-award, additional permit areas adjacent to the existing geothermal permit; and
 - The requested area was referred to local government and First Nations in November 2016. Following the completion of the consultation, an Order-in-Council will be prepared for consideration.
- Approximately 25 kilometers south of Valemont, Borealis Geopower acquired a geothermal permit at Canoe Reach on the Kinbasket Reservoir in October 2010.
 - Borealis requested additional permit areas to the north of the existing permit in 2016 be considered for a direct-award; and
 - A pre-tenure referral has been completed and the Ministry is drafting an Order-in-Council for consideration.
- Tecto Energy acquired a geothermal permit on the north side of Mount Meager near Pemberton in July 2011.
 - Tecto Energy has requested the permit be converted to a geothermal lease to develop this prospect under BC Hydro's Standing Offer Program; and
 - The site is highly prospective, but does not yet have a well drilled, so the conversion will require an Order-in-Council.
- A geothermal lease first issued in 1987 is located on the south side of Mount Meager and is held by Polaris Infrastructure.
 - The 30 year term will expire in December 2017 unless the company requests a renewal; and
 - Renewal terms on the existing lease allow the Minister of Energy and Mines to renew the lease for an additional 30 year term.
- The Ministry has continued to pursue research and coordinate projects with BC Hydro and Geoscience BC in order to improve the state of knowledge of geothermal energy potential in British Columbia.
- Barriers to the exploration and development of geothermal energy in British Columbia include the high cost and risk profile of exploration, and length of exploration and development timelines. In addition, the lack of BC Hydro power calls limits current investment interest in geothermal energy.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION**

ISSUE: Greenhouse Gas Reduction Regulation – Natural Gas

KEY MESSAGES:

- The Greenhouse Gas (GHG) Reduction Regulation (GGRR), authorized under Section 18 and 35(n) of the *Clean Energy Act*, allows Government to set out “prescribed undertakings,” which utilities may choose to carry out to reduce GHG emissions.
- These prescribed undertakings allow utilities to reduce GHG emissions for vehicles and marine vessels and fueling stations, and to help reduce reliance on diesel for remote power generation.
- The Province does not contribute any funding to the incentives or fuelling infrastructure. The programs are funded by natural gas utilities and paid for by natural gas customers.
- Recovery from all customers is required for the program to be successful. If costs are only recovered from those customers who receive grants, these grants would effectively become loans, and the expected uptake in the program and associated GHG emissions reductions would not be achieved.
- The intent of the GGRR is to reduce GHG emissions for the benefit of all customers and all customers will benefit from the incremental throughput on the system.
- Compressed natural gas (CNG) and liquefied natural gas (LNG) fueling stations and infrastructure are paid for by the customer for which the station and infrastructure was built to recover the cost of service. Other ratepayers are not impacted.
- To date, FortisBC has been the only utility to take advantage of the GGRR. Fortis BC produces LNG at its Tilbury Island facility in Delta, BC. FortisBC’s programs have resulted in commitments for more than 600 natural gas vehicles and vessels that have displaced 67.5 million litres of diesel fuel and reduced GHG emissions by more than 74,000 tonnes.
- In March 2017, amendments to the GGRR increased the total spending cap by up to \$160 million to a total of \$336.6 million. This will support recommendations in the August 2016 Climate Leadership Plan (CLP) to incent the conversion or purchase of LNG powered oceangoing marine vessels in British Columbia.

- Amendments will also allow utility investments related LNG bunkering (marine fueling) infrastructure and assets required to enable the development of LNG bunkering capability for LNG powered ocean-going marine vessels calling into British Columbia ports.
- The current level of marine-generated GHG emissions from vessels, including tankers, cruise ships, bulk carriers, container, general cargo, ferries and tugs, calling in to British Columbia ports is estimated at 70 million tonnes of CO₂e per year. The conversion of each coastal freight and deep sea vessel reduces emissions by about 35,000 and 93,500 tonnes of CO₂e per year, respectively.
- Under a Direction to the British Columbia Utilities Commission, FortisBC can increase its Tilbury 1A capital expenditure budget from \$400 million to \$425 million to support LNG sales and distribution through land acquisition for the marine jetty and additional truck load outs. Additional truck load outs will increase the maximum potential utilization of Tilbury Phase 1A and benefit marine-served bunkering sales from Phase 1B.
- The 2017 amendments also include incentives to encourage emissions reductions in BC's transportation sector by promoting renewable natural gas (RNG) for use in commercial fleets.
- The CLP committed to doubling the total pool of incentives available to convert commercial fleets to natural gas, when the new incentives go towards vehicles using 100 percent RNG. Since RNG can be used interchangeably for natural gas and injected easily into the natural gas grid, the demand potential from the transportation market is significant.
- A Renewable Portfolio Allowance was also established to increase the supply of RNG, subject to cost and volume limits.

BACKGROUND:

- The GGRR allows utilities to make time-limited investments with spending caps on expenditures in order to “kick-start” the natural gas vehicle market.
- The original GGRR permitted a utility to spend no more than \$62 million on vehicle and safety upgrade incentives, \$12 million on CNG fuelling stations and \$30.5 million on LNG fuelling stations. There are limits on program expenditures related to administration and marketing, and these programs expired on April 1, 2017.
- In November 2013, the Province amended the GGRR to allow FortisBC to provide guaranteed, firm and competitively-priced LNG to its heavy duty vehicle customers. This was done while maintaining the program's overall spending cap.
- In May 2015, Government further amended the GGRR to allow for shifts in the allocation of incentives and investments within the previously-approved total spending cap in order to better respond to changes in the market place.

- The 2015 amendments prescribed two new undertakings, which allow a utility to spend up to \$5 million to develop a conversion pilot program to incent the conversion of heavy and medium duty vehicles to use CNG or LNG as their primary or secondary fuel source.
 - The second undertaking allows a utility to spend up to \$6 million to promote the use of natural gas for remote power generation in order to reduce reliance on diesel and the primary fuel source.
 - The May 2015 amendments also extended the program by one year, to March 31, 2018, in order to allow for further stakeholder consultation prior to its expiry.
 - In September, 2015, Ministry staff initiated a written consultation process for stakeholders to provide input on the Ministry's intentions to extend and expand the scope of the GGRR. The Ministry sought feedback on the proposed amendments and extension of the program.
 - A consultation paper was emailed to more than 125 stakeholders identified from the 2012 consultation and new stakeholders identified by FortisBC. This list included other utilities such as BC Hydro and Pacific Northern Gas (PNG), BC government agencies such as CAS and TRAN, industry associations such as the Canadian Association of Petroleum Producers (CAPP), the Mining Association of BC, the BC Trucking Association, ports and transit authorities, and all identified current and potential GGRR customers of FortisBC.
 - Stakeholders were generally supportive of the program and its ability to transform the market to natural gas. Industry stakeholders are still concerned about the competitiveness of programs managed by public utilities.
 - Further amendments approved in June 2016 increased the incentive envelope by \$21 million to incent up to four coastal freight vessels and one ocean going vessel and extended the program to 2022.
 - The March 2017 amendment to the GGRR includes a Renewable Portfolio Allowance (RPA),^{s.21} An RPA will allow a utility to provide a voluntary RNG program with regulated rates, while the cost would be borne across all utility customers, not just those receiving RNG service. By establishing an RPA, utilities and producers will have market certainty, including an incentive to adopt new technology and lower the cost of production.
 - s.21
-
- Reporting requirements include an Annual Report for the period from April 1 to March 31 for each year of the prescribed undertaking. The Annual Report is to be filed by May 31, and includes a number of reporting measures for both incentive funding and fueling station expenditures permitted under the regulation. The most recent report was submitted on May 31, 2016 and covered the period from April 1, 2015 to March 31, 2016.

- The GGRR is enabled by the *Clean Energy Act* and, as such, is administered by the Ministry of Energy and Mines. However, staff work closely with the Ministry of Natural Gas Development to facilitate development of the Province's natural gas resource.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

**ISSUE: Renewable and Low Carbon Fuel Requirements
Regulation**

KEY MESSAGES:

- British Columbia is the only jurisdiction in Canada with both a renewable fuel requirement and a low carbon fuel standard (LCFS).
- The *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act* (Act) requires:
 - a provincial annual average of 5 percent renewable content in gasoline sold in British Columbia;
 - a provincial annual average of 4 percent renewable content in diesel sold in British Columbia; and
 - a 10 percent LCFS to reduce the average lifecycle carbon intensity of transportation fuels by 2020, relative to 2010.
- The August 2016 Climate Leadership Plan commits the government to a 15 percent LCFS by 2030, relative to 2010.
- 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, as specified in the Act. Petroleum fuel suppliers in a debit position can purchase credits from low carbon fuel suppliers.
- Regulatory amendments have been made to:
 - improve credit market information and avoid potential trading fraud;
 - establish new penalties for poor compliance reporting;
 - improve the exchange of carbon intensity information among fuel suppliers; and
 - update default carbon intensity values to reflect the best available science.
- The Ministry has implemented an audit program with the Ministry of Finance to minimize costs to Government and fuel suppliers by conducting combined inspections for the Act, the Motor Fuel Tax and the Carbon Tax. This program is supported by funding from the Innovative Clean Energy (ICE) Fund.
- The Transportation Fuel Reporting System (TFRS) is an electronic reporting system that is being developed to enable credit tracking and

exchange, as well as full compliance reporting. It will also be funded through the ICE Fund.

- The carbon intensity values of more than 245 low carbon fuels have been approved for use in British Columbia.
- Part 3 Agreements (compliance credits for the supply of low carbon fuels beyond current market demand) currently support bio-crude testing, the development of British Columbia's first public hydrogen fueling station, propane conversions, and additional funding for the Scrap-It program.

BACKGROUND:

- On October 28, 2013, Premier Christy Clark, California Governor Edmund G. Brown Jr., Oregon Governor John Kitzhaber, and Washington Governor Jay Inslee, signed the Pacific Coast Action Plan on Climate and Energy, which includes a commitment for California and British Columbia to maintain their low-carbon fuel standard, and for Washington and Oregon to implement similar standards.
- A LCFS establishes the lifecycle carbon intensity of a transportation fuel – exploration, production, refining, transportation and combustion for petroleum fuels, and crop growing, harvesting, processing, transport and combustion for biofuels.
- California and Oregon are the only other jurisdictions in North America with a LCFS. Similar programs have been proposed in the European Union and the United Kingdom.
- California has announced that it is considering extending the LCFS beyond 2020 with more aggressive long-term targets, such as a 15 to 20 percent reduction in average carbon intensity, below 2010 levels, by 2030.
- Oregon is implementing their LCFS (the 2016 Clean Fuels Program), which will require a 10 percent reduction in the carbon intensity of transportation fuels by 2026.
- Washington has been unable to pass a LCFS, and is working to identify alternative measures to reduce greenhouse gas (GHG) emissions from transportation.
- Alberta, Saskatchewan, Manitoba and Ontario have renewable fuel requirements. Alberta suppliers must demonstrate at least 25 percent fewer GHG emissions than the equivalent petroleum fuel. Ontario requires that 3 percent of diesel must be greener diesel that achieves at least a 50 percent reduction in carbon intensity over conventional petroleum diesel. Starting in 2017, the requirement increases to 4 percent, with a 70 percent carbon intensity reduction for the renewable portion.
- The Government of Canada has implemented a renewable fuel standard requiring a national average of 5 percent renewable content in Canada's gasoline supply and 2 percent renewable content in diesel. A permanent nationwide exemption from the 2 percent renewable content requirement for heating distillate oil has taken effect.
- British Columbia is working with the Government of Canada to assist in the development of the national Clean Fuel Standard (CFS) announced in the December 2016 Pan-Canadian Framework on Clean Growth and Climate Change. The CFS is intended to reduce Canada's GHG emissions by 30 megatonnes per year by 2030 through the increased use of lower carbon fuels and alternative technologies.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: National Clean Fuel Standard

KEY MESSAGES:

- On March 3, 2016, through the Vancouver Declaration on Clean Growth and Climate Change, First Ministers committed to implementing greenhouse gas emissions (GHG) mitigation policies in support of meeting or exceeding Canada's 2030 target for a 30 percent reduction below 2005 levels.
- The Government of Canada announced on November 25, 2016, that it will consult with provinces and territories, Indigenous peoples, industries, and non-governmental organizations to develop a regulatory framework for a Clean Fuel Standard (CFS) to reduce Canada's GHG emissions through the increased use of lower carbon fuels and alternative technologies.
- The overall objective of the CFS is to achieve 30 megatonnes of annual reductions in GHG emissions by 2030, contributing to Canada's effort to achieve its 2030 GHG mitigation target.
- The CFS was also included in the Pan-Canadian Framework announced on December 9, 2016.
- British Columbia and Environment and Climate Change Canada (ECCC) are co-chairing a federal/provincial/territorial working group (FPT WG) to provide a mechanism for provinces and territories to share views, perspectives and provide technical input during the development of the CFS.

BACKGROUND:

- ECCC is reviewing comments on a discussion paper it released in February 2017.
- A number of jurisdictions and stakeholders have expressed concern over ECCC's approach and process, and are recommending that the British Columbia low carbon fuel standard be adopted for the transportation sector before extending the CFS to other fuels and sectors.
- While British Columbia is a leader in climate change policies, many other provinces do not have policies in place with a similar depth and scope.

CROSS-REFERENCE:

4 – Renewable and Low Carbon Fuel Requirements Regulation

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Transition Note: 5

Page 1 of 1

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Post-Secondary Clean Energy Partnerships

KEY MESSAGES:

- Launched in September 2015, the Post-Secondary Clean Energy Partnership (PSCEP) program, funded by the Innovative Clean Energy (ICE) Fund, supports research in clean energy science and technology projects undertaken by post-secondary institutions in British Columbia.
- The PSCEP program leverages federal government funding from the Natural Sciences and Engineering Research Council of Canada (NSERC) and also requires investment from a private company or industrial research partner.
- Projects are selected through a process defined in a Memorandum of Understanding between the Ministry of Energy and Mines and NSERC. Provincial funding is contingent upon a researcher's successful application for NSERC funding.
- Technological advancements arising from this program could lead to the emergence of more clean energy start-up companies and the attraction and retention of highly skilled experts within British Columbia.
- The ICE Fund has facilitated two calls for applications for clean energy research projects, with individual awards capped at \$100,000 in the 2015 Call and \$50,000 in the 2016 Call.
- The 2015 Call for Applications resulted in \$442,000 being distributed to five post-secondary institutions. Funding was distributed to research teams at the British Columbia Institute of Technology, University of British Columbia, Simon Fraser University, and the University of Victoria (2). Projects included coastal wave energy, high performance batteries and battery chargers, and building insulation.
- The 2016 Call for Applications concluded in January 2017. Five pre-approved research projects may be funded in fall 2017, contingent on additional funding approval by Treasury Board.

BACKGROUND:

- Through the ICE Fund, the Ministry is expanding the integral role it plays in achieving Government's energy, economic, environmental and greenhouse gas reductions priorities.

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Transition Note: 6

Page 1 of 2

- Since 2008, the ICE Fund has allocated approximately \$97 million to support pre-commercial clean-energy technology projects, clean-energy vehicles, research and development, and energy efficiency programs.
- The PSCEP program was originally allocated \$1.25 million over three years; however, approximately \$800,000 was reallocated to other program areas to alleviate budget pressures over the past two years. Some PSCEP application reviews could not meet NSERC approvals in time to meet British Columbia's year-end funding requirements. As such, funds were rededicated to other approved funding priorities (e.g., Clean Energy Vehicle Program, Energy Efficiency Branch, and to accommodate funding pressures, such as Transportation Fuel Reporting System (\$250K) and the Marine Energy Centre Roadmap (\$100K)).
- The 2016 Call for Proposals has resulted in five projects being pre-approved for funding, contingent on additional funding of \$230,000 being approved by Treasury Board as part of a planned spending request to be brought forward in fall 2017. The projects will leverage \$394,000 in NSERC funding and \$394,000 in private sector contributions.

CROSS-REFERENCE:

Innovative Clean Energy (ICE) Fund – TN 26

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: British Columbia Marine Energy Centre

KEY MESSAGES:

- Marine energy, unlike other renewable energy sources, is predictable, stable and forecastable. By 2050, the global wave and tidal industry is projected to be worth US\$600 billion. British Columbia has a number of competitive advantages to capture a significant portion of this economic opportunity:
 - The British Columbia coastline is one of the most energetic wave climates in the world;
 - British Columbia has a significant marine industry cluster, including wave, tidal, and ancillary technology developers in addition to marine engineering, design, manufacturing, and construction;
 - The University of Victoria West Coast Wave Initiative (WCWI) hosts internationally-recognized facilities for wave converter concept testing and the advancement of wave converters to commercial readiness; and
 - Federal and provincial clean technology and innovation commitments are in line with growing and graduating commercial marine energy products and services into the global marketplace.
- In May 2016, \$100,000 from the Innovative Clean Energy Fund was allocated to WCWI to develop an actionable British Columbia Marine Energy Centre (BC MEC) 'Roadmap' by December 2016. The Roadmap identified British Columbia's competitive advantages and confirmed the market need for the Centre of Excellence.

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BACKGROUND:

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MARINE ENERGY IN BRITISH COLUMBIA

What does the future hold for clean power generation and technology using water?

By 2050, the global wave and tidal industry is projected to be worth \$600B US. B.C. is positioned to capture a significant portion of this economic opportunity through the leveraging of the Province's natural competitive advantages.



TAPPING INTO MARINE ENERGY ON THE WEST COAST

B.C. has a long, successful track record generating power from moving water. The B.C. coast receives wave activity from the entire Pacific Ocean. This results in a predictable, stable and forecastable renewables energy resource, and positions B.C. as the ideal testing ground for new technologies.



INNOVATING WITH RENEWABLE ENERGY TECHNOLOGIES

Innovations in wave and tidal energy technologies are making devices less expensive and more efficient; harnessing more energy at lower cost. As developers continue to test devices and refine their technologies, these advancements will bolster the provincial economy while furthering our leadership on climate change and renewable energy.



GAINING FROM AN ABUNDANCE OF LOCAL EXPERTISE

B.C. is home to a significant marine industry cluster, including wave, tidal, and ancillary technology developers in addition to marine engineering, design, manufacturing, and construction. Enhancing this industry diversity is applied and academic expertise, accelerating the development of world leading technologies.

Capturing the Marine Energy Opportunity

Through the Marine Energy Centre, B.C. is advancing innovation in clean technology, access for remote coastal communities to sources other than diesel, and economic growth including exports from the marine industry.



HELPING SHAPE THE PROVINCE'S FUTURE

The B.C. Marine Energy Centre enables achievement of B.C.'s critical aims, including:

- **Job Creation and Investment** – The Centre will attract skilled individuals to B.C. while also driving technology commercialization and recognition as a global hub for marine energy.
- **Clean Technology and Green Economy** – The Centre supports the development of B.C.-based clean technologies and growth of companies in this sub-sector of the economy.
- **First Nations** – The Centre aims to help remote First Nations communities with the shift toward renewable energy.



ALIGNING WITH CANADA'S PRIORITIES

The B.C. Marine Energy Centre aligns with national commitments, including:

- The Pan-Canadian framework on Clean Growth and Climate Change, supporting growth in marine renewable technologies capable of producing clean electricity.
- Federal departments investing in the development of clean technologies, including Natural Resources Canada, Sustainable Development Technology Canada, Innovation, Science and Economic Development Canada, Western Economic Diversification, and the National Research Council.

CONNECTING INTERNATIONALLY

The B.C. Marine Energy Centre furthers relationships across the globe with other jurisdictions pursuing wave and tidal energy, including:



How does this benefit British Columbians?



JOBS

The B.C. Marine Energy Centre will foster growth of the industry, directly and indirectly creating good, high skilled jobs for British Columbians. Studies have shown how wave and tidal energy can lead to thousands of full time jobs.



INVESTMENT

The B.C. Marine Energy Centre will promote more investment in the economy, adding to the growing and vibrant technology sector and substantiating the Province's reputation for clean energy and a strong marine industry.



EXPORT OPPORTUNITIES

The B.C. Marine Energy Centre will support developers as they export their technologies globally, reaching strategic markets throughout the world. This strengthens the resilience of the provincial economy while also accelerating growth.



TECHNOLOGY INNOVATION

The B.C. Marine Energy Centre will encourage made-in B.C. technologies and position the Province as a hub for marine energy innovation. This in turn is not only a driver of economic prosperity but also a catalyst for growth in other sectors.



LOCAL EXPERTISE

The B.C. Marine Energy Centre will bolster the foundation for a prosperous province by engaging with businesses and local expertise in the marine sector, academic institutions, and public service.



FIRST NATIONS & REMOTE COMMUNITIES

The B.C. Marine Energy Centre will work in partnership with First Nations, respecting traditional territories, and connecting developers to support the electrification of remote coastal communities.

How do I learn more?

For inquiries, please contact:

Innovative Clean Energy Fund
Ministry of Energy and Mines



BRITISH
COLUMBIA

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: British Columbia Electricity Market Overview

KEY MESSAGES:

- British Columbia's regulated, cost-based electricity market structure ensures that British Columbians continue to benefit from low cost, reliable electricity supply.

BACKGROUND:

Regulation

- The British Columbia electricity market is a cost-based system, where rates that consumers pay are based on the cost of electricity generation, procurement and delivery rather than the price set in a competitive market.
- Government set a 10 Year Rates Plan in 2013, specifying rate caps for the first five years of the plan. The British Columbia Utilities Commission (BCUC) will set rate increases for the last five years of the plan.
- The BCUC regulates BC Hydro, FortisBC and other electrical utilities to ensure a low cost, reliable electricity supply. Municipal electric utilities (e.g. New Westminster, Nelson) are exempt from BCUC regulation.

Supply

- British Columbia has over 18,000 megawatts (MW) of installed generation capacity:
 - BC Hydro (68 percent) ~ 11,988 MW, 30 hydroelectric generating stations;
 - IPPs (28 percent) ~ 5,316 MW, 115 facilities, including:
 - Alcan (5 percent) ~ 896 MW, 1 facility;
 - Teck (3 percent) ~ 480 MW, 1 facility;
 - Waneta Expansion (2 percent) ~ 335 MW, 1 facility; and
 - Other (wind, biomass, run of river hydro) ~ 4,356 MW, 112 facilities.
 - CPC/CBT (2 percent) ~ 430 MW, 3 facilities; and
 - FortisBC (1 percent) ~ 225 MW, 4 facilities.
- BC Hydro's total capacity is comprised of:
 - 58 percent from projects in the Columbia Basin;
 - 29 percent from projects in the Peace Basin;
 - 9 percent from the Coastal and Lower Mainland areas; and
 - 4 percent from projects on Vancouver Island.

For this past year, about 98 percent of BC Hydro's generation and procurements came from clean and renewable resources. BC Hydro has two gas facilities, 73 MW Fort Nelson station and the 48 MW Prince Rupert station, and several diesel generators in non-integrated areas.

Burrard Thermal was phased out in 2016 and is currently being decommissioned. Prince Rupert provides back-up to the North Coast. BC Hydro purchases electricity from the 120 MW MacMahon/Taylor plant and back-up capacity from the 240 MW Island Generation Project.

Demand

- The most recent data from the BCUC is from 2014 and shows utility shares, by sales of electricity, as:
 - BC Hydro: 93.3 percent;
 - FortisBC: 4.8 percent;
 - Municipally-owned utilities (New Westminster, Nelson, Penticton, Grand Forks, and the District of Summerland): 1.9 percent; and
 - Other investor-owned utilities: 0.03 percent.
- BC Hydro's electricity sales by customer type in 2015/2016:
 - 30 percent for Residential (1,751,296 customers);
 - 32 percent for Light Industrial/Commercial (205,615 customers);
 - 24 percent for Large Industrial (185 customers); and
 - 14 percent for other (3,459 customers), which includes surplus energy sales.

Trade

- Electricity trade enhances reliability and revenues from trade help to keep electricity rates low.
- Powerex, BC Hydro's trading subsidiary, is able to sell power to the United States and Alberta markets at peak times when prices are relatively high, and buy power during off peak times when prices are low.
- However, in recent years, market prices have generally been consistently lower than in the past.
- In a given year, BC Hydro's net import or export position is determined by a combination of customer demand and water inflows. Over the past 10 years, based on domestic purchases and sales, BC Hydro has been a net importer in 5 years, relatively balanced in 3 years, and a net exporter in 2 years. British Columbia currently has a surplus and is a net exporter of electricity.

Cross Reference

15 – BC Hydro 10 Year Rates Plan and Competitive Rates

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: British Columbia Electricity Sector Revenue to Government

KEY MESSAGES:

- The electricity sector in British Columbia is a significant contributor to provincial revenue and the provincial economy.

BACKGROUND:

- Electricity sector contributions include:
 - Direct tax revenues, royalties and dividend payments from electricity sector activities (e.g. water rentals, school taxes, social services taxes, etc.);
 - The electricity sector also provides employment, related taxes and economic activity;
 - Sales of the provincially-owned Canadian Entitlement to the Columbia River Treaty Downstream Power Benefits (DSB);
 - Commercial Crown Corporation net income, which is included in Government revenues in the Province's Summary Income Statement; and
 - Facilitating economic activity through the competitive electricity rates and low carbon power inputs enjoyed by British Columbia businesses.
- Budget 2017 includes the following major contributions from BC Hydro:

	Forecast 2016/17	Plan 2017/18	Plan 2018/19	Plan 2019/20
BC Hydro's Net Income	684	698	712	712
BC Hydro's Dividend	259	159	59	0

s.13,s.17

Note 1: Includes water rentals for Waneta. Drop in 2017/18 reflects removal of Tier 3 water rentals.

Note 2: The reconciliation of taxes to BC Hydro's Forecast Income Statement is as follows:

	F2017	F2018	F2019	F2020³
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Total taxes per Income Statement	230	237	243	248
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Taxes to Province include approximately \$8-\$9 million per year paid to Regional Districts for F2017 to F2020. Note 3: Rounded to the nearest \$million.

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Date: June 1, 2017

Transition Note: 9

Page 1 of 3

Net Income

- Heritage Special Directive No. HC1 and Direction No. 7 were amended in July 2016 by:
 - Fixing the 2016/17 dividend at the minimum Budget 2016 level (\$259M) as per the 10 Year Rates Plan, starting in 2017/18, BC Hydro's dividend payment is reduced by \$100 million per year until it reaches zero; and
 - Eliminating the Consumer Price Index inflation adjustment in BC Hydro's net income after 2018/19.

Water Rentals

- The Water Sustainability Fees, Rentals and Charges Tariff Regulation (Regulation) under the *Water Sustainability Act* came into force on February 29, 2016, and will eliminate Tier 3 water rental charges (\$50 million per year).
- The rates for commercial power use and general power use purposes are indexed to the Consumer Price Index. Prior to 2011, these rates were indexed to annual increases in BC Hydro electricity rates.
- Current waterpower water rental rates under the Regulation are tiered as follows:
 - 1st-Tier: \$1,339/GWh for output up to 160 GWh per year;
 - 2nd-Tier: \$6,243/GWh for output exceeding 160 GWh up to 3,000 GWh per year; and
 - 3rd-Tier: \$6,560/GWh for output exceeding 3,000 GWh per year.
- Because of differences in timing for BC Hydro's fiscal year and assessments for water rentals, the Tier 3 rate remains on the books for this year. However, it has been adjusted so that BC Hydro pays the same as if the higher Tier 3 rate had been removed on April 1, 2017.
- In 1998, the Province initiated a process to establish water use plans (WUPs) for 23 BC Hydro hydroelectric facilities to address legal challenges around compliance with the federal *Fisheries Act*.
- Since BC Hydro voluntarily requested amendments to their licences, water rental remissions of up to \$50 million per year are being provided to BC Hydro as compensation for the cost of the operational changes agreed to in the WUPs, including foregone power, physical works and effectiveness monitoring.
- To offset the cost to the Province of providing water rental remissions to BC Hydro, a third water rental block (Tier 3) was added to the General Power Use water rental rate structure effective January 1, 2008.
- Government revenue from BC Hydro (taxes, water rental payments, and dividends) has been stable for the last 15 years and has actually decreased relative to inflation. Under the 10 Year Rates Plan, to reduce the rate impacts of BC Hydro's capital investments, Government will reduce its revenues from BC Hydro by eliminating the Tier 3 water rental rate, which costs BC Hydro \$50 million per year, starting in fiscal 2018.

Property Taxes

- The electricity sector's taxes to municipalities include taxes paid on the assessed value of their substations, power lines and the land they sit on.
- BC Assessment is looking at updating the value of utilities and clean energy producers' transmission and distribution lines for the first time since 1999. This assessed value could rise significantly.
- Assessments on substation land in the lower mainland have been increasing significantly with property prices, increasing BC Hydro's taxes and Grants in Lieu of Taxes to municipalities in that area.

s.13

CROSS-REFERENCE:

15 – BC Hydro 10 Year Rates Plan

15A – 10 Year Rates Plan Table

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUES: ICE Fund – Energy Efficiency Portfolio

KEY MESSAGES:

- Over the past three years, the Innovative Clean Energy (ICE) Fund has expanded its scope to include strategic support to the broader clean tech sector, with the objectives of fostering economic development, advancing the market for future codes and standards, and reducing greenhouse gas (GHG) emissions.
- In 2015, British Columbia approved \$2.25M in ICE Fund energy efficiency initiatives to strengthen the home retrofit industry, advance technology options for high performance buildings, provide an incentive for oil furnace to heat pump conversion, and accelerate adoption of improved energy management practices in the industrial sector.
- In 2016, British Columbia approved \$1.46M in ICE Fund energy efficiency initiatives to increase industry capacity to build high performance buildings, provide energy coaching services for homeowners, support building energy benchmarking, develop innovative tools to verify compliance with building code energy efficiency requirements, and extend support for the provincial oil furnace to heat pump conversion incentive.
- In 2017, British Columbia approved \$2.5M in ICE Fund energy efficiency initiatives over three years, FY2018-2020, to increase industry capacity to build affordable, high performance buildings in support of the BC Energy Step Code, support research into leading energy technologies for buildings, support building energy benchmarking and labelling, and develop innovative tools to verify compliance with building code energy efficiency requirements.
- Together, the 2017 initiatives will leverage over \$1M in federal, local government and utility partner funds.

BACKGROUND:

- The ICE Fund is a Special Account funded through a levy on natural gas, fuel oil and grid delivered propane sales. The ICE Fund is designed to support the Province's energy, economic, environmental and GHG reduction priorities, and advance British Columbia's clean energy sector.

- In 2015, British Columbia approved \$2.25M in ICE Fund energy efficiency initiatives, including the following:
 - Oil-to-Heat Pump Incentive Program;
 - ISO 50001 Industrial Energy Management Incentive;
 - Home Energy Performance Training and Accreditation;
 - Passive House Training Incentive;
 - High Performance Window Research and Development Incentive;
 - Electric Heat Pump Water Heater Testing;
 - British Columbia Window Market Study; and
 - FortisBC Gas Electronic Data Exchange for Portfolio Manager.
- In 2016, British Columbia approved \$1.46M in ICE Fund energy efficiency initiatives, including the following:
 - Oil to Heat Pump Incentive Program Expansion;
 - Home Energy Rebate Offer - Energy Coaching Incentive;
 - High Performance Home Builders Training Incentive;
 - Passive House Training Incentive Expansion;
 - Benchmarking Data Management Options Project;
 - British Columbia EnerGuide Rating System Transition Project; and
 - Commercial Building Energy Code Compliance Checklist Project.
- In 2017, British Columbia approved \$2.5M over three years in ICE Fund energy efficiency initiatives, including the following:
 - High Performance Home Builders Training Support;
 - Energy Step Code Best Practices Guide for Builders and Local Governments;
 - High Performance Building Cost-Optimization Tool;
 - High Performance Building Research and Development;
 - Air Source Heat Pump Performance Study;
 - Building Owners and Managers Association of British Columbia Energy Advisor Project;
 - Part 9 Energy Step Code Compliance Tool Phase 2;
 - Part 3 Energy Step Code Checklist Phase 2;
 - High Performance Window Rebate; and
 - BC – NRCan ISO 50001 Incentive.

CROSS-REFERENCE:

26 – Innovative Clean Energy (ICE) Fund

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Amendments to the Energy Efficiency Standards Regulation

KEY MESSAGES:

- The Energy Efficiency Standards Regulation (EESR) under the *Energy Efficiency Act* (EE Act) sets minimum energy performance standards for energy-using equipment and building components manufactured, sold, leased or disposed of in British Columbia;
- EESR standards reduce energy bills for consumers, support competitive electricity rates, and create employment and investment opportunities;
- The Ministry consults stakeholders and the general public on a regular basis on proposals for new standards, or updates to existing standards;
- There have been five major amendments to the Regulation since 2006;
- In fall 2016, the Energy Efficiency Branch consulted with stakeholders on a proposed Amendment 6 to the EESR;

s.12,s.13

- The standards are aligned with current and proposed standards from the United States Department of Energy, the British Columbia Building Code and Pacific Coast Collaborative Partners, including California and Oregon;

s.12,s.13

- These savings will help consumers reduce energy bills as well as support the Climate Leadership Plan and BC Hydro's conservation targets set out in *Clean Energy Act*;
- An OIC to implement Amendment 6 has been prepared and will be brought forward for consideration by the incoming government.

BACKGROUND:

- The Ministry employs a targeted approach to increase the availability, awareness, affordability and acceptability of energy efficient products in the marketplace. In coordination with utility and industry partners, the Ministry helps to foster the development of energy efficient products, increase consumer awareness of energy efficiency opportunities, and provide incentives and financing for these products;
- Once an energy efficient product achieves a significant market penetration, efficiency standards are used to lock in those savings. This allows provincial and utility resources to be redirected to the next level of energy efficiency in a cycle of continuous improvement. It also prevents low-efficiency products from other jurisdictions being “dumped” in British Columbia, resulting in higher energy bills than with high-efficiency products. Once regulation is in place, enforcement ensures a level playing field for businesses;
- Costs and benefits of any proposed standard are carefully weighed and outlined in a Regulatory Impact Statement released during consultation. Important factors include economic impacts, market share of high-efficiency products, stakeholder feedback, and contribution towards British Columbia’s energy efficiency and emission reduction targets;
- The Ministry regulates energy efficiency standards through the EE Act, which applies to products that are manufactured, offered for sale, sold, or leased within British Columbia, including products that are imported from other jurisdictions. The federal EE Act applies to products that are imported into British Columbia from another province or country;
- To minimize duplication, British Columbia will typically defer to Natural Resources Canada (NRCAN) regulation for products manufactured out of province. However, when NRCAN regulations do not exist or are significantly delayed, and other provinces or major jurisdictions have moved forward with regulation, it is typically in the public interest to harmonize with other provinces or major jurisdictions;
- Cooperation on standards is featured in the Pacific Coast Collaborative (with California, Oregon and Washington) and the Canadian Energy Strategy (with Canadian provinces and territories);
- The Ministry works closely with the Office of Housing and Construction Standards to minimize unnecessary duplication between BC Building Code energy efficiency provisions and product efficiency standards under the EE Act.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUES: Utility Demand Side Management

KEY MESSAGES:

- Energy efficiency and conservation programs – otherwise known as Demand-Side Management (DSM) - provide a cost effective resource for utilities to address energy and capacity needs, while helping British Columbia families and businesses reduce their energy bills;
- The Province provides the regulatory framework for DSM through legislation and regulation, including the *Clean Energy Act* (CE Act), the *Utilities Commission Act* and the Demand-Side Measures Regulation (DSM Regulation);
- Utility DSM expenditures are approved by the British Columbia Utilities Commission (BCUC);
- In July 2016, BC Hydro submitted its Revenue Requirements Application for F2017 to F2019, including DSM expenditures, to the BCUC. A decision on the application is expected by fall 2017;
- In the current electricity surplus environment, BC Hydro has continued to moderate its DSM expenditures while also considering changing customer expectations in program design;
- BC Hydro plans to invest \$375 million in DSM over the next 3 years (an average of \$125 million per year). The new DSM Plan is forecast to reduce BC Hydro's increase in electricity demand in F2021 by up to 106 percent, exceeding the CE Act target of 66 percent. This assumes a no-LNG scenario. In an LNG scenario, the forecasted reduction in incremental electricity demand is 90 percent. Exceeding 100 percent means that overall electricity demand is decreased;
- Utility costs for DSM programs under the new plan will range from \$0 to \$34 per megawatt hour (MWh) with an average cost of \$22 per MWh. Program costs under the previous plan ranged from \$10 to \$54 per MWh with an average cost of \$29 per MWh;
- Because the utility cost of DSM is below the forecasted 'border sell price' for electricity of \$36 per MWh, the DSM portfolio is expected to reduce overall revenue requirements in spite of its contribution to the electricity surplus;

- FortisBC (electric)'s Long Term DSM Plan, currently before the BCUC, includes 31 gigawatt hours per year of energy savings, a slight increase over past years;
- The August 2016 Climate Leadership Plan made a commitment to "amend the DSM Regulation to allow FortisBC to expand their residential, commercial, and industrial gas equipment incentives by at least 100%."
- Amendments to the DSM Regulation were made in March 2017 that deliver on this commitment. Amendments also were made to encourage utility support for the new building 'Step Code's, and low-income DSM;
- In 2016, FortisBC (gas) spent \$32.2 million on DSM and achieved 438 terajoules in new savings which will reduce greenhouse gas (GHG) emissions by 218,000 tonnes per year. It has more than tripled its spending on DSM since 2005, and with the changes to the DSM Regulation, is planning to further double its spending on DSM by 2020;
- Pacific Northern Gas's first ever DSM Plan was approved by the BCUC in December 2015. The Plan includes \$1.24 million in new DSM funding over 4 years (2015-2018), which will result in incremental yearly savings of 3,019 gigajoules by 2018. This will reduce GHG emissions by an additional 323 tonnes per year;
- Low-income DSM has been a priority for Government and is required via the DSM Regulation. BC Hydro currently spends about \$2 million per year on low-income DSM, and FortisBC currently spends \$2.3 million per year on low-income programs. Programs include free energy-savings kits, home energy retrofits, renovations for housing, and other measures.

BACKGROUND:

- The CE Act includes a target for BC Hydro to meet 66 percent of its new demand through DSM by 2020;
- Utility DSM programs are "decoupled" from sales of gas/electricity, allowing utilities to earn a return on DSM investments and ensuring efficiency and supply investments are treated as comparable alternatives in resource planning;
- The DSM Regulation allows the Minister to specify criteria for evaluating cost-effectiveness and adequacy of a DSM portfolio;
- DSM is typically a utility's most cost-effective resource in addressing new demand. For example, BC Hydro's average DSM program cost is \$22 per MWh, significantly below BC Hydro's Long Run Marginal Cost of new supply of \$100 per MWh.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Site C Update (Permitting, Construction, Litigation, Audit)

KEY MESSAGES:

Permitting/Land Related Agreements:

- All permits and authorizations are in place for the construction currently underway. Additional authorizations will be required at both the provincial and federal levels as construction progresses. Several hundred separate authorizations will be required over the life of construction. The Province continues to consult with First Nations on all authorizations that will be required for the project;
- At the end of April 2017, the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) issued a temporary licence of occupation under the *Lands Act* that is a key requirement for work involving a planned highway realignment. ^{s.16}
s.16
- Agreements are in place with other First Nations. Typically, the components include an Impact and Benefits Agreement, a Contracting Agreement and a Tripartite Land Agreement, to which British Columbia is also a party. Benefits to First Nations include cash payments, procurement opportunities, and the selection and transfer of provincial Crown lands and/or commitments to develop recommendations for enhanced land management initiatives. Consultations with the public, stakeholders and First Nations will occur before FLNRO confirms Crown land parcels for transfer or protection;
- BC Hydro transferred funds for the dam site Crown Grant in Fiscal 2016/17.

Construction:

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Estimate Transition Note: 13

Page 1 of 6

- The Site C Final Investment Decision (FID) was announced on December 16, 2014, following provincial and federal environmental certification in October 2014. Construction started in July 2015;
- BC Hydro is on track to deliver the Site C project on time by the in-service date of November 2024, and on budget. To date, activities and results are within the approved \$8.335 billion pre-reserve budget, with no indication that the \$440 million project reserve will be required. BC Hydro has retained a prudent contingency for the current stage of the project;
- A significant amount of work has been undertaken since July 2015:
 - More than 900 hectares of land cleared for site preparation;
 - A 1,600-person worker lodge is complete;
 - Millions of cubic metres of material have been excavated on the north and south banks of the dam site;
 - Road improvements are substantially complete;
 - A 325-metre-long temporary construction bridge across the Peace River was completed at the end of March 2016; and
 - Main civil works mobilized to the Site C dam site in March 2016 and started physical work in June 2016.
- In March 2017, 2,252 workers were employed on the project, with 1,814 (81 percent) identified as being from British Columbia and over 700 workers on site identified as being from the Peace River Regional District (PRRD);
- More than \$4 billion in financial commitments have been made, including contracts and agreements. The main civil works contract is the largest contract for the project at \$1.75B. This contract comprises the majority of earthworks to construct the project and includes the construction of an earthfill dam, two diversion tunnels, and a concrete foundation for the generating station and spillways;
- Geotechnical risk: The dam site has been extensively studied^{s.12}
 s.12 Geotechnical risks for the North (Left) Bank Site Preparation are being actively managed, including a 400 m tension crack that emerged in February 2017. Some uncertainty will remain until major civil construction activities near completion in 2022;
- Environmental compliance risk: All contractors on the project have experienced difficulties in adapting their construction methodologies to achieve the project's environmental commitments. To address this, BC Hydro is working collaboratively with the contractors to help them

understand these commitments and implement solutions that meet regulators' expectations. On April 25, 2017, senior officials from the BC and Canadian Environmental Assessment Offices, BC Hydro and the Ministry of Energy and Mines (MEM) visited Site C to thoroughly understand and discuss erosion and sediment control requirements;

- Labour –related risk: Active labour organization attempts (i.e., union “raiding”) have been observed on site, posing a potential risk of labour disruptions. A recent raid attempt by the International Union of Operating Engineers was unsuccessful. Ongoing labour relations are being closely monitored. Labour market pressure due to economic growth is expected over the next decade.

Litigation:

- Of nine legal challenges of major environmental approvals and permits, four were discontinued and five dismissed by the courts. Four of the court decisions dismissing the legal challenges were appealed: three appeals were dismissed with one still pending. In addition, two appeals of BC Hydro's water licence have been filed with the Environmental Appeal Board, and will be heard starting in January 2018. A table on page 6 summarizes litigation details.

Audits/Reviews:

- In November 2015, the Office of Auditor General (OAG) of BC informed the MEM and BC Hydro that the office is in the early stages of planning a performance audit of Site C identified in their July 2015 plan. The plan stated the audit would cover, “whether BC Hydro's recommendation and government's decision to build Site C was supported by sufficient information and analysis to demonstrate that it would meet government's economic, social and environmental goals.”
- In August 2016, at a meeting to update MEM staff regarding the audit, OAG staff indicated that a final decision on the audit focus has not been made, and that they would consider refocusing the audit to review procurement practices related to Site C;
- In April 2017, OAG staff indicated that information relating to the context for the exemption of Site C for a Certificate of Public Convenience and Necessity will be reviewed, such as the development of the *Clean Energy Act* and BC Hydro's load demand forecast and financial oversight of the Site C project;

- In 2016, Ernst & Young reviewed Site C procurement and risk management and concluded that BC Hydro has adopted leading practices to identify and manage risks to successful project delivery;
- A UBC paper, published in April 2017, reviewed Site C and concluded that Site C was not needed at this time and that there are lower cost options. MEM staff note numerous errors and omissions in the report, particularly the financing rate and unit energy cost calculations.

Agriculture Fund:

- The Environmental Assessment Certificate requires BC Hydro to develop a Framework for an Agriculture Mitigation and Compensation Plan (July 27, 2016), a Draft Plan (public comment period ended March 13, 2017) and a Final Plan (due July 2017). The Plan is to address four components:
 - construction management practices, as they pertain to agriculture;
 - development of individual farm mitigation plans;
 - management of residual agricultural land; and
 - establishment of a \$20 million agricultural compensation fund.
- A Consultation Steering Committee will consider comments on the Draft Plan before finalization in July 2017. The committee consists of staff from BC Hydro, the Ministry of Agriculture, and MEM.

Reporting:

- The Site C Reporting and Accountability Framework includes quarterly reporting to the Minister of Energy and Mines, and is now aligned with separate reporting every six months to Treasury Board.

BACKGROUND:

- Site C will be the third dam and hydroelectric generating station on the Peace River in northeastern British Columbia and will generate affordable, reliable and clean electricity for more than 100 years. Site C will provide 5,100 gigawatt hours of electricity each year and 1,100 megawatts of capacity, which is enough power for 450,000 homes;
- Large hydro projects, such as Site C, have the ability to provide a reliable supply of both dependable capacity and energy without ongoing cost volatility. Site C would provide significant benefits for BC:
 - Use the existing Williston reservoir — so it can generate a third of the electricity produced at WAC Bennett dam with a reservoir one-twentieth of the size;
 - Help integrate additional intermittent, clean and renewable projects — such as wind, run-of-river hydro and solar; and

- Provide 10,000 person-years of direct construction employment over the construction period.
- The capital-cost estimate for the project is \$8.335 billion. Government also has a project reserve of an additional \$440 million to account for events outside of BC Hydro's control that could occur over an eight-year construction period, such as higher than forecast inflation or interest rates, for a total of up to \$8.775 billion. Once constructed, Site C will have very low operating costs and low emissions over a 70 to 100 year project life. The energy cost for Site C for power delivered to the lower mainland would be \$64 per megawatt-hour (MWh) compared to a cost of \$110 per MWh for independent power projects;
- The Joint Review Panel that undertook the environmental assessment of the project stated in its report that, "a few decades from now...Site C could appear as a wonderful gift from the ancestors of that future society, just as BC consumers today thank the dam-builders of the 1960s." Among the conclusions, the Panel's report states that, "Site C would be the least expensive of alternatives and its cost advantages would increase with passing decade as inflation makes alternatives more costly."
- Site C was exempted from British Columbia Utilities Commission (BCUC) approval requirements under the *Clean Energy Act*. The BCUC will determine the period over which the costs are recovered from BC Hydro ratepayers;
- Several procurements have been completed or are underway, including contracts for the Worker Accommodation Lodge (to ATCO Two Rivers Lodging Group, \$470 million), for the main civil works (to Peace River Hydro Partners, \$1.75 billion), and for turbines and generator (to Voith Hydro, \$470 million);
- BC Hydro is utilizing an inclusive labour approach with a managed open site. This allows BC Hydro and the contractors for large work packages to accept bids from any qualified contractor, regardless of union affiliation;
- The following table summarizes the status of active Site C litigation:

Proceeding/Outcome		Date
Federal Court: Federal Environmental Approval		
Prophet River First Nation West Moberly First Nations	Dismissed Appeal filed Hearing date Appeal Dismissed	August 28, 2015 September 30, 2015 September 12, 2016 January 23, 2017
Federal Court: Federal Permits		
BC Hydro Ratepayers Association	Notice of Application filed Discontinued	September 19, 2016 January 23, 2017
B.C. Court: Provincial Environmental Assessment Certificate		
Prophet River First Nation West Moberly First Nations	Dismissed Appeal filed Hearing date Appeal Dismissed	September 18, 2015 October 19, 2015 December 5 to December 8, 2016 February 2, 2017
B.C. Court: Provincial Permits		
Prophet River First Nation West Moberly First Nations	Injunction application Dismissed Hearing of Petition complete Petition Dismissed Appeal filed Hearing date	August 28, 2015 November 17 to 23, 2015 and February 2, 2016 October 31, 2016 November 30, 2016 To Be Determined
Sierra Club of British Columbia	Judicial review filed Discontinued	July 20, 2016 January 27, 2017
Environmental Appeal Board		
Prophet River First Nation West Moberly First Nations C. London	Water Licence appeals filed Hearing date	March 29, 2016 January 15, 2018
Other Proceedings		
Building Trades v. BC Hydro	Civil claim filed Response to claim filed	March 2, 2015 April 10, 2015

Status as of June 1, 2017.

- BC Hydro is seeking Impact Benefit Agreements with First Nations. Four have been completed to date that include land components. Negotiations are ongoing with one other First Nation. ^{s.16}
- BC Hydro has achieved Community Agreements with the Districts of Taylor, Chetwynd and Hudson's Hope and the City of Fort St. John. A separate Legacy Benefit Agreement was reached with the PRRD in 2014 that will provide legacy benefit payments to the District and its member municipalities for 70 years once the project is operational.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Site C – Schedule Decisions

KEY MESSAGES:

- On May 31, 2017, BC NDP Leader John Horgan wrote to BC Hydro, requesting that the removal of two homes be delayed until the Site C project could be reviewed by the BC Utilities Commission (BCUC). He also asked BC Hydro to refrain from entering into further construction contracts without a “penalty-free clause”.
- Delaying the removal of two homes in the Cache Creek/Bear Flat area pending an independent review of the Site C project would add a year to the project timeline, and around \$630 million (M) to the project’s cost.
- The homes are scheduled to be removed by the end of August 2017, to enable re-alignment of Highway 29 and construction of a new bridge, which will take two years.
- This work must be completed by September 2019, so that the Peace River can be diverted in September 2019 when the river is at low flow, allowing for construction in the main dam area.
- BC Hydro owns the land on which both houses sit, and has offered to relocate them. An agreement has been reached with one of the affected families.
- BC Hydro is proceeding with procurement processes for a number of contracts, including the Highway 29 re-alignment and construction of the new bridge, which is being managed by the Ministry of Transportation and Infrastructure (MoTI).
- Contracts awarded through these processes will include the same contract cancellation terms included in existing Site C agreements. Under these terms, contractors would be kept whole for costs incurred if the project were to be cancelled.
- The full cost of cancelling the Site C project is contingent on a number of factors, including the timing of a termination decision. An accurate estimate cannot be provided at this time.

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BACKGROUND:Project Schedule and Costs

- A key milestone in the Site C construction schedule is the diversion of the Peace River in September 2019, to allow for construction in the main dam area.
- The river must be diverted at low flows, which occur in September each year.
- As flows rise, the upstream and downstream coffer dams will be raised to keep water out of the main dam construction area.
- The coffer dams will raise the level of the river impacting the Cache Creek bridge, which needs to be moved in advance. A corresponding re-alignment of Highway 29 is also required.
- MoTI has provided expert advice confirming that a two year period is required for the highway realignment bridge construction work. To meet the project schedule, this work must commence by August 31, 2017.
- The home of Ken and Arlene Boon is adjacent to an abutment for the new bridge. It must be relocated before August 31 so that bridge and road construction can begin on time.
- BC Hydro already owns the land on which the house sits, and has offered to relocate the home while the Boons move to another structure on their lands, which they could continue to farm (outside the highway right of way) until 2019.
- Delaying relocation pending completion of a BCUC review would mean missing the September 2019 diversion window, adding a year to the project schedule, and an estimated \$630M to the project costs:

Estimated Costs of One-Year Delay	\$ M
Direct Costs	
Ongoing project costs, incurred during delay period	95
Site and environmental maintenance for one-year period	10
Main civil works – overhead, demobilization, mobilization	120
Turbines and generators - storage	25
Worker accommodation, fixed costs	15
Other impacts (e.g. claims, procurement impacts, etc.)	60
Total estimated direct costs	325
Inflation (one-year delay on expenditures)	105
Interest During Construction	200
Total Estimated Cost of Delay	630

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Transition Note: 13A

Page 2 of 4

- BC Hydro has reached agreement with the second affected family, the Meeks, to move their house, which is currently occupied by tenants.

s.16

Alternate Routes for Highway 29 Re-Alignment

- The proposed site of the new bridge and resulting road re-alignment were chosen following extensive public hearings during Joint Panel Review of the Site C project.
- Over time, alternate routes have been investigated, but were rejected by BC Hydro because they were either technically infeasible, or would curtail highway access for about 10 other homes in the area.
- Re-examining the alternate routes would take time, and have the same implications for the project schedule and cost.

Upcoming Contracts

s.17

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Transition Note: 13A

Page 3 of 4

s.17

Costs of Full Project Cancellation

- The costs of terminating the Site C project are dependent on a number of factors, including the timing of a cancellation decision, and the extent of site reclamation required by environmental regulators.
- Cancellation costs would include existing expenditures, the contract terminations costs, demobilization, site reclamation and the cost to acquire energy and capacity to replace Site C.
- \$1.75 billion had been spent on Site C as of May 31, 2017. The average monthly expenditure is around \$60M.

CROSS-REFERENCE:

13 - Site C Update (Permitting, Construction, Litigation, Audit)

14 - BC Hydro's Integrated Resource Plan

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Transition Note: 13A

Page 4 of 4

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: BC Hydro Integrated Resource Plan (IRP)

KEY MESSAGES:

- BC Hydro developed its IRP to demonstrate that, from a planning perspective, it is well-positioned to meet British Columbia's future electricity demand, which is expected to grow by 40 percent over the next 20 years;
- Government approved the IRP through an Order-in-Council on November 25, 2013;
- After applying for an interim 4 percent rate increase for April 1, 2016, BC Hydro submitted its full 3-year Revenue Requirement Application (RRA) to the British Columbia Utilities Commission (BCUC) in late July 2016;
- Delaying the full RRA submission gave BC Hydro time to review the impacts of recent events in the Province's industrial sector on its long-term load forecast and other financial projections underpinning its revenue requirements;
- The RRA does not modify any of the recommended actions in the IRP. However, BC Hydro reviewed its demand-side management (DSM) programs and is making adjustments to its DSM Plan for the Fiscal 2017 to Fiscal 2019 period;
- BC Hydro will invest \$375 million in DSM over the next three years (an average of \$125 million per year). The new DSM Plan will meet over 70 percent of new demand (from 2008 to 2020) through conservation, exceeding the *Clean Energy Act* (CEA) target of 66 percent;
- The new DSM plan will better align with system needs, keep rates low, and reduce costs for ratepayers;
- Given BC Hydro's current energy surplus and low forecast electricity export prices, the IRP moderates independent power producers' energy purchases and DSM spending in the short-term. In the medium to long-term, growing energy and capacity needs will be met through DSM, renewal of cost-effective electricity purchase agreements (EPAs), and the development of Site C;

- The IRP also included a Clean Energy Strategy to help support the clean energy sector and promote clean energy opportunities for First Nations' communities. The Strategy broadened opportunities through the Standing Offer Program (SOP). BC Hydro is currently reviewing the SOP to focus on acquiring electricity that better fits the needs of the system and keeps rates low.
- BC Hydro has begun planning for the IRP that will be due to Government in November 2018.

BACKGROUND:

- In 2008, BC Hydro submitted its Long Term Acquisition Plan to the BCUC. The BCUC did not approve BC Hydro's Plan, although it did approve \$631 million of \$633 million in proposed spending;
- With the introduction of the CEA in 2010, BC Hydro was required to submit its IRP to the Minister of Energy and Mines (Minister) at least every five years. The IRP sets out a long-term plan for acquiring the electricity resources to meet its customers' needs for the following 20 years;
- In accordance with the CEA, the IRP is to include:
 - A description of BC Hydro's 20-year load forecasts of energy and capacity requirements to achieve electricity self-sufficiency;
 - A description of how the IRP responds to BC's other energy objectives, including the objective to ensure that its rates remain among the most competitive of rates charged by public utilities in North America;
 - BC Hydro's plans for demand-side management, construction or expansion of its facilities, and acquisition of electricity from private energy producers;
 - BC Hydro's consultations with the public and First Nations;
 - An assessment of export market potential; and
 - An assessment of transmission infrastructure requirements over the following 30 years.
- BC Hydro initiated the IRP process in December 2010 and conducted an initial set of consultations with the public and First Nations in March and April 2011;
- BC Hydro suspended the IRP process in April 2011 following the Government's announcement of a review of BC Hydro;
- The IRP process remained suspended following release of the review of BC Hydro in August 2011, as the report included a recommendation that Government undertake an evaluation of its electricity self-sufficiency policy;
- A second phase of consultation took place in May and June 2012 following the release of the draft IRP;
- Following these consultations, BC Hydro was to make revisions, as appropriate, to the IRP and submit it to the Minister by December 3, 2012 for Government review. However, it was granted a further extension to August 3, 2013 to incorporate more information about LNG demand;

- BC Hydro submitted its IRP to Government on August 3, 2013. Government subsequently directed BC Hydro to undertake final consultation on the IRP from September 3 to October 18, 2013 and re-submit its IRP for consideration by Government by November 15, 2013;
- Government approved the IRP through an Order in Council on November 25, 2013. BC Hydro's review of the IRP, originally expected in fall 2015, was delayed until 2016 when the Climate Leadership Plan was finalized and updated LNG load requirements were available;
- The IRP Recommended Actions included the following:
 - **Conservation** – DSM continues to be a major element in BC Hydro's recommended actions to fill energy and capacity gaps, because it is cost effective and has a minimal environmental footprint. BC Hydro continually evaluates its expenditures, including its DSM expenditures, to identify opportunities to achieve cost savings, keep rates low and respond to customer and system needs. DSM program costs will range from \$9 to \$35 per MWh, with an average cost of \$22 per MWh;
 - **EPA Portfolio Management** – To manage costs, BC Hydro planned to review pre-Commercial Operation Date EPAs to identify opportunities to terminate or downsize agreements or defer commercial operations. In 2016, BC Hydro completed its implementation of this recommendation, which resulted in the termination of 15 EPAs, downsizing and deferral of 2 EPAs, and deferral of 11 EPAs. These actions resulted in a \$2.1 billion reduction in electricity purchase commitments through, (i) ongoing reductions representing over 440 MW in nameplate capacity and over 1,900 GWh per year in contracted energy through EPA downsizing and terminations; and (ii) one-time reductions in purchase commitments of approximately 2,050 GWh before Fiscal 2018 through deferrals of commercial operations for EPAs;
 - **Clean Energy Strategy** – In order to maintain a healthy and diverse clean energy sector in British Columbia and ensure continuing First Nations opportunities, BC Hydro added a new recommendation regarding a Clean Energy Strategy. It includes expanding the SOP annual procurement volume target. BC Hydro also recommended introducing a micro-SOP for projects between 100 kilowatt and 1 MW, which began accepting applications in March 2016. BC Hydro, Clean Energy BC and Government are currently reviewing the SOP to find ways to reduce costs (price and/or volume) to keep the 10 Year Rates Plan on track;
 - **Site C** – BC Hydro is currently in the process of constructing Site C to add 5,100 GWh per year of annual energy and 1,100 MW of dependable capacity. This involves an approximately seven-year construction period, with one additional year for final project commissioning, site reclamation and demobilization. Site C is scheduled to be completed in 2024;
 - **Capacity Supply-side Options** – To manage incremental capacity needs for LNG loads and potentially higher non-LNG load growth, BC Hydro recommended investigating the acquisition of gas-fired generation and advancing two capacity Resource Smart projects (the G.M. Shrum Units 1-5 capacity increase project and the installation of a sixth unit at the Revelstoke Generating Station). The Resource Smart projects could provide 220 MW and 488 MW of dependable capacity, respectively. Natural gas-fired generation would be considered, in part

due to its ability to support the transmission system to serve new loads in the North Coast. Under the August 2016 Climate Leadership Plan, gas-fired generation is allowed for reliability;

- **Transmission Resources** – To facilitate supplying the forecast load requirements with the recommended supply-side resources, BC Hydro recommended non-wire upgrades to, (1) the existing 500 kilovolt (kV) transmission line from Williston Substation near Prince George to Skeena Substation near Terrace with series and shunt compensation; and (2) the 500 kV transmission lines from G.M. Shrum to Williston Substation and Kelly Lake Substation. In addition, BC Hydro will pursue other upgrades to increase the ability of the North Coast 500 kV transmission line to serve potential increased demand for electricity in northwest British Columbia and the Peace Region Electricity Supply project, which will be used to electrify the upstream natural gas producers in the Montney area.

CROSS-REFERENCE:

12 – Utility Demand-side Management

30 – Clean and Renewable Energy Projects Policy Issues

33 – Sale of Self-generated Electricity

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION**

ISSUE: Liquefied Natural Gas Power Requirements

KEY MESSAGES:

- BC Hydro is prepared to supply the electricity requirements of the liquefied natural gas (LNG) industry;
- BC Hydro has been asked to supply power to the proposed Woodfibre LNG, FortisBC Tilbury LNG Expansion and LNG Canada projects;
- Ultimately, industry will decide which energy source they use. Some may choose gas turbines to drive their liquefaction process. Others may choose on-site gas-fired generation or grid power, or a combination of gas turbines and grid power for their auxiliary needs;
- An LNG rate has been implemented through regulations under the *Clean Energy Act* (CEA);
- A new eDrive rate was announced in November 2016 that provides an incentive for LNG proponents to use electricity to liquefy natural gas while minimizing greenhouse gas (GHG) emissions; and
- The eDrive rate is the same as BC Hydro's standard industrial electricity rate, rate schedule 1823, and will also apply to the proponents' ancillary power needs. LNG proponents who use electricity for their ancillary needs only will be required to pay the LNG rate.

BACKGROUND:

- LNG facilities require large amounts of energy for the liquefaction process (about 80 percent of the total energy requirements), as well as for pumps, controls, lighting and other ancillary equipment. The industry norm is to use natural gas turbines for the liquefaction process. Ancillary equipment is typically run on electricity, either through on-site gas-fired generation, from heat-recovery generation using the exhaust of the liquefaction turbines, or from connecting to the grid and purchasing power from the host utility;
- Intermittent renewable power sources alone are not cost-competitive and do not provide adequate reliability to support LNG facilities;
- BC Hydro has offered LNG proponents a portfolio of renewables, gas-fired power and market supply, backed up by the BC Hydro system for reliability;

- BC Hydro's Integrated Resource Plan (IRP), approved by the Province in November 2013, includes an expected LNG load of 360 megawatts (3,000 gigawatt hours per year) to be served by BC Hydro. The IRP includes the following actions to meet the requirements of the LNG sector:
 - Working with industry, explore natural gas generation options on the North Coast to enhance transmission reliability and meet the expected load; and
 - Advance reinforcement of the existing 500 kilovolt transmission line from Prince George to Terrace, which includes development of three new series capacitor stations and improvements in the existing BC Hydro substations, to be available by Fiscal 2020.
- Under the Province's LNG strategy, proponents are required to contribute capital for infrastructure development and the electricity supply required to serve each operation;
- In November 2014, the Province directed BC Hydro through Section 9 of the CEA to establish a long-term domestic sales program that will have a set price for providing electricity to LNG facilities. Under the LNG rate, LNG proponents must pay an energy charge and a demand charge similar to BC Hydro's standard rate for large transmission customers, rate schedule 1823. The LNG rate energy charge in 2017 is \$76.85 per megawatt hour (MWh) and the demand charge is the same as rate schedule 1823. As of April 1, 2017, the energy charge under rate schedule 1823 is \$46.23 per MWh. The blended energy and demand charge for the LNG rate is approximately \$88 per MWh, compared to \$60 per MWh under rate schedule 1823;
- The LNG rate is based on BC Hydro's incremental energy supply costs to serve LNG proponents and is escalated at 2 percent per year until 2023, and then remains flat until it intersects with rate schedule 1823;
- BC Hydro has signed an energy supply and load interconnection agreements separately with both LNG Canada and FortisBC;
- In June 2016, the Ministry of Energy and Mines brought forward a *Utilities Commission Act* Section 3 Direction Respecting Liquefied Natural Gas Customers that directed the British Columbia Utilities Commission to set the FortisBC agreements as rates;
- In November 2016, Government announced a new eDrive rate for LNG proponents who use electricity to power their liquefaction process. The eDrive rate is the same as BC Hydro's standard industrial electricity rate, rate schedule 1823, and will also apply to the proponents' ancillary power needs. LNG proponents who use electricity for their ancillary needs only will be required to pay the LNG rate;
- The eDrive rate creates an incentive for LNG developers to use clean electricity instead of natural gas for their compression needs, and supports actions under the Province's Climate Leadership Plan to encourage electrification and reduce GHG emissions; and

- Any new agreements signed with BC Hydro based on the LNG rate or the eDrive rate will also need to be set as rates under the Direction Respecting Liquefied Natural Gas Customers.

CROSS-REFERENCE:

14 - BC Hydro Integrated Resource Plan

14B - Coastal First Nations Engagement

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION**

ISSUE: Coastal First Nations

Engagement KEY MESSAGES:

- Clean or renewable electricity is an important part of the energy solution for liquefied natural gas (LNG) development to meet the LNG facility emissions benchmark;
- The Province is continuing to engage with the Coastal First Nations (CFN) on LNG power requirements;
- Uncertainty remains concerning how much power will be required from BC Hydro for LNG projects. As the amount of power needed by LNG developers becomes known, the Province is committed to working with the CFN and BC Hydro to identify cost-effective opportunities to contribute to meeting that demand;
- Provincial LNG policy requires that there be no adverse impact on domestic rates as a result of LNG development, and this will be reflected in the final solutions for LNG power supply;

s.16,s.21

BACKGROUND:

- The CFN is an alliance of First Nations on British Columbia's North and Central Coast and Haida Gwaii. The CFN include Wuikinuxv (Ohh-weeken-oh) Nation, Heiltsuk (Hel-sic), Kitasoo/Xaixais (Kit-a-zoo/shy-shy), Nuxalk (Noo-huk) Nation, Gitga'at (Git-gat), Metlakatla (Met-la-ka-tla), Old Massett (Old Mass-et), Skidegate (Skid-a-gate), and Council of the Haida Nation;
- In December 2009, the Province and the CFN signed the BC/CFN Reconciliation Protocol. One of the key deliverables under the Protocol was the completion of a CFN Clean Energy Action Plan;
- Since 2010, the Ministry and BC Hydro have worked with the CFN to implement the energy chapter of its Reconciliation Agreement. Initial work was completed in July 2011. Analysis of viable renewable independent power projects (IPPs) concluded that there were some cost-effective IPPs in CFN territories; however, the interconnection costs made these projects cost-prohibitive;
- Since then, the Province has signed a framework agreement on regional LNG development with the CFN. One of the key topics identified for discussion with the Province is regional renewable energy supply for LNG;

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Date: April 25, 2017

Transition Note: 14B

Page 1 of 2

- The CFN and provincial negotiators continue to work on draft agreements regarding LNG development on the North Coast. Once finalized, those agreements will be brought to the CFN member First Nations and provincial Ministers for approval;
 - There are several terms regarding renewable energy, including a Government commitment to work with the CFN and BC Hydro in identifying clean energy opportunities;
- s.16,s.21

CROSS-REFERENCE:

14A - LNGPower Requirements

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Transition Note: 14B

Page 2 of 2

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: 10-Year Rates Plan

KEY MESSAGES:

- In November 2013, a 10-Year Rates Plan for BC Hydro (Plan) was announced;
- The Plan includes rate increases that are required to fund BC Hydro investments in aging and new infrastructure, while ensuring a reliable electricity supply for British Columbia:
 - Rate increases of 9 percent for Fiscal 2014/15 and 6 percent for Fiscal 2015/16 (i.e., combined 15.6 percent for Years 1 and 2 of the Plan) were prescribed;
 - British Columbia Utilities Commission (BCUC) is setting rates within caps of 4 percent for Fiscal 2016/17, 3.5 percent for Fiscal 2017/18 and 3 percent for Fiscal 2018/19 (i.e., for Years 3 to 5 of the Plan);
 - BCUC will set rate increases, and actions by BC Hydro and Government will ensure increases remains low and predictable for Fiscal 2019/20 to Fiscal 2023/24 (i.e., for Years 6 to 10 of the Plan); and
 - Existing rate rider of 5 percent will stay in place over the life of the Plan to help pay down regulatory accounts.
- Under the Plan, without Site C, BC Hydro is spending on average \$1.7 billion per year in capital investment from 2014 to 2024, and with Site C, \$2.4 billion;
- By de-linking BC Hydro's net income from rate base, BC Hydro's contributions to Government were to be reduced by \$2 billion over the Plan. As a result of proceeding with Site C, this reduction will be \$2.8 billion. Dividend reductions will allow BC Hydro to keep over \$3 billion for infrastructure investments over the term of the Plan and assist in lowering capital borrowing requirements;
- Direction No. 6 and No. 7 to the BCUC and amendments to the Heritage Special Directive No. HC1 implement the Plan;
- Further amendments were made to Direction No. 7 and Special Directive No. HC1 in July 2016. The two changes set BC Hydro's net income amounts over the next three years. To provide BC Hydro with some flexibility to manage lower revenues or higher costs and keep to the Plan, the dividend payment for 2016/17 was fixed at a minimum of \$259 million;

- BC Hydro submitted its revenue requirements application for 2016/17 to 2018/19 to the BCUC in July 2016 in alignment with the Plan;
- BC Hydro has completed its ninth annual rate comparison report, based on electricity rates for Fiscal 2017;
- BC Hydro's rate comparison report shows that BC Hydro ratepayers continue to have among the lowest electricity prices in North America.

BACKGROUND:

- Electricity rate increases are required to fund investments in aging and new infrastructure that BC Hydro must make to ensure reliable supply and meet British Columbia's expanding energy needs;
- In 2011, BC Hydro applied for a 32.1 percent rate increase over three years. The rates proceeding was suspended to allow for a Deputy Ministers' Review, which made recommendations to reduce BC Hydro costs;
- In 2013, a Rates Working Group was formed to implement the longer-range policy recommendations from the Review, and set out a plan for BC Hydro;
- The Plan required that Government set rates for Fiscal 2014/15 and 2015/16 (9 percent and 6 percent rate increases, respectively), and place caps on rate increases for Fiscal 2016/17, 2017/18, and 2018/19 (4 percent, 3.5 percent and 3 percent). It spreads the rate impacts of large capital investments out over a longer period, while containing costs and gradually reducing BC Hydro's forecast contributions and dividends to Government;
- Direction No. 6 and No.7 to the BCUC and an amendment to Heritage Special Directive No. HC1 were deposited March 2014, enabling the commitments announced in the Plan;

s.13

- BC Hydro submitted an interim rate application of 4 percent for Fiscal 2016/17, and submitted a three-year revenue requirements application to the BCUC in July 2016 in alignment with the Plan;
- An amendment to Direction 7 was deposited in July 2016 that prescribed net income values for BC Hydro for the next three years at \$684M, \$698M and \$712M. For each year following Fiscal 2019, the net income value is fixed at \$712M;
- Special Directive No. HC1 was amended to set a minimum value of \$259M for BC Hydro's dividend payment to the Government in Fiscal 2017, equal to the amount set out in Budget 2016. This provides certainty around Government's fiscal plan and ensures that BC Hydro can continue with its planned capital spending, in the case where there is unexpected cost pressures;

s.13

- The *Clean Energy Act* requires BC Hydro to produce an annual rate comparison report;
- Currently, BC Hydro uses a Hydro Quebec report called “Comparison of Electricity Prices in Major North American Cities” to compile its rate comparison report findings;
- BC Hydro completed its ninth annual rate comparison report in November 2016; and
- On average, and in comparison with 21 other jurisdictions depending on consumption level, BC Hydro residential customers paid the fifth lowest rates, commercial customers paid the fifth lowest rates, while the industrial customers paid the seventh lowest rates.

CROSS-REFERENCE:

15A – 10 Year Rates Plan Table

18 – BCUC Role and Responsibilities

19 – BCUC Recent Decisions

Transition Note 15A- BC HYDRO 10-YEAR RATES PLAN
Actions - Key Developments –
Timing

Action	Key Developments	Timing
Set rate increases at 9% for 14/15 and 6% for 15/16	<ul style="list-style-type: none"> • Direction No. 6 to the BCUC under s.3 of the <i>Utilities Commission Act</i> (UCA) • Includes making 2013/14 rates permanent, adjusting return on equity, covering Powerex/CA settlement, setting rate rider, and establishing regulatory account balances and amortization (including a new rate smoothing account) • Direction was spent once BCUC established rates and other provisions 	March 5, 2014
Establish rate caps of 4% for 16/17, 3.5% for 17/18, and 3% for 18/19	<ul style="list-style-type: none"> • Direction No. 7 to the BCUC under s.3 of the UCA • Allows the BCUC to set rates at cap levels and apply any savings to regulatory accounts, or set rates below caps • Allows overages to be transferred to rate smoothing regulatory account • Changes net income growth to CPI after 2016/17 • Ensures costs prior to 2016/17 for projects, contracts and DSM can be recovered in rates • Allows for rate design on application by BC Hydro 	March 5, 2014
Change Dividend Payout	<ul style="list-style-type: none"> • Amendment to Heritage Special Directive No. HC1 to establish annual dividend payments that decrease to zero in 2021 • Establishes ongoing limitation on dividend payout to preserve a 60:40 debt: equity ratio 	March 5, 2014
Industrial Rate Design	<ul style="list-style-type: none"> • BC Hydro developed a program to provide thermomechanical pulp producers with \$100 million in funding, over four years, for energy efficiency projects • BC Hydro filed comprehensive rate design application (RDA) to BCUC (including Industrial Electricity Policy Review Task Force recommendations) • BC Hydro looking at revisions to its industrial tariff supplements (electricity supply agreement and agreement for new transmission customers) as part of Module 2 of the RDA 	October 31, 2015 Module 1 of the RDA filed September 24, 2015
Remove Tier 3 Water rentals after 2017	<ul style="list-style-type: none"> • Regulations under the <i>Water Sustainability Act</i> (WSA) Royal Assent May 29, 2014 	Brought into force (February 2016).
Implement IRP Clean Energy Strategy	<ul style="list-style-type: none"> • Engage BC Hydro, CEBC and First Nations on greater participation in projects under Standing Offer Program and future calls • MOU with CEBC and BC Hydro on further collaboration between the Ministry, CEBC and BC Hydro. • See Transition Note 14 (BC Hydro Integrated Resource Plan) 	April 2014 (ongoing)
Rate Design Application	<ul style="list-style-type: none"> • Rate Design Application submitted to BCUC • BCUC decision on Module 1 in January 2017. 	Submitted in September 2015
Amend Direction 7	<ul style="list-style-type: none"> • Amendment of Direction 7 under s.3 of the <i>Utilities Commission Act</i> specifies the net income requirements for BC Hydro over the Fiscal Plan. • Net income is specified to be \$684M in F2017, \$698M in F2018 and \$712M for every year after. 	Deposited July 28, 2016

Strictly Confidential

Action	Key Developments	Timing
Amend Special Directive No. HC1	<ul style="list-style-type: none"> • Amendment of HC1 under the <i>Hydro and Power Authority Act</i> • Requires BC Hydro's F2017 dividend payment to be at least to the Budget 2016 value of \$259M 	Deposited July 2016
Revenue Requirements Application	<ul style="list-style-type: none"> • BC Hydro submits Full Revenue Requirements Application to the BCUC • Application seeks approval for rate increases of 4%, 3.5% and 3% for F2017, F2018 and F2019. 	Submitted in July 2016

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION**

ISSUE: Rate Design Application

KEY MESSAGES:

- On January 20, 2017, the British Columbia Utilities Commission (BCUC) released a decision on Module 1 of BC Hydro's 2015 Rate Design Application (RDA) approving BC Hydro's rate proposals for the main residential, commercial, and industrial rates:
 - o BC Hydro's commercial customers found the inclining block confusing and they did not result in measurable energy efficiency; and
 - o The BCUC also decided to phase out a discounted electric heat rate, E-Plus, and rejected a proposal by some interveners for a low-income rate. These portions of the BCUC's decision are under appeal by some intervenergroups.
- BC Hydro is currently consulting for Module 2 on options for voluntary time-of-use residential and commercial rates, rates for customers not connected to the integrated BC Hydro grid, industrial terms and conditions, and other rates such as irrigation and street lighting rates.

BACKGROUND:

- BC Hydro has over 50 individual rate schedules set and approved by the BCUC;
- The vast majority of BC Hydro's power is sold to customers using a smaller number of standard residential, commercial, and industrial rates;
- BC Hydro has been consulting on its 2015 RDA since 2014;
- So far, the BCUC has approved BC Hydro's proposals for an industrial Freshet rate pilot, to continue with the residential inclining block and transmission service rates, and to simplify commercial rates;
- The BCUC rejected a proposal by the BC Old Age Pensioners Association and other anti-poverty groups (BCOAPO), opposed by BC Hydro, for an "Essential Services Usage Block" that would have increased residential rates to offer a discounted rate for a portion of low income users' consumption. BCOAPO has appealed this decision;
- The BCUC accepted, as a pilot, a proposal by BCOAPO for a "Crisis Intervention Fund" for customers facing disconnection. This would be funded by a fee of 25 cents per month on all residential customer bills;

- The BCUC ordered that the E-Plus rate be phased out over five years. The E-Plus rate gave certain customers a lower rate for electric heat on the condition that they maintained a backup heating source, and that BC Hydro would have the right to disconnect them if needed (this right had not been exercised in the 25 years of the rate's existence);
- BC Hydro is currently receiving input from stakeholders at rate design workshops to inform a second set of rate proposals (Module 2);
- These include possible optional Time of Use rates for residential and commercial customers. Under these rates, customers with the ability to shift their electricity consumption from high-demand to low-demand periods could lower their bills while, in principle, also lowering BC Hydro's costs;
- These also include street lighting, irrigation, and farm rates;
- BC Hydro is also looking at updating its Tariff Supplements covering terms and conditions for its industrial customers and its agreement for connecting those customers; and
- BC Hydro is consulting on options for rate design for its customers who are in areas that are not connected to the rest of the North American grid.

CROSS-REFERENCE:

15 - BC Hydro 10 Year Rates Plan
 18 - BCUC Roles and Responsibilities
 19 - BCUC Recent Decisions

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

**ISSUE: Review of BC Hydro's Residential Inclining Block Rate
and FortisBC's Residential Conservation Rate**

KEY MESSAGES:

- In response to customer concerns, the Minister of Energy and Mines asked the British Columbia Utilities Commission (BCUC) to review stepped residential rates for BC Hydro and FortisBC customers;
- This report was released on March 23, 2017;
- The report finds that:
 - Stepped rates do not cause a cross-subsidy between customers with and without access to natural gas;
 - Most low-income customers pay less for electricity under stepped rates than they would under flat rates, but some pay significantly more;
 - High-use electricity customers are most likely to be living in larger, single-family homes, and use electricity for space heating and hot water;
 - Conservation programs offered by BC Hydro and FortisBC have the potential to mitigate bill impact for high-use customers, but utilities could do more to increase participation in these programs; and
 - There are additional opportunities for conservation programs that would benefit all customers.
- In fall 2017, both BC Hydro and FortisBC will be submitting rate design applications, and customers are encouraged to participate in these reviews before the BCUC.

BACKGROUND:

- FortisBC, an investor-owned utility, serves electricity customers in the Okanagan and West Kootenays, at rates approved by the BCUC;
- 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 "stepped" rate is designed to encourage conservation. As of January 1, 2017, FortisBC's residential rates are as follows:
 - Customer Charge \$32.09 based on 60 day billing period;
 - First 1,600 kWh are billed at 10.117¢ per kWh; and
 - Additional kWh are billed at 15.617¢ per kWh.

- The BCUC approved a conservation rate structure for FortisBC's residential customers effective July 31, 2013;
- This Residential Conservation Rate (RCR) is similar in design and intent to BC Hydro's Residential Inclining Block (RIB) rate. BC Hydro's RIB rate is as follows:
 - Customers' basic charge is 18.35¢ per day;
 - Step 1 is 8.29¢ per kWh for the first 1,350 kWh in an average two month billing period (22 kWh per day); and
 - Step 2 is 12.43¢ per kWh over the 1,350 kWh Step 1 threshold.
- Customers can have considerable consumption at the higher Step 2 rate and still be better off than under the old flat rate structure;
- Single-family homes, those heated with electricity, and those with pools, hot tubs, and secondary suites have been identified as homes likely to use more power and see higher impacts from the RCR;
- The RCR is delivering conservation savings amounting to about 3 percent of total electric demand in FortisBC's service area;
- BC Hydro's RIB rate is expected to deliver conservation savings amounting to about 3 percent of residential electric demand in its service area by the end of Fiscal 2017;
- In response to customer complaints, in July 2015, the Minister requested that the BCUC review both the RCR and RIB rates;
- The BCUC received submissions from both BC Hydro and FortisBC, as well as five stakeholders. The BCUC also received 669 letters of comment;
- The BCUC released its report on March 23, 2017. The report's findings were:
 - The RIB rates do not cause a cross-subsidy, as that term is used and understood by energy regulators, between customers with and without access to natural gas;
 - Most low-income customers pay less under stepped rates than they would under a flat rate, but some pay significantly more:
 - 88 percent of BC Hydro's low-income customers pay less under the RIB rate, but 1 percent see bill increases of 10 percent or more; and
 - 62.5 percent of FortisBC's low-income customers pay less under the RCR, but 9.7 percent see bill increases of 10 percent or more;
 - High-use customers of electricity are most likely to be living in larger, single-family homes and use electricity for space heating and hot water. There is some correlation between low-income and lower electricity use, but there are low-income customers in all use categories, including the highest;
 - Demand-Side Management (DSM) programs offered by BC Hydro and FortisBC have the potential to mitigate bill impacts for high-use customers (including low-income, high-use customers) resulting from the RIB rate. However, there are barriers preventing some customers from achieving these benefits, and the utilities could do more to increase participation in their DSM programs; and
 - There are opportunities for additional DSM programs that would benefit all customers, including those on low incomes. While there are limits on BC Hydro's DSM funding, there are opportunities for BC Hydro to reallocate DSM funding within its DSM budget.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Mandatory Reliability Standards

KEY MESSAGES:

- The 2007 BC Energy Plan states that British Columbia will remain consistent with North American transmission reliability standards;
- In 2009, the British Columbia Utilities Commission (BCUC) began to adopt and administer mandatory reliability standards (MRS) that it considers to be in the public interest;
- The BCUC currently leads a process to register transmission service customers and transmission owners to comply with MRS;
- There were some implementation issues that needed to be resolved so that the MRS regime meets British Columbia's interests, while ensuring consistency with North American standards. To that end, the BCUC completed an inquiry on MRS implementation and made recommendations to Government in 2014;
- In 2015, Government amended the *Utilities Commission Act* (UCA) to ensure British Columbia remains consistent with North American standards and provides the BCUC with the authority to determine applicability of MRS to industrial customers and other transmission users. The BCUC is also able to effectively and efficiently address situations where changes to MRS registration are required.

BACKGROUND:

- Amendments to the UCA in 2008 created a mechanism for introducing MRS for British Columbia's bulk electric system. Under the UCA, the BCUC must adopt standards consistent with North American standards, unless the BCUC considers those standards not to be in the public interest;
 - North American standards are those developed by either the North American Electric Reliability Corporation (NERC) or the Western Electricity Coordinating Council (WECC). British Columbia electricity sector participants (e.g. BC Hydro and FortisBC) are active in these organizations.
- The MRS Regulation, which identifies the entities that are subject to MRS, was enacted in February 2009 and amended in October 2014 and May 2016;

- In March 2009, the British Columbia Transmission Corporation (BCTC) filed a report to the BCUC on new North American standards. The report, which is now produced annually by BC Hydro, assesses:
 - whether adopting the standards would have any adverse impact on reliability in British Columbia;
 - the suitability of the standards for British Columbia;
 - the potential cost of the standard if it is adopted; and
 - any other matter that the Government requires by regulation or the BCUC requires by Order.
- The UCA requires that reports be made available to the public and that the BCUC consider any comments provided;
- In June 2009, after allowing for public comment on the original BCTC report, the BCUC adopted 103 mandatory reliability standards. The BCUC ordered that entities subject to the reliability standards under the MRS Regulation must register with the BCUC by November 1, 2009, at which time they were required to begin complying with the adopted standards;
- BC Hydro continues to monitor reliability standards to identify those that may be suitable for adoption in British Columbia;
- The UCA also enables the BCUC to levy the same administrative penalties as WECC for non-compliance. These can be up to \$1 million per day in extreme cases. To date, the BCUC has not levied any penalties;
- In December 2011, industrial customers, represented by the Association of Major Power Consumers, approached Government to request that the MRS Regulation be amended to exclude industrial customers from MRS. They argued that industrial loads do not represent a “real” reliability risk, since BC Hydro as the Balancing Authority has the ability to cut them off from the system if required. They also argued that MRS would impose an incremental reporting cost on them to demonstrate compliance. Finally, they argued that it is BC Hydro’s responsibility to ensure system reliability, so reporting requirements and associated risk should accrue to the utility;
- In the U.S., NERC changed the definition of the “Bulk Electric System” (BES) and initiated measures to allow an inclusion/exclusion process for entities. The BCUC received considerable support from industrial stakeholders and utilities for adopting the revised BES definition and an exclusion process in accordance with NERC standards;
- In light of changes made by NERC and stakeholder input, the BCUC launched an inquiry in October 2012 to consider changes to MRS that allow for exceptions to MRS;
- In December 2013, the BCUC initiated a follow-up process to the MRS inquiry to allow stakeholders to provide input on proposed amendments to the MRS Regulation and the UCA. The amendment would reflect changes to the NERC definition of the BES and provide for an exception/inclusion process for MRS. The BCUC provided recommendations to Government in spring 2014;

- In December 2015, Government amended the UCA to incorporate the new NERC BES definition, thus ensuring consistency with North American entities. The UCA amendment also enables and provides the BCUC with the authority to determine applicability of MRS and make registration changes for British Columbian entities;

s.21

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Roles and Responsibilities

KEY MESSAGES:

- The British Columbia Utilities Commission (BCUC) is an independent, public tribunal that is not bound by Government policy except through legislation, Cabinet direction issued by regulation, or through Ministerial regulations;
- Through the Core Review process, a review of the BCUC began in April 2014, with the goal of increasing the BCUC's capacity, effectiveness and efficiency;
- The three member Task Force released their final report on February 4, 2015, which included 35 recommendations to improve the BCUC;
- Government accepted all the Task Force's recommendations, and the BCUC has developed a strategic information technology plan and staffing reorganization;
- BC Hydro has submitted two applications to the BCUC – a Rate Design and a Revenue Requirements Application – which demonstrates regulation of BC Hydro's rates by the BCUC.

BACKGROUND:

- The BCUC is an independent regulatory tribunal. Its primary role has traditionally been to protect the interests of ratepayers while allowing utility shareholders an opportunity to earn a fair return on their invested capital;
- The Minister of Justice is responsible for administering most aspects of the *Utilities Commission Act* (UCA), which establishes the authority of the BCUC. The Minister of Energy and Mines has authority under the UCA to exempt public utilities from regulation and provide approval of BCUC requested regulatory exemptions. The Lieutenant Governor in Council may also direct the BCUC with respect to the exercise of its powers and performance of its duties;
- Prior to 1980, BC Hydro rates and other activities were approved by Cabinet. The UCA, first proclaimed in 1980, expanded utility regulation - which previously existed for only investor owned utilities - to include BC Hydro;
- During the 1990s, Legislation and Directions were issued to limit the BCUC's authority with respect to the regulation of BC Hydro, including legislation to limit the BCUC's authority to approve changes to BC Hydro's electricity rates. The *Tax and Consumer Rate Freeze Act* of 1996, the *British Columbia Hydro and Power Authority Rate Freeze*

and Profit Sharing Act of 1998, and the *Budget Measures Implementation Act* of 2000, froze BC Hydro's rates at 1994 levels until 2001;

- The incoming government in 2001 made a commitment to restore "an independent BC Utilities Commission" and return BC Hydro to full BCUC regulation;
- In 2003, the BCUC was appointed as the independent regulator for the Insurance Corporation of British Columbia under the *Insurance Corporation Act*. The BCUC is responsible for the approval of rates for basic insurance (universal compulsory insurance) in British Columbia;
- The UCA was amended in spring 2008 to implement many elements of the 2007 Energy Plan, and again in spring 2010 to advance provincial energy objectives;
- The amendments address the Province's goals relating to electricity self-sufficiency, an increased emphasis on energy conservation and efficiency, and the goal of continuing to generate at least 93 percent of electricity in British Columbia from clean or renewable resources;
- In 2010, the *Clean Energy Act* (CEA) exempted certain key/strategic energy investments and procurements from BCUC review, including Site C, Clean Power Calls and smart meters;
- The CEA and the changes to the UCA modified the framework within which the BCUC regulates the plans, programs, projects and contracts of utilities. It is the responsibility of the BCUC to ensure ratepayer and utility shareholder interests are considered within the modified legal framework;
- Government initiated a review of the BCUC in April 2014, through the Core Review process, with the goal of increasing the BCUC's capacity, effectiveness and efficiency. A three member Task Force was appointed to conduct the review. Their final report was released on February 4, 2015 and included 35 recommendations related to improving the BCUC. Government has accepted all the Task Force's recommendations, and the Ministry of Energy and Mines has worked with other ministries and the BCUC to implement them. The UCA was amended in 2015 to address several of the BCUC Review recommendations;
- The BCUC continues to work on methods of improving efficiency and effectiveness in the spirit of the Core Review and, in March 2017, a formal reorganization took place to achieve desired outcomes. The reorganization also prepared for the addition of a Chief Operating Officer, planned for June 2017, in accordance with amendments to the UCA made in 2015;
- The BCUC has a number of ongoing projects related to the Core Review recommendations, the most significant being a strategic information technology plan. A BCUC business plan is produced annually and provided to Government. An Annual Report is also produced to summarize the work of the BCUC;
- As committed to in Government's 10-Year Rates Plan for BC Hydro, the regulation of BC Hydro rates returned to the BCUC for Fiscal 2016/17. Rate increases were capped at 4 percent for 2016/17, and for the next two Fiscal years they will be capped at 3.5 percent and 3 percent. The Plan commits to returning full rate regulation of BC Hydro by the BCUC in year six of the Plan;
- BC Hydro submitted their revenue requirements application for Fiscal years 2016/17 through 2018/2019 to the BCUC on July 28, 2016.

CROSS-REFERENCE:

19 – BCUC Recent Decisions

20 – *Clean Energy Act* Implementation

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Recent Decisions and Overview of Directions and Exemptions

KEY MESSAGES:

- The British Columbia Utilities Commission (BCUC) is an independent, quasi-judicial, public tribunal.
- While the BCUC is not bound by Government policy, it must adhere to Cabinet direction issued by regulation or through Ministerial regulations.
- The *Clean Energy Act* (CEA) objectives provide the BCUC expanded jurisdiction to consider Government policy and the public interest.
- The BCUC released 10 decisions in 2016, with the majority affecting FortisBC.
- On January 20, 2017, the BCUC issued its decision on BC Hydro's 2015 Rate Design Application. The application, filed on September 24, 2015, was BC Hydro's first comprehensive rate design application since 2007, and only the third such application in BC Hydro's history. The rate design process included:
 - BC Hydro's 2016 Cost of Service study;
 - proposals for default Residential, Small General Service, Medium General Service, Large General Service and Transmission Service rates; and
 - proposals for Electric Terms and Conditions.
- Under Section 3 of the *Utilities Commission Act* (UCA), Cabinet may direct the BCUC on the exercise of its powers and functions.
- Under Section 22 of the UCA, the Minister may exempt a public utility from certain requirements under the UCA, such as the setting of cost-based rates or the requirements for pre-approval of new or expanding facilities.
- The BCUC revised its Certificate of Public Convenience and Necessity (CPCN) procedural guidelines, which require that a person must not begin the construction, operation or extension of a public utility plant or system without first obtaining a CPCN.
- Of note in 2016, Cabinet directed the BCUC to approve a tariff supplement from BC Hydro that establishes the terms and conditions of the Mine Assistance Program. The direction establishes a regulatory account, in which the portion of electricity bills deferred will reside and accumulate

interest until commodity prices increase and mining customers begin repayment.

BACKGROUND:

- The BCUC is an independent regulatory tribunal. The Minister of Justice is responsible for administering most provisions of the UCA which establishes the BCUC and its authority.
- The primary role of the BCUC has traditionally been to protect the interests of ratepayers, while allowing utility shareholders an opportunity to earn a fair return on their invested capital.
- In 2010, the CEA and changes to the UCA modified the framework within which the BCUC regulates the plans, programs, projects and contracts of utilities. It is the responsibility of the BCUC to ensure ratepayer and utility shareholder interests are considered within the modified legal framework.
- The table below describes the directions, regulations and exemptions generated by the Ministry of Energy and Mines in 2016 and 2017 year to date.

2016 and 2017 Year to Date– Regulatory Overview	
Directions to the BCUC	
Mine Assistance Program	<p>The Mine Assistance Program will provide financial relief to British Columbia's copper and coal mining sectors, supporting employment and protecting BC Hydro ratepayers.</p> <p>The Direction under section 3 requires the BCUC to approve a tariff supplement from BC Hydro that establishes the terms and conditions of the Mine Assistance Program.</p>
Silversmith Power and Light	<p>Silversmith Power and Light is a distribution utility with 7 customers in Sardon. British Columbia. s.21</p> <p>s.21</p>
Regulations	
Amendments to Regulations Impacting Regulated Utilities	
Greenhouse Gas Reduction (Clean Energy) Regulation	<p>In August 2016, the Ministry amended the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR) to allow for an increase in the allocation of incentives and investment for natural gas for transportation and created a new prescribed undertaking for remote power generation. This amendment also extended the GGRR program to 2022.</p> <p>Further amendments in March 2017 increased incentives for the marine sector and create a renewable portfolio allowance to increase the supply of renewable natural gas in British Columbia. Amendments also established an electrification framework, and support transmission and distribution infrastructure in northeast British Columbia.</p>
Energy Efficiency Standards Regulation Amendment 6	<p>The Energy Efficiency Standards Regulation (EESR) sets energy efficiency standards for devices that use, control or affect the use of energy, such as manufactured building components, household appliances, heating systems, water heaters, lighting and some industrial equipment.</p> <p>The amendments include new and updated standards for gas fireplaces,</p>

	residential heat pumps, small diameter directional lighting, general service lighting and fenestration (windows and doors).
UCA Part 3 Exemptions	
Bakerview EcoDairy	<p>Bakerview EcoDairy Ltd., in partnership with Science World, is a demonstration farm which promotes agricultural science and technology education, and inspires innovation in the agricultural sector. On August 25, 2014, EcoDairy signed a Direct Current Fast Charging Equipment Lease Agreement with BC Hydro to participate in a pilot project involving the acquisition, installation and operation of DCFC stations for EVs at locations around the Province.</p> <p>On November 24, 2015, EcoDairy filed an application with the BCUC for exemption from Part 3 of the UCA in relation to its proposed resale of electricity via the DCFC station.</p> <p>The BCUC considered EcoDairy's application and recommended that an exemption from Part 3 of the UCA be granted pursuant to section 88(3), and that the exemption exclude sections 25, 38, 42, 43, 44, and 49 of the UCA. The Minister approved the BCUC to issue the exemption.</p>
Long Lake Hydro	<p>Long Lake is an independent power producer which is a wholly owned subsidiary of Manulife Financial. Long Lake owns and operates a 31 megawatt (MW) hydroelectric facility and a private 138 kilovolt transmission line and interconnection facility that connects with the BC Hydro transmission system near Stewart.</p> <p>Long Lake proposed to provide indirect transmission service by wheeling BC Hydro electricity to the Brucejack Gold Project located 65 kilometers (km) north of Stewart. Since they would be providing transmission service for compensation, Long Lake would be considered a public utility as defined in the UCA.</p> <p>Long Lake requested an exemption under section 22 (2), with BC Hydro support. The Minister approved the exemption.</p>
Whitecap Resources	<p>On December 15, 2015, Whitecap Resources Inc. (Whitecap) filed an application with the BCUC for an exemption from Part 3 and section 71 of the UCA with respect to the ownership and operation of an electrical substation (Goodlow Substation) and distribution facilities located in the Boundary Lake area of British Columbia (Boundary Lake Distribution Facilities).</p> <p>The BCUC approved an exemption from Part 3 and section 71 of the UCA pursuant to section 88(3), and that the exemption exclude section 38 of the UCA (duty to provide service to the BCUC deems adequate, safe, just and reasonable). The exemption is intended to allow the BCUC to retain the authority to address matters of continuity of service and operational safety.</p>
Apollo Forest Products	<p>Fort St. James Green Energy Limited Partnership is developing the Fort St. James Green Energy project in the Fort St. James area. The Project involves the construction of a 40 MW gross biomass thermal generation facility located approximately 6 km north of the BC Hydro Fort St. James #2 substation. The generation facility will use wood residue obtained from local sawmills and recovery logging activities.</p> <p>Apollo Forest Products Ltd will provide transmission service to Fort St. James over the Apollo transmission system in order to connect the project to the</p>

	<p>BC Hydro transmission system. Apollo and Fort St. James have jointly entered into a Standard Generator Interconnection Agreement with BC Hydro.</p> <p>The Minister approved the exemption, sending a signal to the market that Government supports joint use of facilities, thus reducing costs to the proponent and minimizing the project footprint.</p>
BluEarth Tyson Creek Hydro	<p>Tyson Creek is an independent power producer, which is a wholly owned subsidiary of BluEarth Renewables LP. Tyson Creek owns and operates a 9.3 MW hydroelectric facility, a private 25 kilovolt transmission line and an interconnection facility that connects with the BC Hydro transmission system near Pender Harbour.</p> <p>NI Hydro is a majority-owned subsidiary of BluEarth and is currently constructing three hydroelectric power facilities with an aggregate capacity of 33 MW. s.21</p> <p>s.21</p>
	<p>The Minister approved the exemption from Part 3 of the UCA, signalling that Government supports joint use of facilities, thus reducing costs and the project footprint.</p>
Port Alice Gas	<p>Port Alice Gas has operated as a regulated public utility for over twenty years, and had recently submitted a Rate Application requesting an order approving an increase in the Basic Charge and Facilities Charge for its existing propane gas customers. An interim rate increase was granted effective January 1, 2016. On March 14, 2016, Port Alice Gas filed a submission requesting that it be released from its obligations as a regulated utility, and asked that the Rate Application be suspended while the exemption was under consideration. By Order G-45-16, the Rate Application was suspended until the regulatory exemption was granted.</p> <p>Port Alice Gas and other suppliers compete for the same customers, however, it is the only one subject to regulatory burden under the UCA. The BCUC reviewed the application and concluded that approval of the exemption was warranted, pursuant to section 88(3) of the UCA.</p>
QCS Exemption Regulation Amendment	<p>QCS owns and operates a transmission line that interconnects with the BC Hydro grid and provides transmission service to Encana's Saturn Compressor Station, near Fort St. John. Since they are providing transmission service for compensation, QCS would be considered a public utility, as defined in the UCA, and be subject to the regulatory requirements under Part 3 of the UCA.</p> <p>In 2012, QCS sought regulatory exemption for their transmission service. The QCS Exemption Regulation provides QCS with an exemption from Part 3 of the UCA with certain exclusions that allow the BCUC to oversee safety requirements.</p> <p>s.21</p> <p>s.21 QCS requested that the regulation be amended to expand the scope of the regulatory exemption to apply to this additional transmission service. The amendment was approved.</p>

Spirit Bay Utility	<p>The Beecher First Nation is located on Southern Vancouver Island approximately 45 minutes from Victoria. It is in the process of developing a new town community (SB Community) on part of its reserve by making available Economic Development Zoned land for development under long term leases. The SB Community is a staged, new town development planned to have 400 – 600 homes, 50,000 square feet of commercial space, a spa resort and a light industrial site. The Beecher First Nation has established the SB Utility to provide energy services to the SB Community. Energy services consist of provision of electricity (i.e. resale of BC Hydro electricity), grid delivery of propane and district heating and cooling service.</p> <p>In June of 2016, SB Utilities filed an application with the BCUC for an exemption pursuant to section 88(3) of the UCA from Part 3 with respect to planned energy services. This application was denied by the BCUC on December 1, 2016.</p> <p>In its Reasons for Decision, the BCUC had a number of concerns that ultimately resulted in their rejection of the exemption application.</p> <ul style="list-style-type: none"> • SB Utility did not satisfy the BCUC that a transparent rate setting process and/or adequate benchmarks for utility service rates would be put in place; • The BCUC found that ratepayers would be subject to risk due to an inadequate complaint resolution mechanism; and • The BCUC concluded that a lack of independent oversight resulted in significant monopolistic characteristics.
Other	
Superior Propane /Seascapes propane utility	<p>On August 7, 2015, Superior Propane was defined as a public utility, as per section 1 of the UCA, for its operations at the Seascapes Development, and its current rates were approved as interim effective August 7, 2015.</p> <p>On February 17, 2016, Superior Propane filed with the BCUC a rate application for the Seascapes grid system seeking approval of its tariff and changes to its rate schedule. The BCUC approved the rate application in November 2016.</p>

CROSS-REFERENCE:

- 3 – LNG Heavy Duty Vehicle Transportation
- 11 – Amendments to Energy Efficiency Standards Regulation
- 15 – 10 Year Rates Plan
- 17 – Mandatory Reliability Standards
- 18 – Roles and Responsibilities
- 30 – BC Hydro Clean and Renewable Power Acquisitions

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: *Clean Energy Act Implementation*

KEY MESSAGES:

- The *Clean Energy Act* (CEA), enacted in June 2010, sets out 16 provincial energy objectives, including: electricity self-sufficiency; conservation; greenhouse gas (GHG) reduction; and fostering jobs and opportunities for rural communities and First Nations;
- The CEA commits the Province to having at least 93 percent of electricity generated in British Columbia from clean or renewable resources;
- Twelve regulations have been enacted to implement the CEA;
- As part of the Climate Leadership Plan released on August 19, 2016, Government will need to change the CEA to ensure that 100 percent of the Province's electricity is generated using clean and renewable resources.

BACKGROUND:

- The August 2009 Throne Speech stated that green energy would be a cornerstone of British Columbia's Climate Leadership Plan;
- The February 2010 Throne Speech committed to build on the contributions of the Green Energy Advisory Task Force and launch a comprehensive strategy to put British Columbia at the forefront of clean energy development;
- The CEA helps implement the strategy by:
 - setting out British Columbia's energy objectives to guide both BC Hydro's resource planning and the British Columbia Utilities Commission's (BCUC) decisions;
 - moving the Province to self-sufficiency and laying the foundation for a low carbon economy;
 - exempting from BCUC pre-approval a number of strategic energy investments, such as the Northwest Transmission Line, Site C, bioenergy and clean energy procurement, and capacity additions at Mica and Revelstoke;
 - creating a framework for BC Hydro to pursue electricity exports, including transmission capacity, while protecting BC Hydro ratepayers;
 - reintegrating British Columbia Transmission Corporation back into BC Hydro; and
 - installing smart meters and a smart grid.
- Regulations governing clean or renewable resources, exempt projects and programs, self-sufficiency, Burrard Thermal, BC Hydro's Standing Offer Program, smart meters and smart grid, and the First Nations Clean Energy Business Fund, have been enacted to implement the CEA:

- In 2012, the CEA was amended to remove the requirement under Section 6 (electricity self-sufficiency) for BC Hydro to hold rights to 3,000 gigawatt-hours of insurance energy by 2020. The requirement was considered costly and unnecessary to maintain a reliable electricity supply. Changing BC Hydro's planning criteria for critical to average water was enacted by regulation for the same reasons;
- In November 2014, the Province directed BC Hydro, through Section 9 of the CEA, to establish a long-term domestic sales program that sets a price for providing electricity to liquefied natural gas (LNG) facilities (currently \$86 per megawatt hour);
- The Final Report of the Task Force appointed to review the BCUC was released on February 4, 2015. As part of its recommendations regarding the independence of the BCUC, the Task Force recommended that Government should consider updating the CEA to ensure that it is consistent with current government policies;
- The Climate Leadership Plan, released on August 19, 2016, commits to making 100 percent of grid connected electricity generated in British Columbia clean or renewable, except where concerns regarding reliability or costs must be addressed. Acquisition of electricity from any source in British Columbia that is not clean or renewable must be approved by Government through an Integrated Resource Plan, where the specific reliability or cost concerns will be identified;
- The CEA will need to be amended to follow through on the Task Force recommendations and the Climate Leadership Plan commitments;
- The Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR), under Section 18 of the CEA, was issued on May 16, 2012 with the intention to encourage the adoption of natural gas as a transportation fuel for heavy duty fleet vehicles to reduce GHG emissions. Since then, the GGRR has been amended to expand incentives for emissions reduction activities, including the use of natural gas in heavy duty vehicles and machines, remote community power generation and for marine LNG bunkering;
- The most recent 2017 amendments to the GGRR support commitments made in the 2016 Climate Leadership Plan, including:
 - new incentives to encourage emission reductions from renewable natural gas (RNG) use in British Columbia's commercial transportation fleets;
 - a provision that allows utilities to purchase RNG and recover the costs from ratepayers;
 - a flexible framework that allows utilities to develop electrification programs; and
 - an undertaking that allows utilities to build and operate transmission lines in northeast British Columbia intended to serve the upstream oil and gas industry.

CROSS-REFERENCE:

3 – LNG in the Heavy Duty Vehicle Transportation Sector
14 – Integrated Resource Plan
14A – LNG Power Requirements
18 – Roles and Responsibilities
25 – Electricity Exports

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Columbia Basin Trust Overview

KEY MESSAGES:

- The Columbia Basin Trust (CBT) has a regionally-focused statutory mandate and provides programs and initiatives valued by Columbia Basin (Basin) residents.
- CBT continues to fulfill its mandate to provide social, economic and environmental benefits in the Basin, with priorities developed in consultation with residents. CBT's revenues are expected to grow significantly (to \$58 million) in 2016/17, and CBT has consulted and is now implementing its renewed Columbia Basin Management Plan (CBMP).
- CBT developed a restructuring proposal that would transfer the power asset management function from Columbia Power Corp. (CPC) to CBT, while retaining all existing CPC employees. Cost savings to the Province would be approximately \$1.3 to \$2.0 million per year, which could increase overtime if further efficiencies are found. The CBT Board is currently reviewing the proposal and will decide on whether to bring it forward to the incoming Government for consideration.

BACKGROUND:

- In the early 1990s, residents of the Basin requested that the Province recognize inadequacies in the original Columbia River Treaty (Treaty) consultations, including reparation for impacts resulting from construction and ongoing operation of the Treaty dams.
- The resulting negotiations led to the formation of CBT in 1995, under the *Columbia Basin Trust Act*, with a mandate to promote social, economic and environmental well-being in the Canadian portion of the Columbia River Basin.
- A Financial Agreement, also in 1995, established the initial funding arrangements. CBT has been endowed with \$363 million:
 - \$250 million to finance power project construction and \$26 million in expansion rights at two dams;
 - A \$45 million upfront payment in 1996, which CBT used as an endowment;
 - \$2 million per year from 1995 to 2010 for operations as noted in the Financial Agreement; and
 - \$10 million in 2006 as compensation for CBT forgoing its option to purchase CPC.

- In addition, the Province transferred \$250 million to CPC, CBT's Joint Venture Partner in power projects within the Basin. Revenues from these projects go to each project partner based upon their ownership share.
- These projects include:
 - 145 megawatt (MW) Brilliant Dam and Generating Station purchased from Teck and upgraded;
 - 185 MW Arrow Lakes Generating Station;
 - 120 MW Brilliant Expansion; and
 - 335 MW Waneta Expansion Project with Fortis Inc. (51 percent), CPC (32.5 percent) and CBT (16.5 percent).
- CBT's revenues are growing significantly (\$25 million in 2012/13 to \$58 million in 2016/17) as a result of the Waneta Expansion Project coming into service, and a new Electricity Supply Agreement for the Arrow Lakes Generating Station.
- CBT has completed a planning and engagement process with Basin residents to determine how these revenues should be spent.
- CBT's core functions include its Delivery of Benefits program, which is used to strengthen the social, economic and environmental well-being of the Basin residents, and its Investment Program, which generates a predictable, sustainable and appreciating income stream to fund the Delivery of Benefits program.
- CBT has renewed its CBMP, and this will guide CBT's activities in the next three to five years.
- The CBMP's strategic priorities include:
 - Affordable Housing;
 - Agriculture;
 - Arts, Culture and Heritage;
 - Broadband;
 - Community Priorities;
 - Early Childhood and Childhood Development;
 - Economic Development;
 - Environment;
 - First Nations Relationships;
 - Land Acquisition;
 - Non-profit Support;
 - Recreation and Physical Activity; and
 - Renewable and Alternative Energy.

CROSS-REFERENCE:

22 - Columbia Power Corporation

Page 089 to/à Page 090

Withheld pursuant to/removed as

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**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Community Energy Leadership Program

KEY MESSAGES:

- The Ministry is providing resources, support and tools for local governments and First Nations to implement energy efficiency and small-scale clean energy projects that meet energy, economic development and emission reduction goals;
- Budget 2015 included \$1.3 million in funding over three fiscal years from the Innovative Clean Energy Fund to establish a Community Energy Leadership Program (CELP);
- The primary purposes of CELP are to: support communities in implementing their climate action goals; reduce greenhouse gas (GHG) emissions; increase energy efficiency; and support the development of vibrant and resilient communities;
- After three rounds of funding, CELP is investing \$1.27 million in 23 community projects throughout the Province;
- CELP has leveraged over \$16 million in community, utility, federal government, and industry investments;
- These innovative community energy projects are creating jobs, supporting regional, economic and social development opportunities, reducing GHG emissions, reducing energy costs, and improving energy conservation and overall community sustainability.

BACKGROUND:

- CELP was designed and launched in fall 2015 and has had three annual calls for projects;
- Across the three program calls, CELP received 169 applications requesting a total of \$14.6 million in funding;
- CELP Round One successful projects completed by March 31, 2016 included:
 - Squamish-Lillooet Regional District – \$24,742.74 in funding for a solar photovoltaic project in the rural community of Gold Bridge;
 - City of Kelowna – \$45,000 for an arena energy efficiency retrofit project;
 - City of Kamloops – \$30,855 for a solar photovoltaic project at their newest park and community center;
 - Capital Regional District – \$21,780 for an energy efficient boiler retrofit project at a non-profit housing location;

- Nanaimo Regional District – \$20,000 for an arena energy efficiency retrofit project; and
- City of Coquitlam – \$20,000 for an energy efficient boiler retrofit at their cultural center, and an exterior LED retrofit at their sports and leisure center.
- CELP Round Two successful projects, completed by March 31, 2017, include:
 - Kwadacha First Nation – \$150,000 for a bioenergy project that will reduce diesel use in their remote community and generate revenue through an electricity purchase agreement with BC Hydro;
 - Old Massett Village Council – \$47,000 for a biomass district heating system that will reduce diesel use in their remote community;
 - City of Nelson – \$20,000 for a solar photovoltaic project, demonstrating a first-in-Canada concept of a “community solar garden,” where community members share in the ownership of a central solar system managed by the City’s municipal power utility;
 - District of Saanich – \$100,000 for an energy efficiency and air source heat pump retrofit project at a local community center;
 - Cowichan Valley Regional District – \$24,000 for a solar photovoltaic project at a local recycling center in their community;
 - Corporation of the City of Cranbrook – \$108,000 for a heat recovery ventilator pool retrofit project;
 - Skidegate Band Council – \$70,000 for a community-wide heat pump retrofit and training project that will reduce diesel use in their remote community; and
 - Xeni Gwet’in First Nation – \$36,000 for Phase 1 of a solar project to displace diesel power generation in their remote community.

s.17

- CELP Round Three successful projects, expected to be complete by March 31, 2018, include: (Note: these projects will be publicly announced in June 2017)

s.16,s.21

s.16,s.21

to further displace diesel power generation in their remote communities; and

s.16,s.21

CROSS-REFERENCE:

26 – Innovative Clean Energy Fund

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Remote Community Electrification Policy and Regulation

KEY MESSAGES:

- There are approximately 60 remote (or off-grid) communities in the Province, some of which are served by BC Hydro and some of which operate independently on costly, inefficient, and unreliable diesel-generation systems;
 - The Climate Leadership Plan's 2016 report included multiple recommendations to reduce diesel reliance in remote communities. These recommendations, as well as additional public and industry input, informed the development and direction of the Climate Leadership Plan;
 - Since 2006, the Province has provided approximately \$11 million in funding towards remote community energy efficiency and clean energy projects through the Remote Community Implementation (RCI) Program administered by Fraser Basin Council;
 - In 2013, BC Hydro's Remote Community Electrification (RCE) Program was discontinued as a result of budget constraints and a lack of federal funding available to support RCE projects;
 - British Columbia is a member of the Pan-Canadian Task Force on Reducing Diesel in Remote Communities as part of the Council of the Federation's Canadian Energy Strategy.^{s.16}
- s.16
- The Ministry of Energy and Mines chairs the British Columbia Remote Community Energy Network (which includes the Province, BC Hydro, the federal government and the Fraser Basin Council). The Network's objective is to improve program access and information sharing between members' programs, and to assist communities in implementing clean and efficient energy solutions.

BACKGROUND:

- Key barriers to improving remote community energy systems include inconsistent and inadequate federal funding, the lack of proven, reliable and cost-effective designs and operating standards for appropriately sized systems;

- The Province provided policy direction for the RCE Program through the BC Energy Plan. The Remote Communities Regulation creates an obligation for BC Hydro to serve eleven remote communities listed in the Schedule to the Regulation;
- Under the RCE Program and related Memorandum of Understanding, BC Hydro took over operation, maintenance, billing, and capital upgrades of energy systems in communities. Indigenous and Northern Affairs Canada (INAC) was responsible for funding any necessary system upgrades and to transfer operations and maintenance payments to BC Hydro going forward;
- Remote communities that are not BC Hydro customers presently pay approximately 40 cents per kilowatt hour (kWh) for electricity. Under the RCE Program, communities could become “Non Integrated Area” (NIA) customers and pay Zone 2 rates (~14 cents/kWh), while communities that are connected to the main grid pay Zone 1 rates (~11 cents/kWh);
- As a result of the lack of available INAC funding and BC Hydro’s budget constraints, the RCE Program was discontinued in fall 2013;
- The federal government, through both INAC and Western Economic Diversification, has recently expressed an interest in partnering with the Province on supporting energy efficiency and clean energy projects in remote communities. However, INAC has indicated that, due to budget constraints, they are not interested in partnering to reinstitute the RCE Program at this time;

s.16,s.21

- Any interest earned on the RCI funding held by the Fraser Basin Council is to be redirected into remote community energy projects, as directed by the Province; this has allowed the RCI Fund to continue to support remote community energy and First Nations energy efficiency projects;
- In 2017, the Ministry of Aboriginal Relations and Reconciliation’s First Nations Clean Energy Business Fund allocated \$2.1 million over three years to First Nations remote community clean energy projects where there is matching federal government funding.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Electricity Exports

KEY MESSAGES:

- The *Clean Energy Act* (CEA) sets an objective for the Province to be a “net exporter of electricity from clean or renewable resources” and how BC Hydro plans to meet this objective must be set out in its Integrated Resource Plan (IRP).
- Direction 7 to the British Columbia Utilities Commission (BCUC), as amended, suspends the expenditures for export provisions for 2016/17 and 2018/19.
- In the November 26, 2013 Government-approved IRP, BC Hydro concluded that the prospects of export sales of clean or renewable energy, in excess of that required to meet British Columbia’s self-sufficiency requirements, have diminished considerably.
- The prospects of such sales are not expected to materially improve over the short to medium term because of:
 - ongoing low natural gas prices and increasing natural gas fired electricity generation capacity;
 - the persistence of tax incentives (subsidies) available to U.S. renewable energy producers; and
 - the enactment of Renewable Portfolio Standards in potential markets that exclude renewable British Columbia resources.

BACKGROUND:

- The CEA sets an objective for the Province to be a “net exporter of electricity from clean or renewable resources” and sets out the requirement for what BC Hydro must include in its IRP with respect to meeting this objective. Specifically, the IRP includes a description of:
 - the expected export demand during a defined period;
 - the potential for British Columbia to meet that demand;
 - the actions BC Hydro has taken to seek suitable opportunities for export of electricity from clean or renewable resources; and
 - the extent to which BC Hydro has arranged for contracts for the export of electricity and the transmission or other services necessary to facilitate those exports.

- The CEA's reference to exports is in the context of investing in transmission and developing new clean or renewable generation resources in British Columbia beyond self-sufficiency requirements for the express purpose of exporting the electricity from those resources to the U.S.
- There are two types of potential export market opportunities: the spot and short-term electricity market; and the Renewable Portfolio Standard (RPS) market.
 - Electricity (Spot) Market – refers to the generation and usage of all electricity that does not have to meet a RPS. BC Hydro advises that this is, and will continue to be, the largest market for electricity. There are currently no restrictions on the type of generation that can be used to meet demand in this market. It is served by utilities' self-generation, long-term contracts and spot market transactions; and
 - RPS Market – refers to a mechanism that places an obligation on electricity suppliers to include a specified percentage of electricity from renewable energy resources, such as wind and solar. Nine of the eleven U.S. states that are located wholly within the Western Electricity Coordinating Council (WECC) region have mandatory RPS requirements and two (Idaho and Wyoming) do not.
- British Columbia resources currently have challenges accessing RPS markets in the U.S. because of delivery and resource eligibility requirements. This is particularly the case in California. The California Energy Commission has concluded that “the difficulty of meeting the environmental protection requirements for out-of-country facilities, and the restrictions on the eligibility of new hydroelectric facilities pursuant to the Renewables Portfolio Standard statutes make it extremely unlikely that any run-of-river facilities in British Columbia would qualify as eligible for California's Renewables Portfolio Standard.”
- In its IRP, BC Hydro concludes that the prospects of export sales of clean or renewable energy in excess of that required to meet British Columbia's self-sufficiency requirements have diminished considerably. The prospects of such sales are not expected to materially improve over the short to medium term.
 - The reasons include projected ongoing low natural gas prices; a significant recent increase in renewable energy resources in the WECC; the persistence of tax incentives for development of, and subsidies for the operation of, renewable energy projects available to U.S. producers; and the enactment of RPSs in potential markets that exclude renewable British Columbia resources.
- In 2015/16, gross revenue to BC Hydro from trade in electricity totalled \$643 million.
- Under the CEA, the BCUC must not allow “expenditures for export” to be recovered in rates. Direction 7 suspends the expenditures for export provisions for 2016/17 to 2018/19, in order to preclude assertions that electricity procured to meet forecast domestic demand that is currently surplus should be deemed electricity for export.

CROSS-REFERENCE:

9 – B.C. Electricity Sector Revenue to Government

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Innovative Clean Energy Fund

KEY MESSAGES:

- Established in 2007, the Innovative Clean Energy (ICE) Fund is designed to support Government's energy and environmental priorities and advance British Columbia's clean energy sector;
- The legislation underpinning the ICE Fund Special Account allows the Minister to undertake a broad range of activities to address Government's energy and environmental priorities;
- The initial mandate of the ICE Fund (2008 to 2012) was to support emerging clean energy technologies in the electricity, alternative energy, transportation, and oil and gas sectors to bridge critical financial barriers to commercialization;
- Technology demonstrations have included bioenergy, solar, ocean tidal, geo-exchange, desalination, energy management, smart grid and waste-to-energy, resulting in several projects achieving notable success and advancing their technologies to commercial readiness;
- In 2014, the ICE Fund was applied in a more comprehensive manner within its legislated mandate to support the energy and environmental priorities, and advance British Columbia's clean energy and technology sectors;
- The ICE Fund has allocated approximately \$97 million in funding to support pre-commercial clean energy technology projects, clean energy vehicles, research and development and energy efficiency programs;
- ICE Fund leveraging of project funding is typically \$2 external for each \$1 from the ICE Fund;
- Successful ICE Fund partnerships have included universities, First Nations, municipalities and many emerging clean tech companies across British Columbia;
- Budget 2017 approved a three-year (2017/18 to 2019/20) ICE Fund spending plan of \$2.3 million per year, which will support programs and initiatives already identified;

- Additionally, in March 2017, Canada and British Columbia entered into a three year, \$40 million partnership for the development of pre-commercial clean energy projects and technologies. Each party will contribute \$20 million and are represented by Sustainable Development Technology Canada and the ICE Fund, respectively;
- The ICE Fund supports the Climate Leadership Plan, which outlines 21 actions leading to the creation of up to 66,000 green jobs over the next 10 years and reducing net annual greenhouse gas emissions by up to 25 million tonnes below current forecasts by 2050.

BACKGROUND:

Current Status:

- Since 2008, approximately \$97 million has been allocated to support 62 pre-commercial clean energy tech projects and various programs and initiatives such as:
 - LiveSmart BC Residential Program;
 - Clean Energy Vehicle Program;
 - Community Energy Leadership Program;
 - BC - NRCan ISO 50001 Implementation Incentive; and
 - Oil to Heat Pump Incentive Program.
- Of the 62 pre-commercial clean tech projects approved prior to 2012, 33 projects are completed, 26 projects have been rescinded or withdrawn, and 3 projects remain active. The remaining projects are the last of the 62 pre-commercial clean tech projects approved between 2008 and 2012.

ICE Fund Project Partnerships:

- Carbon Engineering: Air-to-Fuels Pilot Project – In March 2016, the ICE Fund provided \$3.75 million to Carbon Engineering to support the delivery of the world's first air to fuels plant that demonstrate low or zero carbon intensity liquid fuel production by a process that is technically and economically feasible at commercial scale. Project is expected to be completed in March 2019; and
- Saltworks: Mine Water Treatment Pilot – In March 2016, the ICE Fund provided \$1.25 million to Saltworks to support the design, build and implementation of two demonstration pilots using their patented wastewater treatment technologies to remove nitrates in a test environment and selenium at Teck Resources' Fording River mine site. Project is expected to be completed in December 2017.

Post-Secondary Clean Energy Partnerships Program:

- Launched in 2015, the Post-Secondary Clean Energy Partnerships Program supports research in clean energy science and technology projects undertaken by post-secondary institutions in British Columbia and leverages federal government funding from the Natural Sciences and Engineering Research Council of Canada.

BC Marine Energy Centre Roadmap to Implementation Project:

- An allocation of \$100,000 (in fiscal 2016/17) to facilitate the completion of a development roadmap for the British Columbia Marine Energy Centre that will initially focus on creation of a wave energy hub.

\$40 Million Canada – British Columbia Joint Call for Applications:

- Under the Pan-Canadian Framework on Clean Growth and Climate Change, British Columbia and Canada are working together to spur the development and commercialization of new technologies that will reduce emissions and create jobs for Canadians; and
- Described above, the Province and the federal government will each contribute \$20 million for the program. The provincial contribution comes from the ICE Fund and the federal contribution is provided through Sustainable Development Technology Canada.

Special Account Funding and 2017/18 Budget (see Appendix 1):

- Funding for the Special Account comes via a 0.4 percent levy applied to specific “energy products.” Under the current definition, “energy products” include: natural gas; fuel oil used for the purposes of heating, cooling or raising steam (kerosene excluded); and propane in a vaporized form. The levy is forecast to generate approximately \$5.5 million in 2017/18. When originally implemented, the levy included electricity sales, which combined with higher natural gas prices, generated about \$25 million per year;
- The forecast balance in the Special Account at March 31, 2018 is \$10.9 million;
- An updated spending plan approved by Treasury Board over the 2017/18 to 2019/20 fiscal plan period is \$6.9 million (\$2.3 million per year over the 3-year fiscal plan); and
- The ICE Fund administrative budget for 2017/18 is \$399,000 and 3.0 FTEs. The amount represents an increase of \$100,000. This is the result of the salary transfer for a Ministry of Finance compliance auditor approved to support the Renewable and Low Carbon Fuel Requirements Regulation.

ATTACHMENT: Appendix 1: Approved ICE Fund 3 Year Spending Plan

APPENDIX 1

Approved ICE Fund Projects / Special Account Administration

	2017/18	2018/19	2019/20	Total
Forecast Balance at March 31, 2017	7.701	13.201	18.701	
Levy Revenue Estimate	5.500	5.500	5.500	16.500
Total	13.201	18.701	24.201	16.500

Approved Budget 2016

ICE Fund Portfolio	1.901	1.898	1.898	5.697
Special Account Administration / RLCFRR Auditor Position	0.399	0.402	0.402	1.203
Total	2.300	2.300	2.300	6.900

	2017/18	2018/19	2019/20	Total
Clean Transportation Fuels				
MEM RLCFRR - Transportation Fuel Reporting System (TFRS) Staff Development Cost	0.700	0.700	0.100	1.500
Public Sector Infrastructure / Post-Secondary R&D				
Clean Energy Leadership Program (Communities)	0.550			0.550
First Nations Energy Save Program	0.050	0.050	0.050	0.150
Energy Efficiency and Conservation				
High Performance Building Cost-Optimization Tool	0.125			0.125
High Performance Builder Training	0.075	0.200	0.200	0.475
High Performance Window Rebate			0.750	0.750
High Performance Building Research & Development		0.200	0.200	0.400
ASHP Performance Study	0.050			0.050
Building Owners and Managers Association Energy Advisor	0.100	0.100	0.100	0.300
Part 9 Energy Code Compliance Tool Phase 2	0.020			0.020
Part 3 Energy Code Checklist Phase 2		0.150		0.150
Energy Step Code Best Practices Guide	0.030			0.030
BC-NRCan ISO 50001 Incentive		0.098	0.098	0.196
ICE Fund Project Partnerships				
s.21		0.250	0.250	0.500
	0.100			0.100
	0.025			0.025
		0.150	0.150	0.300
	0.016			0.016
	0.010			0.010
	0.050			0.050
Sub-total	1.901	1.898	1.898	5.697
Special Account Administration & RLCFRR Auditor	0.399	0.402	0.402	1.203
Total	2.300	2.300	2.300	6.900

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

**ISSUE: ICE Fund Partnership with Sustainable Development
Technology Canada (SDTC)**

KEY MESSAGES:

- Under the Pan-Canadian Framework on Clean Growth and Climate Change, British Columbia 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 energy projects and technologies. The \$20 million provincial contribution is from the Innovative Clean Energy (ICE) Fund. The federal contribution will be provided through the SDT Fund managed by SDTC. At least a further \$20 million will be leveraged from the private sector;
- The parties will conduct a joint call over a three-year continuous intake period beginning in April 2017 to seek out clean energy projects and technologies that will mitigate or avoid provincial greenhouse gas (GHG) emissions, including prototype deployment, field testing and commercial-scale demonstration projects;
- A streamlined and harmonized application process will provide 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 British Columbia;
- The partnership enables the leveraging of federal funds in a 1:1 ratio to fund clean energy technologies, and a 2:1 leveraging ratio including federal and industry contributions;
- The partnership with SDTC is a signal to other federal funding agencies (e.g. Natural Resources Canada; Innovation, Science and Economic Development Canada; Transport Canada) that the Province is interested in developing further relationships to undertake investments in clean energy and GHG reduction projects.

BACKGROUND:

- 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;
- The Ministry of Energy and Mines and SDTC have worked together in the past through the ICE Fund in areas of shared information and due diligence, and each has independently funded some common clean energy projects in British Columbia;
- ICE Fund revenues are estimated at \$5.5 million annually. Any surpluses (spending below revenues) increase the balance available in future years. On January 19, 2017, the Chair of Treasury Board approved a three-year spending plan for the ICE Fund of \$6.9 million over 2017/18 to 2019/20;
- The 2017/18 ICE Fund opening balance at March 31, 2017 is projected to be \$7.7 million. Disbursements from the ICE Fund under the partnership with SDTC are anticipated to flow between 2018/19 and 2020/21 from built up surpluses;
- In addition to enabling the ICE Fund to leverage federal investment, the partnership will allow 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;
- The Joint Call is for clean energy technology development and/or demonstration projects with a Technology Readiness Level 4-7 at the start of the project:
 - ✓ **Prototype Development (TRL 4-5):** The technological components have been integrated and the concept has been proven;
 - ✓ **Field Pilot (TRL 6):** a small-scale prototype system is ready to be field tested in an operational environment; and
 - ✓ **Commercial Demonstration (TRL 7):** a prototype system is ready to demonstrate commercial viability.
- Project applications must be led by a Canadian company and involve a consortium. At least 50 percent of project costs must be incurred in Canada and project demonstrations must take place in British Columbia;
- The maximum request that an applicant can make to the ICE Fund is the lesser of 33.3 percent of eligible project costs or \$3 million; however, the ICE Fund can, at its discretion, contribute more funding to accelerate high potential technologies. The maximum request that an applicant can make to SDTC shall not exceed 33.3 percent of eligible project costs.

Page 104 to/à Page 111

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**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Clean and Renewable Power Producers Facts

KEY MESSAGES:

- The provincial energy objectives in the *Clean Energy Act* (CEA) confirm the role of clean, renewable energy producers in meeting British Columbia's electricity needs.
- As of January 1, 2017, there were 115 operational projects with Electricity Purchase Agreements (EPAs) with BC Hydro. BC Hydro also manages another 20 EPAs for projects in the pre-commercial operation stage. Additionally, there are 13 applications proceeding through the Standing Offer Program (SOP) review process.
- Of the 115 projects delivering power to BC Hydro:
 - 78 are hydro projects, including 12 storage hydro projects;
 - 4 are wind projects;
 - 1 is a solar project;
 - 24 are biogas/biomass projects;
 - 3 are gas-fired thermal projects;
 - 1 is a municipal solid waste project; and
 - 4 are energy recovery projects.
- To date, these projects deliver 19,760 gigawatt hours (GWh) per year of electricity to BC Hydro. Power procurement processes have included: Clean Power Calls; Bioenergy Calls; an Integrated Power Offer for Pulp and Paper Customers; and the SOP for projects of less than 15 megawatts (MW) of capacity.

BACKGROUND:

- Several of British Columbia's energy objectives under the CEA are relevant to clean and renewable energy projects, namely:
 - To achieve electricity self-sufficiency;
 - To generate at least 93 percent of the electricity in British Columbia from clean or renewable resources and build the infrastructure necessary to transmit that electricity;
 - To use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources;

- To reduce greenhouse gas emissions; and
- To reduce waste by encouraging the use of waste heat, biogas and biomass.
- BC Hydro is managing 20 EPAs for projects that are in development. These pre-commercial operation date projects represent 2,385 GWh per year of contracted energy.
- BC Hydro's current load resource balance does not forecast a need to purchase large amounts of electricity from clean or renewable power producers until the early 2030s.
- BC Hydro's SOP continues to accept applications for clean or renewable projects between 100 kilowatts and 15 MW. The annual target volume for the SOP is 150 GWh per year.
- In February 2016, BC Hydro announced a review of the SOP that will take into account the current needs of BC Hydro and declining development costs for independent power producer (IPP) projects. The review will consider system impacts from a forecasted oversupply of freshet (spring and early summer) energy in the future and the need for more capacity based resources. BC Hydro is likely to complete the review by summer 2017.
- BC Hydro forecasts that it has enough energy to meet the SOP's 150 GWh per yr volume target for 2017, 2018 and 2019. BC Hydro is, however, continuing to accept and review applications for projects that will commence operations in 2020. No decisions will be made regarding these projects until BC Hydro determines the future price and annual volume for the program.

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- The Climate Leadership Plan, released on August 19, 2016, commits Government to making 100 percent of grid connected electricity generated in British Columbia clean or renewable, except where concerns regarding reliability or costs must be addressed. Acquisition of electricity from any source in British Columbia that is not clean or renewable must be approved by Government through an IRP, where it will be aligned with the specific reliability or cost concerns.

CROSS-REFERENCE:

29A – Questions & Answers for IPP in British Columbia
 30 – Clean and Renewable Power Producers Projects Policy Issues
 33 – Sale of Self-Generated Electricity

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia

Qs & As: For Clean and Renewable Power Production in British Columbia

What is the role of clean and renewable power producers?

- A number of generators, including Crown agencies, self-generators, utilities and clean, renewable power producers, produce electricity in British Columbia. BC Hydro generates the majority of electricity generated in the Province, while other generators include Rio Tinto, Teck, Columbia Power, industrial self-generators and clean, renewable power projects.
- In the 2002 Energy Plan, “Energy for Our Future: A Plan for BC,” British Columbia moved to strengthen the opportunities for private sector investment in developing new electricity generation.
- The 2007 Energy Plan targets energy conservation, investments by BC Hydro in Heritage Assets and system expansion and competitive sourcing from clean, renewable power projects.
- The *Clean Energy Act* (CEA) supports this direction with the 16 Provincial Energy Objectives, which include achieving electricity self-sufficiency, a conservation target for BC Hydro of 66 percent by 2020 (up from 50 percent previously), and ensuring that at least 93 percent of the electricity generated in British Columbia is from clean or renewable resources (up from 90 percent). Related policy actions were designed to ensure a continued supply of affordable, reliable supply of electricity over the long term to provide value to ratepayers.
- The Climate Leadership Plan (CLP), released on August 19, 2016, commits to making 100 percent of grid connected electricity generated in British Columbia clean or renewable, except where concerns regarding reliability or costs must be addressed. Acquisition of electricity from any source in British Columbia that is not clean or renewable must be approved by Government through an Integrated Resource Plan (IRP), where specific reliability or cost concerns will be identified.
- Clean energy producers bring entrepreneurial capital, access to financing, and take on associated risks.
- Clean, renewable power producers have a proven track record in British Columbia, demonstrating the development and operation of cost-effective projects, including First Nation’s participation.
- Clean, renewable power producers and their projects contribute to a balanced strategy for ensuring communities, individuals and industries in British Columbia have access to adequate supplies of affordable electricity.

What is the role of BC Hydro?

- BC Hydro has acquired power from clean and renewable power projects primarily through competitive processes. In some cases, BC Hydro acquires power under bilateral arrangements outside of its competitive processes, with pricing benchmarked to the most recent competitive calls. The amount of power acquired is based on the system need. To date, BC Hydro’s initiatives for purchasing electricity from independent and clean, renewable power projects include:
 - existing contracted purchases of approximately 19,292 gigawatt-hours per year (GWh/year) of electricity;
 - Clean Power Call;

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia

- Bioenergy Calls;
- Integrated Power offer; and
- Standing Offer Program (SOP) for projects less than 15 megawatts (MW).
- BC Hydro's primary business activities are the generation and distribution of electricity, as well as planning and assessing to ensure sufficient power will be available to meet its customer's needs through a combination of:
 - demand management programs to reduce electricity demand;
 - investing in upgrades to its existing assets to improve power production; and
 - acquiring power from outside suppliers.
- BC Hydro plans, operates and maintains an extensive publicly-owned electrical transmission system (wires, poles, towers, substations, etc.), and provides non-discriminatory access to the system.
- BC Hydro has a history of construction and operation of large-scale hydroelectric generation facilities with associated dams and water reservoirs.
- BC Hydro is responsible for the construction, operation, maintenance and improvement of large capital projects, such as:
 - Surrey Area Substation Project;
 - Big Bend Substation Project;
 - Ruskin Dam and Powerhouse Upgrade;
 - Horne Payne Substation Project;
 - Cheakamus Unit 1 and Unit 2 Generator Replacement;
 - John Hart Generating Station Replacement Project;
 - Fort St. John and Taylor Electric Supply Project;
 - G.M. Shrum G1-G10 Control System Upgrade; and
 - Site C Clean Energy Project.
- Federal and provincial government environmental approvals for Site C were received in October 2014. In December 2014, a final investment decision was made. Once completed, the 1,100 MW project will produce about 5,100 GWh of electricity each year – enough to power the equivalent of 450,000 homes in British Columbia. Construction was started in July 2015.
- BC Hydro also owns Powerex Corp., a separate trading subsidiary. Powerex helps optimize BC Hydro's electric system resources, improves the security and reliability of electricity supply for the Province, and provides significant economic benefits to BC Hydro ratepayers.
- Electricity trade and power marketing are possible because BC Hydro's bulk transmission network is interconnected with Alberta to the east, and the Bonneville Power Administration to the south. This transmission network links BC Hydro with a huge market for the purchase and sale of wholesale electricity outside the Province.

How does BC Hydro decide how much power it needs from clean and renewable projects?

- The CEA requires BC Hydro to submit an IRP to the Government, setting out how it will implement the energy objectives and the results of public and First Nations consultations on the IRP. The IRP includes forecast growth in power demand, an assessment of

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia

export market potential, and an assessment of transmission infrastructure requirements over the following 30 years. In November 2013, Government accepted BC Hydro's IRP with its long-term plan for acquiring the energy resources to meet its customers' needs for the next 20 years.

What is the role of conservation and energy efficiency?

- Under the CEA, one objective is for BC Hydro to meet at least 66 percent of its increased resource requirements to 2020 through energy efficiency and conservation.
- In evaluating the need for additional generation, BC Hydro prepares estimates of the electricity that can be "saved" by users through the adoption of conservation and energy efficiency measures.
- BC Hydro's "Powersmart" program encourages the adoption of energy efficient activities through education and financial incentives and rebates for customers who choose energy efficient products.
- This type of program is called "Demand Side Management."

How many clean and renewable power projects are there in British Columbia?

- In order to answer this question, it is important to be clear about what is being counted. Generally, when discussing clean and renewable power producers, Crown corporations are excluded (BC Hydro and Columbia Power Corporation), as well as Rio Tinto, Teck, and FortisBC.
- As of January 1, 2016, BC Hydro had Electricity Purchase Agreements (EPA) with 108 clean, renewable power projects. Of these operational projects, 71 are waterpower projects (59 non-storage and 12 storage hydro), 24 are biogas/biomass projects, four are wind power projects, four are energy recovery generation projects, one is a solar project, and one is a municipal solid waste project.
- Please note that this total does not include three EPAs that BC Hydro has with natural gas thermal facilities.

What is the impact for BC Hydro to purchase electricity from clean and renewable power producers on provincial electricity rates?

- BC Hydro has acquired power through competitive processes in the past, where projects bid against each other for the opportunity to supply power to BC Hydro. BC Hydro designs its power acquisition programs to obtain competitively priced supplies of electricity, and these processes evolve over time to address its needs and meet provincial policy. BC Hydro has entered into bilateral EPAs that are benchmarked to competitive procurement processes.
- Notwithstanding the competitive nature of power pricing from clean energy projects, the cost of power from new generation projects is higher than the cost of power from BC Hydro's existing Heritage Assets.
- This is the case regardless of who builds the new projects.
- Clean, renewable power producers have demonstrated their ability to finance, build and operate facilities effectively. They bring entrepreneurial capital, access to financing and take on associated risks, and have a proven track record in the development and operation of cost-effective projects.

Can clean and renewable power producers export power?

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia

- It is legal to export electricity, as it is for other commodities produced in British Columbia. For example, BC Hydro, through Powerex, uses the flexibility of its hydro-based system and interconnections with the U.S. and Alberta to buy and sell power. Profits from these activities help keep rates low.
- Clean and renewable power producers are free to export power if they: obtain the required approvals and permits to make use of provincial resources; meet provincial and federal environmental standards for their projects; arrange and pay for access to the transmission system; and obtain an export permit from the National Energy Board.
- Although the opportunity for clean and renewable power producers to sell to markets in the U.S. and Alberta exists, British Columbia IPPs have been focusing on selling power to BC Hydro.
- There are a number of reasons the export market has not been attractive, including the cost and availability of transmission to other markets, the difficulties in marketing power from intermittent power projects, low market prices due to low natural gas prices and U.S. subsidies for renewables, and financing of large capital projects without a long-term sales agreement.

How many clean and renewable power projects will there be in the future?

- This is a difficult question to answer, as there are a number of variables, several of which are difficult to predict.
- BC Hydro did not recommend any new calls for power in its IRP, approved by Government in November 2013, because they forecast a surplus over the next several years. With Government's approval of Site C in December 2014, BC Hydro will likely not need to acquire electricity until the 2030s, assuming an initial LNG load of 3,000 GWh per year.
- BC Hydro is continuing to acquire electricity through their SOP.
- The BC Hydro SOP for projects less than 15 MW is an open program that accepts projects as submitted, therefore, the number of projects in the future is not known, but is expected to number in the dozens as opposed to the 100s.
- The IRP identifies electricity supply needed in the Province and makes recommendations about the anticipated load demand.
- If demand increases more than forecast, for example if there is increased electrification as resulting from CLP commitments, then further procurement of clean or renewable power may be required.
- Regardless of what opportunities are pursued by producers, all power project proposals must meet provincial and federal environmental requirements in order to be developed in British Columbia.

How are clean and renewable power project proposals evaluated?

- Projects are evaluated several times as they move from original concept through to full development.
- All projects on Crown land, regardless of size or type, must receive the appropriate permits under the *Water Sustainability Act* (WSA) (for a waterpower project) and the *Land Act* (LA) from the provincial government. In deciding whether to issue these permits, Government considers technical information, federal and provincial agency comments, and comments from the public, local government and First Nations. For example, in total, a typical run-of-river project will require more than 50 permits,

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia

licences, approvals and reviews from regulatory bodies, including federal, provincial, local and First Nations.

- In its acquisition process, BC Hydro has specific evaluation criteria developed for the review of project submissions.

What rights do clean and renewable power producers acquire when they develop a wind or waterpower project?

Waterpower

- In order to develop a waterpower project, the developer must apply for and receive a water licence and associated tenures for Crown land, and the project must be compliant with the WSA and the LA.
- The water licence and land tenures give the developer the right to temporarily use water, modify the land and/or construct improvements as specified in the tenure document, and develop a transmission line from the power project to electrical grid connection, power substation and operations center. Generally, this means the construction and operation of the project is described in their submitted and approved development plan for a 40 year term. Ownership of the water resource remains with the Province.
- The developer may construct and operate their project for the time period specified in the permits. The water licence and Crown land tenures may contain terms and conditions which must be adhered to by the developer for the duration of the tenure.
- Where a project has received an EPA from BC Hydro, the length of the land tenure matches the time period for the EPA. However, the length of the water licence is fixed by the *Water Sustainability Act* to be 40 years.
- If the project has not received an EPA, the land tenures are awarded for 10 years.
- The developer has the right to develop their project subject to any terms and conditions on the tenure, to sell electricity for a fair return on investment, and must pay the Province for their use of water and land. Water fees are based on the capacity of the project and the amount of electricity produced, and land fees on the area of land under tenure.
- At the end of the tenure term, the developer may apply for a renewal, and this application will be adjudicated following normal procedures at that time for water licences and Crown land tenures.
- At the end of the tenure term, the Province may choose to not renew the water licence and/or and tenures, and may ask the developer to remove the improvements and return the waterway and lands to original condition.
- An IPP Guidebook outlines in more detail the permitting and approval process for waterpower projects.

Wind Power

- In order to develop a wind power project, the developer must apply for and receive land tenures for the turbines, transmission lines connecting between the turbines, and transmission lines from the turbine cluster to electrical grid connection, power substation and operations center. The project must be compliant with the Crown Land Use Operational Policy for Wind Power Projects.
- The land tenures give the developer the right to construct and operate a wind power project as described in their approved development plan.

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia

- The developer may construct and operate their project for the time period specified in the permits. The Crown land tenures may contain terms and conditions which must be adhered to by the developer for the duration of the tenure.
- Where a project has received an EPA from BC Hydro, the length of the land tenure matches the time period for the EPA.
- If the project has not received an EPA, the land tenures are awarded for 10 years.
- The developer has the right to develop their project subject to any terms and conditions on the tenure, to sell electricity for a fair return on investment, and must pay the Province for their use of land. The fees are based on a percentage of revenues from the electricity produced and on the area of land under tenure.
- At the end of the tenure term, the Province may choose to not renew the land tenures, and may ask the developer to remove the improvements and return the lands to original condition.
- The IPP Guidebook outlines in more detail the permitting and approval process for wind power projects.

How do investigative licences and water licence applications relate to actual number of clean and renewable power producer projects built?

- Developers interested in hydropower, wind power and ocean power must first apply for an investigative licence under the LA and, if applicable, file a water licence application under the WSA.
- These initial applications allow for the investigation of a particular site to determine if a viable project can be developed. Resource data and environmental information is collected, preliminary engineering plans are drawn up, and financial analysis is conducted.
- Developers do not have to have an EPA with BC Hydro to investigate hydro or wind power potential. The extent to which projects will get built is largely dependent on BC Hydro's need to acquire power and the competitiveness of projects relative to others.
- It is important to note that an application for a water licence or having an investigative licence for wind power development does not mean that a water licence or a permit to construct a wind power project will be granted. Only those applications that are able to meet British Columbia's significant regulatory requirements will proceed beyond the application stage.

How is the environment protected when clean, renewable power projects are developed?

- All clean, renewable power projects, regardless of size, must meet stringent environmental requirements to receive the necessary permits to construct and operate generation projects.
- The review process for projects 50 MW or larger is subject to an environmental assessment (EA) under the *Environmental Assessment Act* (EAA) and coordinated by the EA Office.
- Projects subject to an assessment under the EAA must not proceed until they have received an EA Certificate, as well as all other applicable permits and licences.

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia

- The EA Certificate, as well as permits and licences, contain terms and conditions the developer must adhere to, and report on, in order to ensure the environment is protected.
- Smaller projects are assessed as part of the review of permit or licence applications under specific statutes, such as the WSA or the LA. The permits or licences contain terms and conditions the developer must adhere to, and report on, in order to ensure the environment is protected.
- EA Certificates are identified on the EA Office's website; water licences may be erased in the provincial water licence database; and Crown land tenure applications and reasons for decision are posted by the Ministry of Forests, Lands and Natural Resource Operations.

What is an EA under the EAA for clean power projects 50 MW or greater?

- British Columbia's EA process provides a mechanism for reviewing major projects to assess their potential impacts. In order for a major project to proceed, an EA review must be completed successfully and the proposed project must be approved by two provincial Ministers who can issue an EA Certificate.
- The EA process addresses a broad range of environmental, economic, social, health and heritage issues through a single, integrated process. It ensures that the issues and concerns of all interested parties and First Nations are considered together, and that a project, if it is to proceed, will do so in a sustainable manner.
- Some clean power projects under 50 MW apply to have their projects reviewed under the EA process.

How long does an EA Certificate last?

- An EA Certificate remains in effect for the life of the project, unless suspended or cancelled by the Minister of Environment for reasons of non-compliance with the EAA. All certificates also contain a deadline of between three and five years from the date of issuance for the project to be "substantially started." If substantive project development has not begun by this deadline, the holder of the certificate can apply for one extension of the deadline for up to five more years.

What is the role of the public, local governments and First Nations in clean and renewable power project development?

- All clean power projects, regardless of size or type, must receive the appropriate permits under the WSA or the LA from the provincial government.
- Obtaining input from the public, local governments, and First Nations, and any other interests potentially affected by a project is an essential component of permit reviews, regardless of project size.
- Input from the public, local governments, and First Nations is used by agencies in deciding whether or not to issue permits under the WSA or the LA.
- First Nations are also consulted with respect to how any potential project may impact their asserted rights and title.
- For projects 50 MW or greater, the EA Office establishes an advisory Working Group that consists of First Nations, federal, provincial and local government who participate throughout the project review. The EA process fosters public involvement through a number of channels, including: notification of key consultation events, thorough

March 2017 – Qs & As: Clean and Renewable Power Production in British Columbia
formal public comment periods on the Terms of Reference and the Application and
public meetings.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

**ISSUE: Clean and Renewable Power Producers Projects Policy
Issues**

KEY MESSAGES:

- Clean, renewable energy producers have been supplying competitively priced clean electricity to BC Hydro for more than 20 years. They will continue to help meet power needs in British Columbia.
- BC Hydro currently has a surplus of electricity and does not expect to issue any calls for power in the near future.
- Government continues to work with clean and renewable power producers with respect to the operational policy framework for clean and renewable power producers.

BACKGROUND:

- BC Hydro acquires electrical generating capacity from clean, renewable energy producers through competitive procurement processes.
- A decision for BC Hydro to develop Site C was made in December 2014.
- In the *Clean Energy Act*, 16 provincial energy objectives are set out, including: achieving electricity self-sufficiency; a conservation target for BC Hydro of 66 percent of new demand by 2020; and ensuring that at least 93 percent of the electricity generated in British Columbia is from clean or renewable resources.
- The Climate Leadership Plan, released on August 19, 2016, commits Government to making 100 percent of BC Hydro's grid connected electricity generated in this Province clean or renewable, except where concerns regarding reliability or costs must be addressed. Acquisition of electricity from any source in British Columbia that is not clean or renewable must be approved by Government through an Integrated Resource Plan (IRP), where the specific reliability or cost concerns will be identified.
- The Ministry of Energy and Mines (MEM) has the lead responsibility for developing, implementing and maintaining Government's strategic energy policy, whereas the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) has the responsibility for operational clean energy policy.
- BC Hydro's current load resource balance does not forecast a need to purchase electricity from clean or renewable power producers until the early 2030s.
- BC Hydro's Standing Offer Program (SOP) continues to accept applications for clean or renewable projects between 100 kilowatts and 15 megawatts. The annual target volume for the SOP is 150 gigawatt hours (GWh) per year.

- In February 2016, BC Hydro announced a review of the SOP that will take into account the current needs of BC Hydro and declining development costs for independent power producer projects. The review will consider system impacts from a forecasted oversupply of freshet (spring and early summer) energy in the future, and the need for more capacity based resources. BC Hydro is likely to complete the review by summer 2017.
 - BC Hydro forecasts that it has enough energy to meet the SOP's 150 GWh per year volume target for 2017, 2018 and 2019. BC Hydro is, however, continuing to accept and review applications for projects that will commence operations in 2020. No decisions will be made regarding these projects until BC Hydro determines the future price, annual volume, and other conditions for the program.
 - BC Hydro's current load resource balance does not forecast the need to continue
- s.13,s.17

- Issues that the MEM, in collaboration with the FLNRO, are currently working with industry include:
 - Consulting and working with Environment Canada on their proposed guidance on siting wind power turbines to minimize their impact on weather radar accuracy; and
 - Ensuring the industry is engaged on the continued provincial and federal consultations regarding efforts to protect the Southern Mountain Caribou.

CROSS-REFERENCE:

9 – BC Electricity Sector Revenue to Government
 20– *Clean Energy Act* Implementation

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

**ISSUE: Gap in Safety Regulatory Framework for
Independent Power Producers**

KEY MESSAGES:

- The *Safety Standards Act* (SSA), administered by the BC Safety Authority (BCSA), sets out a comprehensive model for safety of regulated equipment and standards in British Columbia.
- Public utilities are exempt from the Electrical Safety Regulation under the SSA in relation to the generation, transmission and distribution of electrical energy.
- Independent power producers (IPPs), which sell power to BC Hydro and Powerex, are also exempt from portions of the *Utilities Commission Act* (UCA) relating to enforcement of safety requirements under the UCA.
- The unintended consequence is a gap in safety regulation: most IPPs are operating without regulatory oversight of their electrical equipment, because neither the BCSA nor the British Columbia Utilities Commission (BCUC) has authority in this regard.
- The BCUC has requested that the Ministry of Energy and Mines (Ministry) examine this issue, which presents an ongoing safety risk.
- Early analysis points to the BCSA being the appropriate regulator given its capacity for and expertise in overseeing technical safety.
- Pursuing this issue would involve collaboration with the Office of Housing and Construction Standards, the BCSA, the BCUC, and the electricity industry.

BACKGROUND:

- Except for the electrical systems noted above, the SSA applies to all regulated equipment associated with IPP operations. The BCSA is already overseeing these other technical areas (e.g., boilers and pressure vessels).
- The BCSA's attempts to have utilities prepare safety plans for electrical equipment and demonstrate compliance with best practices have been unsuccessful.
- The Ministry and the BCUC have taken steps to ensure IPPs and other public utilities requesting an exemption from BCUC oversight of transmission services for customers other than BC Hydro or Powerex, will be subject to safety enforcement provisions in the UCA.

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Date: June 7, 2017

Transition Note: 30A

Page 1 of 2

- Where IPPs and public utilities are subject to BCUC regulation, concerns exist about the BCUC's capacity and expertise in enforcing these safety requirements;
- It should also be noted that, pursuant to the *Hydro and Power Authority Act*, BC Hydro is exempt from most sections of the SSA.
- Oversight of BC Hydro's gas equipment, boilers, elevators, and other regulated products therefore falls exclusively to the BCUC, which lacks expertise in these areas.
- In 2013, a joint inter-agency working group examined the exemption, however, BC Hydro raised multiple objections to full regulation under the SSA and the issue was not pursued further.

CROSS-REFERENCE:

18 – BCUC Role and Responsibilities

29 - Clean and Renewable Power Producers Facts

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

**ISSUE: Clean Energy BC, BC Hydro and the Province
Memorandum of Understanding**

KEY MESSAGES:

- The provincial government and BC Hydro signed a Memorandum of Understanding (MOU) with the Clean Energy Association of British Columbia (CEBC) on October 21, 2015.
- The MOU recognizes that the independent power sector is an important partner and supplier to BC Hydro, providing a significant and growing amount of British Columbia's energy needs.
- The MOU supports continued collaboration between Government, BC Hydro and the CEBC to strengthen British Columbia's competitive advantage in clean, reliable and affordable electricity.
- BC Hydro currently has a surplus of electricity and does not expect to issue any calls for power until the 2030s.
- On February 29, 2016, the members of the MOU steering committee announced consultation on changes to the Standing Offer Program (SOP) that were a result of collaboration under the MOU to improve procurement practices.

BACKGROUND:

- CEBC is an industry association with 220 members and the mandate to develop a viable clean power industry in British Columbia. It represents many different types of renewable and clean energy operating and development companies, as well as suppliers, contractors, consultants, and service providers to the clean energy sector within British Columbia.
- CEBC has been active in advocating on Government electricity policy development, regulatory processes, permitting procedures, BC Hydro procurement, transmission services, and informing the public, and local First Nations governments about clean and renewable electricity resources and technology.
- The MOU recognizes that the independent power sector is an important partner and supplier to BC Hydro, providing a significant and growing amount of British Columbia's energy needs through more than 100 electricity purchase agreements (EPA) across a wide range of resource types, including hydro, biomass, wind, natural gas and solar. Currently, independent power projects provide about 25 percent of BC Hydro's electricity.

- The MOU is meant to facilitate collaboration on key issues to strengthen British Columbia's competitive advantage of reliable and affordable clean electricity and support continued investment and growth in the independent power sector, and includes commitments from the parties to:
 - Explore opportunities with First Nations that will support the development and stewardship of British Columbia's clean energy resources;
 - Improve procurement practices for acquiring power from clean energy projects;
 - Engage together transparently on BC Hydro's Integrated Resource Plan review and policy for electricity purchase agreement renewals; and
 - Meet at least quarterly and participate in an ongoing series of workshops to review innovative and emerging technologies in renewable energy.
- The MOU will remain in effect until December 31, 2017.
- Since the MOU with the CEBC was signed:
 - A pricing review has been initiated to ensure that the SOP reflects the declining cost of new power technology and is meeting system needs;
 - The Climate Leadership Plan expanded the mandate of BC Hydro's energy management programs to include initiatives that reduce greenhouse gas (GHG) emissions by replacing higher emission fuels with clean, renewable electricity; and
 - BC Hydro announced a new e-drive rate to encourage LNG proponents to use electricity for liquefaction purposes.

s.13,s.16

- With the current projected surplus and the addition of Site C in 2024, BC Hydro does not forecast the need for new supply until into the 2030s.
- If there are large, new power demands, for example from electrification to reduce GHG emissions, earlier procurement may be triggered.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Mercer North American Free Trade Agreement Challenge

KEY MESSAGES:

- In April 2012, Mercer International Inc., a United States company that owns the Celgar pulp and paper mill near Castlegar, BC, filed a request for arbitration under the North American Free Trade Agreement (NAFTA).
- Mercer claims that the Province, through the actions of BC Hydro and the British Columbia Utilities Commission (BCUC), treats self-generation at Mercer's Celgar pulp and paper mill unfairly compared to other pulp and paper mills in British Columbia.
- Mercer wants to sell nearly all of the electricity it currently generates at the Celgar mill either to BC Hydro or to the market, and purchase electricity from FortisBC to power the mill.
- This is arbitrage, and no other pulp and paper mill in the Province is permitted to do this.
- The Province has been clear about its self-generation policy and that only incremental generation is eligible for market sales.
- To this end, Mercer is selling incremental self-generated power from a new generator to BC Hydro under the Bioenergy Phase 1 Call for Power.
- The Province has worked closely with BC Hydro and Government of Canada lawyers to defend against the claim.
- An oral hearing took place in Washington, D.C., between July 21 and 31, 2015, which was attended by staff from the Ministry of Energy and Mines, as well as staff from the Ministry of Justice, International Trade and BC Hydro.
- The NAFTA Tribunal issued a final Procedural Order in March 2017, admitting additional evidence from both parties on the current FortisBC Self Generation Phase II BCUC proceeding. Each party confirmed they have nothing further to submit.
- A final decision and award, which is non-appealable, should be rendered by the end of 2017

BACKGROUND:

- For the past six years, Mercer has persistently made a case to provincial staff and elected officials, and filed submissions in BCUC proceedings, seeking to sell its existing self-generated electricity at market rates and replace it with lower-cost utility supply.
- The effect would be that Mercer would increase power purchases from its utility, FortisBC, which would in turn increase purchases from BC Hydro under Rate Schedule 3808, increasing costs for BC Hydro ratepayers.
- The Province, in forums such as the 2008 Pulp and Paper Self-Generation Working Group (co-chaired by the Ministry of Energy and Mines and the Ministry of Forests and Range), in submissions to the BCUC and in ministerial correspondence to Mercer, has consistently stated that re-pricing existing self-generation to market prices is not supported, but that new, or incremental, generation could be sold.
- To this end, Mercer is selling 242 gigawatt-hours per year of incremental self-generated power to BC Hydro under a 10-year Energy Purchase Agreement (EPA) from the 2008 Bioenergy Phase 1 Call. The \$65 million generation expansion to provide incremental power for the EPA was assisted with a \$58 million grant from the federal government's Green Transformation Fund.
- Despite these results, Mercer wants to sell more of its generation at market prices. Through its NAFTA claim, Mercer is seeking damages of \$19 million per year (or a total of \$250 million if the alleged discriminatory treatment continues), as well as costs associated with the NAFTA claim (up to \$15 million).
- On April 30, 2012, Mercer filed its request for arbitration.
- The parties concluded document production in December 2013.
- In February 2013, Mercer requested a meeting to discuss settlement options. Senior staff from EMNG, JTST, FLNRO, JAG and BC Hydro met with a team from Mercer, including their U.S. and British Columbia counsel. Mercer proposed two detailed settlement options that appeared to be four times higher than the amount sought in the Request for Arbitration, including higher prices for power sold and awarding of forest tenures. The proposals were assessed by EMNG and BC Hydro staff, who concluded there was no benefit in pursuing settlement.
- In November 2013, Mercer's counsel requested a meeting with Canada's lawyers, British Columbia government staff and BC Hydro staff to present the outline of their case following the conclusion of British Columbia's document production. At the meeting, Mercer's counsel informally suggested a significantly lower settlement proposal on the order of approximately \$50 to \$70 million, spread over 10 years. As with the first settlement offer, staff concluded there was no benefit in pursuing settlement.
- In December 2013, Canada's legal counsel sent Mercer a letter highlighting the weakness of their claim and offering to forgo pursuing legal costs incurred to date in return for Mercer withdrawing its claim. Mercer did not respond.
- The exchange of evidence, arguments, witness statements and expert reports concluded in April 2015.
- A two-week oral hearing in Washington, D.C., took place between July 21 and 31, 2015.
- A final decision and award, which is non-appealable, should be rendered by the end of 2017.

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Sale of Self-Generated Electricity

KEY MESSAGES:

- The Province has been clear about its self-generation policy, consistently stating that re-pricing existing self-generation to market prices is not supported, but that new, or incremental, generation could be sold.
- On April 5, 2001, the BC Utilities Commission (BCUC) issued Order No. G-38-01, which directed BC Hydro to allow industrial customers with incremental self-generation to sell excess self-generation on the condition that those customers do not arbitrage between cheaper, embedded cost utility supply and higher market prices.
- On May 6, 2009, the BCUC issued Order No. G-48-09, which clarified that BC Hydro's electricity provided to FortisBC under their Power Purchase Agreement (PPA) could not be arbitrated by FortisBC customers who wished to sell their self-generation.
- On May 6, 2014, the BCUC approved a new PPA between BC Hydro and FortisBC that maintained the restriction on arbitrage of PPA energy by FortisBC self-generators.
- It is not in the interest of BC Hydro's ratepayers for a self-generating customer to sell its own power at market prices and replace it with cheaper power from the grid.
- BC Hydro would have to replace it with new higher cost power, leading to higher rates for BC Hydro customers
- In 2015, the BCUC formally approved guidelines that incorporate the principles that BC Hydro applies to avoid harmful arbitrage when negotiating electricity purchase agreements (EPA) and load displacement agreements with its self-generating customers.
- In response to a direction from the BCUC, FortisBC is developing a policy to determine the extent to which it will serve its customers with self-generation.
- BC Hydro has several EPAs that will expire over the next several years with self-generation suppliers in the forest industry. BC Hydro has indicated that they intend to renew these contracts at reduced price, compared to current contracts, and reduce the overall volume purchased. Government indicated its support of this approach through approval of the 2013 Integrated Resource Plan (IRP).

BACKGROUND:

- In February 2001, at the height of the California energy crisis, Howe Sound Pulp and Paper proposed to BC Hydro that it be able to sell its previously idle self-generation. BC Hydro requested that the BCUC initiate a public process to review issues arising out of the desire of industrial customers, served under its industrial rate tariff, to sell their self-generated electricity on the open export market. BC Hydro was concerned that significant harm could ensue for its ratepayers if industrial customers were allowed to take their self-generation to market and serve their load (otherwise served through self-supply) with embedded cost power supplied by BC Hydro.
- In April 2001, the BCUC issued Order No. G-38-01, which directed BC Hydro to allow industrial customers with incremental self-generation to sell excess self-generation on the condition that those customers do not arbitrage between cheaper, embedded cost rates and higher market prices by replacing electricity otherwise used for self-supply with electricity purchased from BC Hydro. The order stated that BC Hydro would not be required to supply any additional embedded cost power to industrial customers who were selling self-generation output to market.
- The BCUC directed BC Hydro to establish an industrial customer baseline, based on either a customer's historical consumption or generation output, above which industrial customers could sell excess self-generation.
- In July 2008, the City of Nelson and Nelson Hydro announced an agreement to sell up to 9 megawatts (MW) of power from the Upper Bonnington Generating Facility on the open electricity market through North Point Energy Solutions, a wholly-owned marketing subsidiary of Regina-based SaskPower.
- The City of Nelson proposed to arbitrage between the price of electricity it purchased from FortisBC at the BCUC-approved rate of 3.507 cents per kilowatt hour (KWh) and the price it would receive selling its generation output in the export market.
- Under this arrangement, it was likely that FortisBC would purchase additional energy from BC Hydro under its PPA, at a rate of 2.952 cents per KWh, to provide replacement power to the City of Nelson.
- The proposal would have had an impact on BC Hydro's ratepayers whose rates would increase due to the need to acquire new resources to provide replacement power.
- In August 2008, a similar agreement was announced between FortisBC and Mercer, which would have allowed Mercer to arbitrage between the price of electricity it could purchase from FortisBC and the price it could receive selling self-generation from the Celgar pulp mill into the market.
- BC Hydro applied to the BCUC for an amendment to the PPA to prevent arbitrage by customers of FortisBC, such as the City of Nelson and Celgar, and the Ministry of Energy and Mines filed a written argument in support of BC Hydro's application.
- The Ministry argued that the City of Nelson's proposed arbitrage was inconsistent with the intention of the Heritage Contract, whose objective is to ensure that BC Hydro's heritage assets continue to provide benefits for all BC Hydro customers, and not benefit one set of customers who seek to use the heritage assets as the basis for arbitrage between low cost energy from the heritage assets and market prices.
- The Ministry also stated its position that it is appropriate for self-generating customers to sell to market electricity that is in excess of historical generation.

- On May 6, 2009, the BCUC approved BC Hydro's application to amend the PPA to prevent the arbitrage activities proposed by the City of Nelson and Celgar.
- Mercer continued to exert pressure on the BCUC, utilities and Government to allow them to engage in arbitrage.
- In April 2012, Mercer filed a request for arbitration under the NAFTA, alleging that the Province's actions through BC Hydro and the BCUC amount to discrimination, and seeking damages of \$250 million.
- Between July 21 and 31, 2015, an oral hearing was held at the International Centre for Settlement of Investment Disputes in Washington, D.C.
- The Province continues to work closely with BC Hydro and Government of Canada lawyers to defend the claim, and a decision from the NAFTA panel is expected in the coming months.
- Forest sector biomass power producers consider the biomass EPAs with BC Hydro an important source of revenue and a critical option for disposing of wood waste streams.
- BC Hydro currently purchases excess power from the forestry sector facilities using waste products, such as hog fuel or products from the pulping process, to generate electricity. Some of this electricity is for their own needs (self-generation) and some is sold to BC Hydro through an EPA.
- BC Hydro's government approved 2013 IRP and 10 year Rates Plan assume expiring biomass EPAs will be renewed at an average price of \$75 per MWh and at 50 percent of current energy volume.

s.21

- BC Hydro plans to review its 2013 assumptions as part of the 2018 IRP process. Two biomass EPAs will expire before BC Hydro's 2018 IRP is delivered to Government. BC Hydro plans to negotiate short-term extensions through June 2019 to allow Government time to review and approve the 2018 IRP.

CROSS-REFERENCE:

14 – BC Hydro's Integrated Resource Plan

30 – Clean and Renewable Power Producers Projects Policy Issues

32 – Mercer NAFTA Challenge

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: Columbia River Treaty Review

KEY MESSAGES:

- A decision to continue the Columbia River Treaty (CRT) and seek improvements within its existing framework was released on March 13, 2014.
- The decision includes 14 principles to guide discussions with Canada and the United States on the future of the CRT.
- The decision was based on an extensive First Nations, local government and public consultation process, and more than two years of hydrologic, social, economic, and legal studies.
- In December 2013, the U.S. Entity submitted its final recommendations to the U.S. Department of State to continue the CRT and negotiate modifications. In fall 2016, the U.S. Department of State completed its federal interest review of the final recommendations and decided to proceed with negotiations to modernize the Treaty.
- British Columbia believes the CRT continues to benefit both Canada and the United States, but the benefits to the United States are significantly undervalued and extend across a much broader range of interests, such as fisheries, navigation and water supply, than the original Treaty focus of flood mitigation and power production.
- British Columbia believes the value of benefits to the United States are greater than the Canadian Entitlement power the United States now sends to the Province. The Ministry of Energy and Mines undertook an economic analysis of the range of benefits to the United States, which was completed in December 2015. The analysis will be kept confidential in order to not compromise the Province's negotiating position.
- Under the current arrangements of the CRT, flood control provisions change in 2024 from assured flood control to a more ad hoc "called-upon" arrangement. There is a difference of opinion between the Canadian and U.S. Entities on the interpretation of "called-upon" as laid out in the CRT. The Province has stated it is open to negotiating a more suitable arrangement.
- British Columbia has been working closely with Canada in preparing for potential negotiations to ensure BC's interests are represented and benefits to both British Columbians and Canadians are maintained.

- The Province will continue to refine studies on potential improvements to CRT operations in British Columbia and the valuation of Treaty benefits to the United States, and will continue to engage with First Nations, local governments and citizens in the Basin.

BACKGROUND:

- The CRT is a trans-boundary water management agreement between the U.S. and Canada that was signed in 1961 and ratified in 1964.
- One of the key principles of the CRT is to create and equitably share benefits resulting from the trans-boundary coordination.
- Although the CRT has no specified end date, either Canada or the U.S. can unilaterally terminate most of the agreement's provisions after 2024, with at least 10 years notice. No such notice has been given.
- Under the CRT, Canada received a one-time payment of US\$64.4 million for 60 years of flood mitigation. Canada also approved the sale of the Canadian Entitlement (a one-half share of the increased power potential in the U.S. resulting from the three Treaty storage dams in BC) for 30 years. The US\$254.4 million lump sum power payment and the flood mitigation payment were transferred to BC to pay for the construction of the three Treaty dams.
- Currently, the CRT returns approximately \$120 million each year to the Province's Consolidated Revenue Fund through the sale of Canada's share of the U.S.'s downstream power benefits (referred to as the Canadian Entitlement). The return to the Province for fiscal 2016/17 was approximately \$114 million. The value of the Canadian Entitlement in fiscal 2017/18 is estimated to be \$126 million.
- Although international treaties are within the jurisdiction of the executive branch of the federal government, the Canada-British Columbia Agreement (1963) transferred most CRT rights and obligations to the Province, and also requires the agreement of the Province before terminating or amending the CRT.
- The primary purposes of the CRT are to provide flood mitigation in Canada and the U.S., and increase the power generating potential of the Columbia River by capturing spring run-off and releasing water at other times of the year when it is more valuable.
- Under the CRT, Canada agreed to build 15.5 million acre-feet of storage by constructing three dams – Duncan, Arrow (now called Hugh Keenleyside) and Mica.
- The CRT also gave the U.S. the option, which it exercised, to construct a dam near Libby, Montana, that floods the Kootenay River valley 68 km back into Canada almost as far as Cranbrook (Kootenay Reservoir).
- Assured flood control provisions expire in 2024 and change to a more ad hoc "called-upon" version of flood control.

- In Canada, BC Hydro is the designated “Entity” with the responsibility to implement the CRT on behalf of the Province and Canada. The Province has been designated as the Canadian Entity for the purposes of disposing of the Canadian Entitlement. In the U.S., the CRT is entirely the responsibility of the federal government, which has designated the Bonneville Power Administration and the U.S. Army Corps of Engineers as the U.S. Entity responsible for implementation.

Columbia River Treaty Review (Treaty Review)

- Beginning in late 2011, Ministry of Energy and Mines’ CRT Review Team (Review Team) led a review process to evaluate future decision options, including possible continuation, amendment or termination of the CRT. In December 2013, a recommendation was made to continue the CRT and seek improvements within its existing framework, together with 14 guiding principles for any potential future negotiation. On March 13, 2014, the provincial government released its decision on the CRT.
- The Review Team completed four rounds of public consultation delivering 25 community events. More than 1,000 Basin residents attended the events.
- Basin residents were able to provide feedback throughout the consultation process, including on the draft recommendation, principles and public consultation report, in person at community events and through email, blog posts, Facebook and Twitter.
- Basin residents generally agreed that they have been heard, that the public consultation report captured and reflected their issues, concerns and interests.
- The Review Team also consulted with First Nations, local and regional governments, federal agencies, and stakeholder groups.
- In response to public interest in ongoing engagement on hydroelectric operations and potential future improvements to the CRT, the Ministry, the CRT Local Governments’ Committee, and BC Hydro initiated the Columbia Basin Regional Advisory Committee (CBRAC) in August 2014.
- The CBRAC is a diverse Basin-wide group representing a broad range of perspectives, interests and geography, and includes Basin residents, First Nations, local governments, Columbia Basin Trust, BC Hydro, FortisBC, Columbia Power Corporation, the Province and the Canadian federal government. It meets twice a year, with additional conference calls and webinars as needed.
- The Review Team is continuing to consult, on a government-to-government basis, with the Ktunaxa, Shuswap and Okanagan Nations who assert rights and title in the Columbia Basin.
- The Review Team also continues to engage with key U.S. stakeholders on issues regarding the future of the CRT. There are differences of opinion on flood control operations after 2024, the return of the Canadian portion of the downstream power benefits, and the role of ecosystem enhancement as a CRT priority. These issues will likely be topics for negotiation, along with potential operational changes to respond to climate change.
- In fall 2015, the U.S. Department of State assigned a chief negotiator (Brian Doherty) to the CRT, and in fall 2016, the U.S. Department of State received a mandate to negotiate the CRT. Canada does not yet have a mandate to negotiate approved by the Federal Cabinet. It has not identified a chief negotiator.

- The Review Team is working closely and collaboratively with federal departments, primarily Global Affairs Canada and Natural Resources Canada, in developing common negotiating scenarios and positions ahead of potential discussions with the U.S.
 - On October 24, 2016, then U.S. Secretary of State, John Kerry, sent a letter to Stephane Dion, then Canada's Minister of Foreign Affairs, urging the Canadian government to begin negotiations with the U.S. to modernize the CRT, indicating it would be "mutually beneficial to begin negotiations promptly to establish a negotiating framework before the end of 2016."
 - Secretary Kerry indicated three areas for negotiations: incorporating ecosystem function in CRT operations; controlling floods; and allowing economic and reliable hydropower generation.
 - In November 2016, the U.S. Chief Negotiator initiated a Transboundary Collaborative Modelling Workgroup to model potential Columbia River operational scenarios that could enhance ecosystem and other values. The Government of Canada co-chairs this committee, and Canadian participants are representatives from BC Hydro, the Ktunaxa, Okanagan and Shuswap Nations, Basin environmental scientists, and the Province.
 - The Province and Canada are working collaboratively to engage with Basin First Nations and local governments to confirm their interests regarding the CRT, and determine how they would like to be involved in potential CRT negotiations.
 - In a letter dated March 6, 2017, U.S. Secretary of State Rex Tillerson wrote to Minister of Foreign Affairs Chrystia Freeland reiterating the State Department's desire to begin formal negotiations to modernize the CRT. and specifically mentioned the CRT's flood control provisions. ^{s.16}
- s.16

**MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
TRANSITION NOTE 2017**

ISSUE: British Columbia Climate Leadership Plan Overview

KEY MESSAGES:

- On August 19, 2016, the Province announced the Climate Leadership Plan (CLP) was announced, with targets to create up to 66,000 jobs over the next 10 years, and reduce net annual greenhouse gas (GHG) emissions by up to 25 million tonnes below current forecasts by 2050.
- The revenue neutral carbon tax remains in place as the highest effective carbon price in North America.
- The CLP will be further updated over the coming year, in response to work underway between the federal government, the provinces and the territories to develop a Pan-Canadian Framework on Clean Growth and Climate Change under the March 2016 Vancouver Declaration.
- Clean electricity is fundamental to the transition to a low carbon economy; a number of options for reducing emissions in other sectors, like transportation, industry and the built environment, depend on access to clean, reliable electricity. In 2016, 98 percent of BC's electricity was clean or renewable.
- BC Hydro is fortunate to be in a surplus situation, and is well-positioned to implement policies to promote electrification that could substantially increase overall electricity demand.
- Legislative and regulatory amendments will be required to implement the 100 percent clean electricity requirement, and expanded low carbon fuel requirements, under the CLP.

BACKGROUND:

- In 2008, the BC Climate Action Plan (CAP) was introduced. This included the introduction of GHG emission reduction targets and North America's first revenue-neutral carbon tax.
- The 2008 CAP established legislated GHG emissions reduction targets of at least 33 percent below 2007 levels by 2020, and 80 percent below 2007 levels by 2050. Interim reduction targets of 6 percent by 2012 and 18 percent by 2016 were also set to guide and measure progress. British Columbia met its 2012 interim target, but is not currently on track to meet its legislated 2020 or 2050 targets.

- In May 2015, the Government announced the formation of the Climate Leadership Team (CLT) and plans for public engagement on new climate actions to support a growing economy.
- On November 27, 2015, the CLT released 32 recommendations for consideration by the provincial government to move BC's climate agenda forward to achieve 2050 targets. The recommendations ranged from fiscal measures to recommendations regarding emissions reduction targets and sector goals, industry, transportation, buildings, communities, First Nations, offsets, intergovernmental aspects and a periodic review.
- On August 19, 2016, the CLP was announced with 21 actions that span the Province's natural gas, transportation, industrial, built environment and government operations sectors.
- The Ministry of Energy and Mines holds responsibility directly or indirectly for delivering on 12 of the 21 newly identified actions:
 - Electricity to Power Upstream Natural Gas Production and Processing;
 - Increasing the Low Carbon Fuel Standard;
 - Incentives for Renewable Natural Gas;
 - Incentives for Purchasing a Clean Energy Vehicle (CEV);
 - Charging Infrastructure for Zero Emission Vehicles;
 - Making BC's Electricity 100 percent Clean or Renewable (with provisions for cost and reliability);
 - Efficient Electrification;
 - Fuelling Marine Vessels with Cleaner Burning liquefied natural gas (LNG);
 - New Energy Efficiency Standards for Gas Fired Boilers;
 - Expanding Incentives for Efficient Gas Equipment;
 - Regulations for More Energy Efficiency Buildings; and
 - Encouraging Development of Net Zero Buildings.
- Budget 2017 provided \$40 million in additional funding for the CEV program.
- Legislative changes, such as the 100 percent clean electricity requirement and the expanded low carbon fuel standard, will be required.
- The Greenhouse Gas Reduction Regulation has been amended, allowing utilities to undertake efficient electrification and provide incentives for upstream electrification of natural gas facilities, renewable natural gas and fueling marine vessels with LNG.

CROSS-REFERENCE:

- 1 – Zero Emission Vehicles/Clean Energy Vehicle Program
- 3 – Greenhouse Gas Reduction Regulation – Natural Gas
- 20 – Clean Energy Act Implementation
- 26 –Innovative Clean Energy (ICE) Fund

MEM Electricity and Alternative Energy Division – 2017 Priorities

Top Ten:

Issue	Activities	Time Lines	Lead/Support
Climate Leadership Plan Implementation	<ul style="list-style-type: none"> • Industry & Utility action implementation • Built Environment action implementation: • Transportation action implementation: <ul style="list-style-type: none"> ○ Zero emission vehicle standards ○ Expanded charging network 	<ul style="list-style-type: none"> • Fall • Fall • Summer 	Nat/Katherine M. Nat/Tom/Chris F Chris F
Site C Monitoring	<ul style="list-style-type: none"> • Participate on Project Board • Respond to OAG and other reviews(s) • Site C Agriculture Fund Final Plan s.12,s.17	<ul style="list-style-type: none"> • As required • June – Fall • July 	Les Les/Katherine R Os
Monitor/Engage in BCUC Proceedings	<ul style="list-style-type: none"> • BCH Rate Design Module 2 • BC Hydro SAP Inquiry • FortisBC Rate Design 	<ul style="list-style-type: none"> • Fall • Ongoing • Fall 	BCH/Paul/Jack Les Jennifer/Jack
BC Property Tax Assessment	<ul style="list-style-type: none"> • BCA assessments on BC Hydro's transmission lines and substations 	<ul style="list-style-type: none"> • Fall 	BCH/Les/ Amy/Jack
LNG Support	<ul style="list-style-type: none"> • Direction to BCUC to implement FortisBC agreements as rates • Implementation of S.18 to create LNG Hub for the marine sector and double incentives for renewable natural gas for heavy duty vehicles. • LNG E-drive rate s.13,s.17	<ul style="list-style-type: none"> • Complete • Regulation Complete s.13,s.17	Paul/Scott Jennifer Scott Scott
	<ul style="list-style-type: none"> • Other regulatory support for power/ pipeline infrastructure 	<ul style="list-style-type: none"> • Ongoing 	Jennifer
Transmission and Northeast Electrification	<ul style="list-style-type: none"> • Work with BC Hydro and MNGD • Secure federal funding for PRES, NMPS and restoration/augmentation of intertie capacity (RECSI) 	<ul style="list-style-type: none"> • Fall • Fall 	Amy and Os Amy and Os
ICE Fund	<ul style="list-style-type: none"> • Implement approved Spending Plan projects • Implement 3-year open call for clean energy projects with SDTC 	<ul style="list-style-type: none"> • Ongoing • April 2017 ongoing 	Dan / Steve /Will Dan/Steve

Issue	Activities	Time Lines	Lead/Support
	s.13	<ul style="list-style-type: none"> • Sept/Oct 	Steve / Guy
	<ul style="list-style-type: none"> • Prepare for possible year end spending program 	<ul style="list-style-type: none"> • Jan 	Dan / Steve / Ted / Will
Low Carbon Fuel Standard	<ul style="list-style-type: none"> • TFRS - Online reporting software development • Part 3 Agreements proposals s.13	<ul style="list-style-type: none"> • Ongoing • September • Fall • Fall • Summer 2017 • March 2017 ongoing 	Sean / Michael Michael / Sean Guy / Sean/ Michael Michael Michael
CRT prep for negotiations	<ul style="list-style-type: none"> • Confirm BC Decision with new govt. • Explore options with Entities • Meetings in Ottawa, Washington DC • Engage in negotiations with Canada and US 	<ul style="list-style-type: none"> • Summer • Ongoing • As required • TBD 	Kathy/Les Kathy Kathy/Les Kathy/Les
Energy Efficiency	<ul style="list-style-type: none"> • EESR – Amendment 6 OIC • EESR – Amendment 7 regulatory impact analysis • ICE Fund F18 EE Program Implementation s.13	<ul style="list-style-type: none"> • June-Oct • April-Sept • April – March • April-Nov • June-Nov • May-June • April-June 	Nat/Tom Tom/Std's Eng All EEB staff Katherine/Nat Katherine/Nat Nat/Tom Nat

Other Issues:

Issue	Activities	Time Lines	Lead/Support
NG for Transportation	s.13	<ul style="list-style-type: none"> • December 	Jennifer

Issue	Activities	Time Lines	Lead/Support
Transportation	s.13 <ul style="list-style-type: none"> EV oversight of Capacity & Infrastructure deployment projects Policy support for CLT transportation recommendations 	<ul style="list-style-type: none"> Fall Fall Oct – Feb 	Chris
Communities	<ul style="list-style-type: none"> Finalize Community Energy Leadership Program agreements Announce communities Remote Community funding oversight with Fraser Basin Council 	<ul style="list-style-type: none"> Aug-Sept Oct Ongoing 	Nairn/Ted Nairn
Cheslatta FN – Nechako Reservoir Management	<ul style="list-style-type: none"> Engage with CFN, RTA, BCH RTA Board review of dredge/tunnel proposals Support EA application for dredging and Industrial Development Act to support tunnel 	<ul style="list-style-type: none"> May–Sept September Oct-Dec 	Kathy
Mercer NAFTA Arbitration	<ul style="list-style-type: none"> Arbitration panel process Support reply to panel decision 	<ul style="list-style-type: none"> Complete Late 2017 	Nat/BCH/JAG/GAC
Geothermal	s.21 <ul style="list-style-type: none"> GeoScience BC study Regulation to transfer Geothermal Resource Act within Oil and Gas Activities Act, including updating regulatory structure and consult on transfer to OGC and fees Geothermal Royalty Regulation 	<ul style="list-style-type: none"> Completed Completed Fall Fall Ongoing 	Warren Warren Warren Warren/Katherine R
Clean Energy Strategy	s.17,s.21 <ul style="list-style-type: none"> BC/BCH/CEBC MOU engagement 	<ul style="list-style-type: none"> Ongoing Fall 	Les/Katherine R/ Les/BC Hydro
Western Interconnection Engagement	<ul style="list-style-type: none"> Participate in WIEB/WIRAB and other forums to monitor reliability standards development, regional planning and market developments that may impact BC. Participate in the Reliability Assessment subcommittees as the Canadian representative. 	<ul style="list-style-type: none"> Ongoing Ongoing 	Amy Amy
Alberta Engagement	<ul style="list-style-type: none"> Work with Alberta Energy and AESO on potential new intertie and 	<ul style="list-style-type: none"> Fall 	Amy/BCH

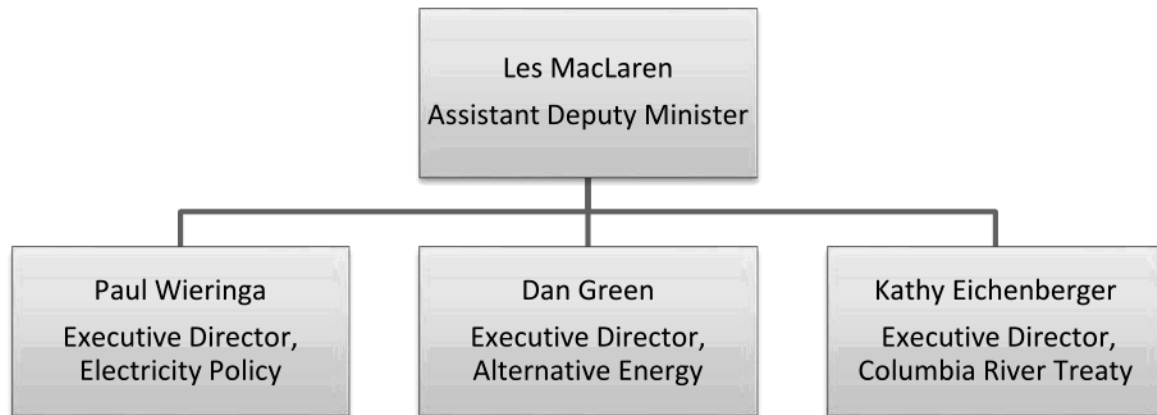
Issue	Activities	Time Lines	Lead/Support
	supplying low carbon electricity to AB		
BC Marine Energy Centre	s.12,s.13	<ul style="list-style-type: none"> • Fall • Fall 	Dan/Steve Dan/Steve
BC Hydro IRP	<ul style="list-style-type: none"> • Participate in IRP Technical Advisory Committee • By Nov 2018, BCH will submit final IRP for Gov't approval 	<ul style="list-style-type: none"> • Ongoing 	Paul and Katherine R
BC Bioenergy Network / Bioenergy Strategy Update	<ul style="list-style-type: none"> • Develop strategy to re-focus BCBN to support government policy priorities. • Assess whether a strategy update is required and develop proposal • Seek Minister direction on desirability and priority 	<ul style="list-style-type: none"> • As resources are available 	Dan / Steve / Michael
Peace Region Electricity Supply	<ul style="list-style-type: none"> • BC Hydro is moving forward with the system reinforcement project subject to anticipated need. Construction is expected to begin in 2018 and completed sometime between 2020 and 2022. 	<ul style="list-style-type: none"> • On going 	Amy
Energy Efficiency Strategy	<ul style="list-style-type: none"> • Develop Energy Efficiency Strategy to address priorities of new government and leverage existing portfolio of energy efficiency policies and programs 	<ul style="list-style-type: none"> • Post-election/ 	Nat/ /Katherine M/Tom

Bike Rack:

Issue	Activities	Time Lines	Lead/Support
Transportation	<ul style="list-style-type: none"> • Re-engage with Canada on potential programs 	<ul style="list-style-type: none"> • As resources are available 	Chris
	•	•	
PST Exemptions for EE Products and CEVs	s.13	<ul style="list-style-type: none"> • Fall • TBD • TBD • ASAP 	Nat / Chris Dan / Chris
Remote	<ul style="list-style-type: none"> • Develop concept paper for an 	<ul style="list-style-type: none"> • TBD 	Chris / Nairn

Issue	Activities	Time Lines	Lead/Support
Communities Strategy	overarching remote communities strategy		

ELECTRICITY AND ALTERNATIVE ENERGY DIVISION ORG CHART APRIL 2017



Ministry of Energy and Mines
Transition 2017/18

Electricity & Alternative Energy

Alternative and Renewable Energy

Zero Emission Vehicles / Clean Energy Vehicle Program	1
Geothermal Tenure Issuance and Management	2
Greenhouse Gas Reduction Regulation – Natural Gas	3
Renewable and Low Carbon Fuel Requirements Regulation	4
National Clean Fuel Standard	5
Post-Secondary Clean Energy Partnerships	6
BC Marine Energy Centre	7

Electricity Sector in British Columbia

B.C. Electricity Market Overview	8
B.C. Electricity Sector Revenue to Government	9

Energy Efficiency:

ICE Fund – Energy Efficiency Portfolio.....	10
Amendments to Energy Efficiency Standards Regulation.....	11
Utility Demand Side Management	12

Ministry of Energy and Mines Transition 2017/18

BC Hydro

Site C Update (Permitting, Construction, Litigation, Audit).....	13
Site C Shedule Decisions	13A
Integrated Resource Plan.....	14
LNG Power Requirements	14A
Coastal First Nations Engagement	14B
10-Year Rates Plan	15
10-Year Rates Plan Table.....	15A
Rate Design Application	15B

BC Utilities Commission:

Review of BC Hydro's Residential Inclining Block Rate and FortisBC's Residential Conservation Rate	16
Mandatory Reliability Standards	17
Roles and Responsibilities	18
Recent Decisions and Overview of Directions and Exemptions.....	19

Clean Energy Act:

<i>Clean Energy Act</i> Implementation	20
Including amendments, regulations and potential changes, e.g., 93% and LNG	

Columbia Basin Trust:

Overview	21
----------------	----

Ministry of Energy and Mines

Transition 2017/18

Columbia Power Corporation:

Columbia Power Corporation	22
----------------------------------	----

Communities:

Community Energy Leadership Program.....	23
Remote Community Electrification Policy and Regulation	24

Exports/Cross-Border Issues:

Electricity Exports.....	25
--------------------------	----

Innovative Clean Energy (ICE) Fund:

26

Approved Budget 2016 – 3 Year Spending Plan	26A
ICE Fund/SDTC Partnership	27

IPPs/Self Generators:

BC Hydro's Energy Procurement March 2016 Update	28
Clean and Renewable Power Producers Facts	29
Questions & Answers about IPP in British Columbia.....	29A
Clean and Renewable Power Producers Projects Policy Issues.....	30
Gap in Safety Regulatory Framework for Independent Power Producers	30A
Clean Energy BC/BC Hydro/Province MOU	31
Mercer NAFTA Challenge	32

Ministry of Energy and Mines
Transition 2017/18

Sale of Self-Generated Electricity..... 33

Columbia River Treaty:

CRT Update 34

Climate Leadership Plan:

Climate Leadership Plan overview 35

Division Priorities:

Division Priorities..... 36

Organizational Chart:

Organizational Chart 37

**MINISTRY OF ENERGY AND MINES
MINES AND MINERALS RESOURCES DIVISION**

**ISSUE: Notice of Work Application for an exploration program
for New Prosperity Project.**

KEY MESSAGES:

- Taseko Mines Ltd. (Taseko) submitted a Notice of Work (NoW) to the Ministry of Energy and Mines (MEM) on October 17, 2016 to conduct site investigation work involving 47.2 hectares of new disturbance.
- The NoW was accepted by the MEM for review, and First Nations consultation was initiated on November 22, 2016.
- The proposed work is located within the Tsilhqot'in National Government's (TNG) proven Aboriginal rights area (not in the declared Title area).
- The statutory decisions under the *Mines Act* and *Mineral Tenure Act* are made in accordance with the legislation, such that statutory decision makers (SDM) are independent and are not subjected to political interference.
- Taseko maintains that the NoW is required to support a *Mines Act* permit application and enable the company to substantially start construction before the Environmental Assessment Certificate (EAC) expires in January 2020.
- The MEM also has a constitutional obligation to ensure that the TNG are adequately consulted and accommodated in relation to both proven and asserted Aboriginal rights that may be impacted by the NoW.
- The Project was rejected by the federal government in February 2014. Taseko is challenging the federal panel report and process, as well as the federal decision rejecting the Project, in Federal Court. This judicial review was heard from January 30 to February 3, 2017; a decision has not yet been rendered.
- Exploration programs of this nature ensure sufficient data is available to assist Government staff in making informed decisions on larger scale applications. Exploration activities must be done in a manner that minimize impacts and are reclaimed satisfactorily.
- The MEM is working with the Ministry of Aboriginal Relations and Reconciliation (MARR) to ensure the NoW is processed in a manner that is consistent with the Province's administrative law requirements and in accordance with the Province's constitutional obligations owed to the TNG.
- s.16,s.21

- A decision by the SDM is expected by mid-June 2017.

BACKGROUND:

- Taseko submitted a NoW to the MEM on October 17, 2016 to conduct site investigation work involving 47.2 hectares of new disturbance. Included among the proposed activities are the construction of a 50-person camp, 122 geotechnical drill sites, 367 trenches and/or test pits, and 20 kilometres of cut lines and induced polarization surveys.
- The NoW was accepted by the MEM for review, and First Nations consultation was initiated on November 22, 2016.
- The proposed work under the NoW is located within the TNG proven Aboriginal rights area (not in the declared Title area). As required under the Tsilhqot'in Stewardship Agreement, consultation is being conducted in accordance with constitutional and common law obligations.
- The MEM has an administrative law obligation to receive, review and consider Taseko's NoW, provided the application meets the content requirements specified in Section 10 of the *Mines Act*.
- Taseko maintains that the NoW is required to support a *Mines Act* permit application and enable the company to substantially start construction before the EAC expires in January 2020.
- The MEM also has a constitutional obligation to ensure that the TNG are adequately consulted and accommodated in relation to both proven and asserted Aboriginal rights that may be impacted by the NoW.

Environment Assessment Certificate

- Taseko was issued a B.C. EAC in January 2010 for the original Prosperity Gold-Copper Mine project, which included a proposal to create a tailings storage facility (TSF) by dewatering Fish Lake. The federal government rejected the Prosperity Project in November 2010 following a panel review. The Project cannot be built in the absence of federal approval.
- Taseko subsequently proposed changes to the Project, including an alternate TSF location, and renamed it the New Prosperity Project. Taseko applied for an amendment to its EAC in 2011 to account for the changes contemplated by the Project design. The Project was rejected by the federal government in February 2014.
- Taseko applied for a five-year EAC extension in June 2014. Under the original EAC issued in 2010, had the Project not substantially started by June 2015, the EAC would have expired. The B.C. Minister of Environment granted this extension in January 2015.
- The Minister's decision to grant the extension recognized that the review of Taseko's EAC amendment had not been completed and noted that the Environmental Assessment Office (EAO) would consider additional material information that had become available since the EAC was originally issued.
- If Taseko does not substantially start construction on the Project before January 2020, the existing EAC will expire and Taseko will need to apply for a new EAC if it continues pursuing the Project.

- In May 2016, Taseko wrote to the Premier calling for a timely EAO decision on Taseko's EAC amendment application. Taseko also raised concerns about the MEM's actions during the Ministry's participation in the federal panel review process, and claimed a lack of consultation on the Nenqay Deni Accord (Accord) signed between the Province and the TNG in February 2016.
- The EAO responded to Taseko that it would move forward to complete its review of the company's amendment application. The EAO is in the process of clarifying the scope of the amendment request and the most appropriate process for review, which will include consultation with the TNG.
- Taseko is challenging the federal panel report and process, as well as the federal decision rejecting the Project, in Federal Court. This judicial review was heard from January 30 to February 3, 2017.

First Nations

- The TNG are opposed to Taseko conducting any work related to the Project. Pursuing the review of the NoW application will likely have a negative effect on the evolving government-to-government relationship with the TNG and may put pressure on implementation discussions evolving under the Accord. To date, the TNG have not indicated a willingness to engage on any discussions with the Province at the Accord table in relation to the Project.
- The TNG wrote to the Province on December 1, 2016 and January 10, 2017 to reaffirm its strong opposition to the Project. The TNG also requested capacity funding from the Province to support its engagement.
- The Province has provided \$18,000 to support its engagement in Taseko's NoW and related applications.
- In accordance with the 2012 Settlement Agreement between Taseko and the TNG, Taseko was obligated to engage the TNG in advance of submitting the NoW. Taseko and the TNG met in September 2016 in this regard, and the proponent provided the TNG with 14 days to review the NoW before filing with the MEM.
- Despite Taseko's efforts to engage, the TNG continue to strongly oppose the proposed work program. The TNG are concerned with the cumulative effects the work may cause within the TNG's proven Aboriginal rights area, where there have already been numerous exploration activities.
- The MEM's strategy, with support from the MARR, is to process the NoW in a manner that is consistent with the Province's administrative law requirements and in accordance with the Province's constitutional obligations owed to the TNG. The Province is approaching consultation and accommodation with the TNG at the deeper level of the Haida spectrum and is actively working with both Taseko and other government agencies to ensure it meets its legal obligations.

Status of Decision

- Final comments have been received by the TNG and the consultation summary has been completed by the First Nations Advisors from the Ministry of Forests, Lands and Natural Resource Operations.
- The MARR is currently assessing additional accommodation measures that could be included in a permit if the SDM approves the NoW.
- It is expected that a decision by the SDM will be rendered by mid-June 2017.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Exploration in BC

KEY MESSAGES:

- According to the British Columbia Mineral and Coal Exploration Survey, exploration spending in B.C. was \$205 million in 2016, down from \$272 million in 2015.
- The survey found that there has been a shift to grassroots and early-stage exploration, which is a positive sign that could signal a “reset” for BC’s mining exploration lifecycle.
- In 2016, BC accounted for approximately 14 percent of all exploration spending in Canada, down from 19 percent in 2015.
- More than half of Canada’s exploration companies are headquartered in Vancouver.
- Exploration leads to new mine development. A healthy level of exploration activity is critical to the long-term success of mining in BC.

BACKGROUND:

- The goal of exploration is to locate large, high-grade mineral and coal reserves with minimal disturbance to the ground and the environment.
- Technological advances, including GPS surveying, airborne technologies and down-hole seismic imaging, have enabled companies to locate new deposits previously beyond discovery using traditional methods.
- Exploration projects result in benefits for nearby communities; particularly rural communities since so many mineral and coal deposits are found in rural areas of BC.
- Geoscience research, which supports exploration activity, is undertaken by the provincial and federal governments, universities, exploration companies and Geoscience BC.
- The Province has provided \$71.7 million in funding to Geoscience BC since 2005 to further support its work in encouraging mineral, coal, and oil and gas exploration investment in BC.
- Prior to 2016, annual exploration estimates were generated by the B.C. Geological Survey’s Mineral Development Office (Vancouver) and the Regional Geologists through annual surveys, personal communication, site visits, Notices of Work and Assessment Reports.

- In 2016, exploration expenditures, drilling estimates and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey, which replaces the previous methodology and provides a consistent approach for measuring exploration activity in all regions of the Province. The survey is a joint initiative between the Ministry of Energy and Mines, the Association for Mineral Exploration and Ernst & Young LLP.
- According to the survey, \$205 million was invested by exploration companies and \$1.8 million from prospectors in 2016.
- The survey found that the focus of exploration in BC is shifting to grassroots and early-stage exploration. Although the overall downward trend in exploration in BC continued in 2016 – led by low commodity prices, market uncertainty, and another sharp drop in advanced-stage exploration – expenditures on grassroots and early-stage exploration projects increased last year.
- In 2016, BC ranked fourth in Canada for exploration spending behind Ontario, Quebec and Saskatchewan. From 2012 to 2015, BC ranked second in the country.
- Canada and Australia topped worldwide exploration spending by country in 2016, followed by the United States, Chile and Peru.
- Ministry staff report the highlights of exploration activity in summary documents prepared each year for the Roundup Conference.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: British Columbia Geological Survey

KEY MESSAGES:

- British Columbia Geological Survey (BCGS) develops, disseminates and acts as the custodian for provincial geoscience data, including delivering geoscience surveys, maps, databases, publications and technical reports.
- BCGS is the agency which links government, the minerals industry and British Columbians to the Province's geology and mineral resources.
- After years of decline, the BCGS's budget has stabilized at roughly 2008 levels (\$4 million) the past few years as recommended by the Association for Mineral Exploration British Columbia.

BACKGROUND:

- 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 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. In 2016, however, the BCGS rank dropped to thirteen because of negative industry perceptions about BC arising from the Mount Polley tailings spill and Supreme Court of Canada judgement in the Tsilhqot'in case.
- BCGS staff undertake technical marketing of BC's mineral resources and growth opportunities through the Survey's Mineral Development Office in Vancouver.
- 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).

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Geoscience BC

KEY MESSAGES:

- Geoscience BC has received \$71.7 million in grants from the BC Government to fund minerals and oil and gas related geoscience since its inception in 2005.
- Geoscience BC received its latest grant of \$10 million in March 2017, with \$5 million allocated for 2017/2018 and \$5 million for 2018/2019.
- Geoscience BC has a mandate to collect, interpret and market geoscience data to help ensure that BC's mineral exploration and mining and oil and gas industries remain innovative, competitive and sustainable.
- Provides important geoscientific data to support the development of future mines and energy projects in BC.

BACKGROUND:

- In August 2016, Geoscience BC prepared a business case that was presented to Resource Deputies on September 12, 2016.
- Geoscience BC undertook a detailed review of public geoscience contributions and strategies in key competing jurisdictions. The review found that public geoscience investment in BC is well below that of Western Australia, Quebec and Ontario.
- Under the current funding/governance arrangement, Geoscience BC projects are not eligible for matching federal funds for public geoscience.
- Since 2012, the Ministries of Energy and Mines and Natural Gas Development have undertaken extensive reviews of long-term funding options for Geoscience BC; however, no clear and practical options have emerged from analysis and industry consultation.
- 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;
 - undertake community outreach and promote awareness of geoscience; and
 - market material and work with the Province in trade shows and trade missions to attract more resource investment to BC.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Mining Exploration Tax Incentive Program

KEY MESSAGES:

- BC and Canada have comprehensive mining exploration tax incentive programs to encourage exploration, a critical part of discovering sites for new mines.
- BC mineral exploration expenditures were estimated at \$205 million in 2016.
- The B.C. Mining Flow-Through Share Tax Credit (B.C. MFTS) program was extended to December 31, 2017, and the Mining Exploration Tax Credit (METC) program was expanded to include costs incurred for environmental studies and community consultations.

BACKGROUND:

Provincial Exploration Tax Incentives

- The B.C. MFTS provides a 20 percent tax credit and is completely harmonized with the federal METC. The non-refundable federal and provincial tax credits are in addition to regular Flow-Through Share Tax deductions and can combine to make the after-tax cost of qualifying flow-through share-financed grassroots exploration expenditures in BC among the lowest in Canada. The programs have been well received by industry. The B.C. MFTS was extended to December 31, 2017 as part of BC's provincial budget.
- The METC is a refundable tax credit equal to 20 percent of non-flow-through funded, eligible BC grassroots mineral exploration expenditures incurred after July 31, 1998, and before January 1, 2020. The 2007 provincial budget enhanced the METC with a 10 percent increase to 30 percent for eligible exploration in Mountain Pine Beetle affected areas. Similar to the federal METC program, the METC has been expanded to allow the costs of environmental studies and community consultations to be included in the calculation of the METC.
- In 2017/18, the METC and B.C. MFTS have been estimated to cost the Province \$52 million.

Federal Exploration Tax Incentives

- The federal Flow-Through Shares (FTS) program allows companies to flow qualifying Canadian Exploration Expenses (CEE) through to investors who can then deduct that CEE from otherwise taxable income. The program encourages exploration by reducing the amount of funds the investor has at risk. The companies issuing the FTS and their investors typically share any gains associated with mineral exploration.

- The federal METC is a non-refundable, 15 percent tax credit for grassroots exploration expenses pursuant to a Flow-Through Share Agreement. As announced on March 5, 2017, the program has been extended to March 31, 2018.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERALS RESOURCES DIVISION**

ISSUE: Mine Development Projects

KEY MESSAGES:

- In 2015, the Mines Fee Regulation was established, enabling an additional \$1.9 Million to be allocated to Health, Safety and Inspections, as well as an additional \$2 Million to be allocated to the coordinated permitting of major mines and First Nations engagement.
- As a result of this injection of funding into the Ministry, the Major Mines Permitting Office (MMPO) was created and has been working closely with the Environmental Assessment (EA) Office to ensure a seamless transition from EA review to the permitting process.
- This has resulted in increased process certainty for industry, high-quality applications being submitted for review and timely and enduring decisions being issued on permits.

BACKGROUND:

- There are currently 17 mines in BC under active review through either the EA process or the MMPO coordinated permitting process:

Mining Projects Currently Subject to EA and/or MMPO Coordinated Permitting Process

Project	Company	Commodity	Community	Est. FTEs	Status
Ajax	KGHM Ajax Mining Inc.	Cu/Au	Kamloops	380	<ul style="list-style-type: none"> • EA application submitted Jan 2016, EA currently suspended • MMPO coordinated permitting expected to begin in Summer 2017
Blackwater	New Gold Inc.	Au/Ag/Pb/Zn	Vanderhoof	500	<ul style="list-style-type: none"> • EA application submitted June 2014, EA currently suspended • MMPO coordinated permitting schedule subject to EA completion
Brucejack	Pretium Resources	Au/Ag	Stewart	300	<ul style="list-style-type: none"> • Received EA Certificate (EAC) and permits in July/Aug 2015 • Amendment #4: MMPO coordinated permitting process to be completed by end of March 2017 • Amendment #5: MMPO and EAO coordinating on EAC amendment

Mine Development Projects

Burnco	Burnco Rock Products Inc.	Aggregate	Squamish/Howe Sound	360	<ul style="list-style-type: none"> EA application submitted May 2016, EA currently suspended
Bingay Main Coal Project	Centermount Coal Ltd.	Met Coal	Elkford	Unknown	<ul style="list-style-type: none"> EA pre-application since Nov 2012
Crown Mountain	NWP Coal Canada	Met Coal	Elkview/Sparwood	Unknown	<ul style="list-style-type: none"> EA review estimated to start 2018/19
Fording River Active Water Treatment Facility	Teck Resources	Met Coal	Elkview/Sparwood	Unknown	<ul style="list-style-type: none"> MMPO coordinated permitting process estimated to start 2018
Giscome Quarry and Quarry and Limestone Project	Graymont Western Canada	Limestone	Giscome/Prince George	15-20	<ul style="list-style-type: none"> EAC issued Dec 2016 MMPO coordinated permitting process started Aug 2016, recommendations anticipated Oct 2017
Gibraltar	Gibraltar Mine Ltd	Cu/Mb	Williams Lake	Unknown	<ul style="list-style-type: none"> MMPO coordinated permitting process started Sept 2016, recommendations anticipated March 2017
Harper Creek	Yellowhead Mining	Cu/Au/Ag	Vavenby	430	<ul style="list-style-type: none"> Revised EA application submitted Jan 2015, EA currently suspended
Kemess Underground	AuRico Gold	Au/Cu/Ag	Mackenzie	350	<ul style="list-style-type: none"> EAC issued March 2017 MMPO coordinated permitting process anticipated Fall 2016
Kootenay West	CertainTeed Gypsum Canada	Gypsum	Canal Flats	17	<ul style="list-style-type: none"> EA application submitted Jan 2017 MMPO coordinated permitting process anticipated May 2017
Michel Creek Coking Coal	CauAus Coal Ltd	Met Coal	Elkview/Sparwood	220	<ul style="list-style-type: none"> EA pre-application since Oct 2015
Murray River	HD Mining Inc.	Met Coal	Tumbler Ridge	780	<ul style="list-style-type: none"> EAC issued Oct 2015 MMPO coordinated permitting process underway, permit submitted March 2017
Red Mountain Underground Gold	IDM Mining Ltd	Au/Ag	Stewart	100	<ul style="list-style-type: none"> EA pre-application anticipated to be complete March 2017 MMPO coordinated permitting process anticipated to commence Jan 2018
Silvertip Mine	JDS Silver Inc.	Ag/Pb/Zn	Watson Lake, Yukon, northern BC Border	210	<ul style="list-style-type: none"> MMPO coordinated permitting process began in Sept 2016
Sukunka	Glencore	Met Coal	Tumbler Ridge	543	<ul style="list-style-type: none"> EA Application submitted July 2015, EA currently suspended MMPO coordinated permitting review not to commence until EAC issuance

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**MINISTRY OF ENERGY AND MINES
MINES AND MINERALS RESOURCES DIVISION**

ISSUE: Ajax Copper-Gold Mine Project

KEY MESSAGES:

- KGHM Ajax Mining Inc. (KGHM) submitted their application for an environmental assessment (EA) certificate on January 18, 2016. The 180-day EA review period is currently suspended at Day 107, pending KGHM providing responses to agency, First Nations and public comments to the Environmental Assessment Office's satisfaction.
- The Application Review phase of the Coordinated Authorizations Process for provincial permits is expected to begin in late July 2017.
- The Major Mines Permitting Office has convened a Mine Review Committee composed of representatives from the Stk'emlupsemc te Secwepemc Nation, provincial Natural Resource Sector agencies, as well as the Ministry of Transportation and Infrastructure, the Agricultural Land Commission, Interior Health, and local government to review the Ajax provincial permit applications.
- The Major Mines Permitting Office is working with KGHM and the Mine Review Committee to discuss and develop adequate application information requirements for KGHM's permit applications.
- The Province is working with the Stk'emlupsemc te Secwepemc Nation to better understand the Stk'emlupsemc te Secwepemc Nation's recent 'No' decision on the Ajax Project.

BACKGROUND:

Project Information

- KGHM is a joint-venture company owned 80 percent by KGHM Polska Miedz S.A. and 20 percent by Abacus Mining & Exploration Corp.
- The Ajax Mine Project (Ajax) would be an open-pit copper-gold mine with a processing capacity of 65,000 tonnes of ore per day and an 18-year mine life.
- Ajax would be located just south of Kamloops city limits, with the majority of components located on private land owned by KGHM.
- Ajax would employ over 500 full time positions during construction and operations.
- Ajax would have an initial capital expenditure of \$1.307 billion, and would derive over \$500 million in federal, provincial and municipal tax, including \$350 million in Mineral Tax.

Consultation with the SSN

- Ajax would be located within the traditional territories of the Skeetchestn Indian Band and Tk'emlúps Indian Band, which together make up the Stk'emlupsemc te Secwepemc Nation (SSN). The Province has been consulting deeply with the SSN on the EA and permitting Pre-Application process.
- The SSN commenced an Aboriginal Rights and Title case on September 21, 2015, covering their entire traditional territory, including the Ajax mine site. This action also seeks a declaration that authorized mining activities unjustifiably infringe on the SSN's Aboriginal rights and title, injunctive relief for future Provincial authorizations, and damages for past and continued infringements. KGHM and the federal government are also named as defendants in the litigation.
- The SSN have identified that Jacko Lake area, or *Pípsell*, is of significant cultural and historic importance to the SSN, including the practice of Aboriginal Interests.
- The Major Mines Permitting Office (MMPO) led an intergovernmental group (Ministry of Aboriginal Relations, Environmental Assessment Office, Justice of Attorney General, Ministry of Forests, Lands and Natural Resource Operations) in the development of an overarching Ajax Government-to-Government (G2G) Framework Agreement with the SSN. This agreement was signed by the SSN Chiefs and Minister Bill Bennett on September 6, 2016.
- As part of the Ajax G2G Agreement, the Environmental Assessment Office and SSN have developed an EA Collaboration Agreement for the Ajax EA. s.16
- The SSN undertook their own Assessment Process, concurrent and closely linked to the provincial EA. The SSN Panel is composed of community-appointed representatives and has worked together throughout the past year and a half to discuss the potential impacts of Ajax. The process included a "panel-style" hearing with SSN community members May 2 to 5, 2016, in which the Province participated.
- On March 4, 2017, the SSN announced their decision against the Ajax Mine, citing concerns regarding Ajax's potential impacts to *Pípsell*.
- The SSN decision will be incorporated into the EA Assessment Report to inform an EA decision by Ministers.

Provincial Coordinated Authorizations Process

- The coordinated authorizations process for provincial permits is expected to begin screening in late June 2017, with Application Review expected to begin in late July 2017.
- Previously, it was anticipated that the coordinated authorizations process would overlap the EA process (a synchronous process). At present, the coordinated authorizations process would begin after an EA decision. The SSN were not in favour of a synchronous process, citing capacity concerns and opposing discussions on permit applications prior to the completion of the EA process.
- The membership of the Ajax Mine Review Committee is similar to the membership of the Environmental Assessment Office's Working Group, resulting in knowledge transfer from the EA to the Coordinated Authorizations Process.

- During the Pre-Application Stage of the provincial coordinated authorizations process, the Mine Review Committee provided KGHM with input on the specific information required for Provincial permit applications. During the Application Review Stage, the Mine Review Committee will review KGHM's provincial permit applications, discuss issues, and develop recommendations to be provided to Provincial statutory decision makers for consideration.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: The Klappan and Tahltan Agreements

KEY MESSAGES:

- There is significant potential economic opportunity in the mining sector within Tahltan territory, which includes the Klappan. The Klappan has deep and unique social, cultural, heritage, environmental, and spiritual values for the Tahltan.
- The Province and Tahltan recently concluded the Klappan Land Use Plan (the Klappan Plan), which describes three zones with allowable land and resource uses and associated objectives.
- Concluding the Klappan Plan is a key step to bringing closure to two decades of land use conflict with the Tahltan in the Klappan.
- The Province required a number of commitments from Tahltan as part of Klappan Plan negotiations. These include explicit acknowledgement that mineral exploration and development are acceptable uses within sections of the Klappan, and agreement on the principle of predictable access into the Klappan for both Tahltan and BC residents.
- The Klappan Plan is supported by the Klappan Decision Making and Management Board (the Klappan Board), which is composed of Tahltan and Provincial representatives.
- The existing Order in Council prohibiting the disposition of coal licence interests in the 145,500 hectare coal licence application deferral area in Klappan remains in place until zones are established by government through legislative and other policy measures. The existing Order in Council expires in September 2017 – it is likely an application for an extension will be required.

BACKGROUND:

Klappan

Tahltan Territory represents some of the richest mineral potential in BC. The Atrium Groundhog Project is a notable project in the area, as is the operational Red Chris Mine owned by Imperial Metals (copper-gold; \$650M investment; 28 year lifespan; generating 350 jobs and an estimated \$300 million per year in revenue during the lifespan).

Tahltan members' protests of mining developments in the Klappan, most notably the September 2013 blockade of the Fortune Minerals' camp at Mount Klappan, prompted the development of the Klappan Strategic Initiative (KSI). Through the KSI, the Province and Tahltan agreed to address the parties' interests with respect to planning for appropriate activities in areas of cultural importance in the Klappan.

Ongoing negotiations of a Klappan Plan between the Province and Tahltan Central Government (TCG) have been enabled by the December 2013 Order in Council that defers coal licence applications in proximity within the area known as the Sacred Headwaters of the Skeena, Nass, and Stikine until September 2017.

In addition, in May 2015, the Ministry of Energy and Mines announced an agreement to acquire the 61 coal licenses for the Arctos Anthracite coal deposit in the Groundhog area of the Klappan. A 10-year provision gives Fortune Minerals and POSCO Canada the option to re-purchase the licences at the original price once the Province and the Tahltan Nation have developed a shared vision for the Klappan.

The Province and TCG recently concluded negotiation of the Klappan Plan. The package that was considered and approved by the Environment and Land Use Committee (ELUC) in early 2017 contains a Terms of Reference for the Klappan Board and a side letter respecting immediate wildlife measures.

Tahltan political leadership generally support economic development in their territory, though the Klappan has a history of conflict. The Tahltan leadership supported the construction of the Northwest Transmission Line, as well as the Iskut hydro projects. Despite significant community opposition, Tahltan were also able to support the Red Chris Mine. Securing protection of a portion of the Klappan is a critical requirement for Tahltan leadership to show that they are maintaining a balanced approach to development in their territory.

The Klappan Plan encompasses more than 755,954.16 hectares and consists of a land-zoning regime that sets out acceptable uses within three defined zones (see table below).

Zone	Management Objective	Area (ha)	Comments
Sacred Headwaters Zone A	No industrial development for 20 year period.	285,580	No major industrial development.
Culturally Significant Zone B	Sensitive cultural zone – industrial development must consider cultural and archaeological values	49,360	BC and Tahltan agree additional measures or information may be required to assess archaeological and cultural values.
Industrial Zone Zone C	Industrial Development Zone	403,600	Tahltan support for industrial development as an acceptable activity according to provincial regulations, assessments and processes (includes proposed Groundhog Mine)
Coal Licence Purchase Agreement Area (Arctos)	Set out by Coal Licence Purchase Agreement (2015) <u>Note</u> - area not part of the Klappan Plan Zoning	16,400	BC and Tahltan to enter into discussion for joint recommendations for long-term land use prior to expiry of Coal Licence Purchase Agreement.

The Klappan Plan will be implemented within existing provincial legislative and policy frameworks and is intended to provide guidance for land users and industry. Some components would be implemented as legal designations or objectives and an order under the *Environment and Land Use Act* will be prepared to provide for implementation of the 20 year “no development” Sacred Headwaters Zone A.

Issues around wildlife management and access require further resolution through implementation of a side letter. The side letter sets out immediate measures that include cooperation with resident hunters, and set out a process to continue to discuss wildlife management matters.

Reconciliation Agreement

British Columbia and the Tahltan Nation are negotiating a Reconciliation Agreement. Now that the Klappan Plan has been concluded, the parties are shifting efforts to reconciliation agreement negotiations, which will cover the entire Tahltan territory. The Province will seek territory-wide certainty through the Reconciliation Agreement, including with respect to mining development in Tahltan territory.

Red Chris Management Agreement

On January 24, 2017, Tahltan and the Province signed the Red Chris Mine Management Agreement (RCMA). The purpose of the RCMA is to collaboratively address issues pertaining to the construction, operation, and closure of the Red Chris Mine owned by Imperial Metals Corporation.

The RCMA establishes a formal engagement framework through which Tahltan concerns pertaining to the Mine can be discussed and addressed. It also sets out procedures to guide collaboration between the Province and Tahltan on new applications for provincial authorizations and amendments.

The RCMA provides for Tahltan to have an ongoing, active, and central role in monitoring compliance at the Mine and explicitly sets out notification procedures in the event of an emergency or incident that may impact Tahltan or the environment. This aspect of the agreement serves as a pilot for First Nations involvement in compliance and enforcement activities.

The Ministry of Energy and Mines is currently working collaboratively with Tahltan and other applicable Provincial agencies (i.e. Ministry of Environment; Environmental Assessment Office; Ministry of Forests, Lands and Natural Resource Operations) to implement the RCMA. This includes training for relevant agency staff and developing shared understandings with Tahltan around key implementation issues.

Mineral Access Fees

The Association for Mineral Exploration BC (AMEBC) is reporting that First Nations are demanding access fees from both companies undertaking mineral exploration on Crown land, and from suppliers and contractors serving those exploration operations.

According to AMEBC, these payments are being demanded in order for companies to operate in a traditional territory, regardless of existing benefit agreements between companies and First Nations. Payments do not necessarily provide guarantees that exploration will continue unimpeded. AMEBC notes that a common demand is for payments as a percentage of the exploration budget, or a percentage of the gross billing amount of a supplier. s.16
s.16

In a letter to AMEBC dated June 13, 2016, Minister Rustad stated that First Nations or any other third party does not have the legal authority to charge fees to companies or individuals operating on Crown land, and that companies are under no obligation to pay fees or capacity funding to a First Nation in order to operate on Crown land. While proponents are not required to provide funding as part of consultation, they may choose to do so as part of their business arrangements. The Province encourages proponents to continue to engage early and often, with the objective of establishing mutually beneficial working relationships.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Blackwater Project

KEY MESSAGES:

- New Gold Inc. is seeking an environmental assessment (EA) certificate to develop the Blackwater Project (Project), a proposed open pit gold and silver mine.
- The Project's 180-day EA was suspended August 15, 2016 at New Gold's request to allow adequate time for the review of supplemental information relating to water quality and the suspension remains in effect.
- Water quality and management, a proposed re-route of the transmission line, and wildlife (especially caribou) continue to be the main issues to resolve and cause of delays during EA review.
- The Province has signed a Collaboration Agreement with the Carrier Sekani Tribal Council (CSTC) to collaborate and seek consensus in relation to decisions on major approvals. The Project's access road and proposed 140 kilometre long transmission line are in CSTC asserted territory.
- CSTC and New Gold have agreed to a re-route of the transmission line to address concerns raised by CSTC of impacts to rights and title; the re-route proposal is under review by the Environmental Assessment Office (EAO) (submitted Mar, 4, 2017).
- The Province has agreed to work with New Gold on an early permitting approach which would seek Provincial Authorizations for early construction activities ahead of major permits including the *Mines Act* permit once an EA certificate is received.
- The Province is evaluating proposed Blackwater connector roads which provide access to the Project for the Lhoosk'uz Dene Nation (Kluskus) and Ulkatcho First Nation (Anahim Lake). Both First Nations are supportive of the Project and are interested in the economic opportunities it can provide their members however, the District of Vanderhoof and CSTC have expressed concern.

BACKGROUND:

- The Project is located 160 kilometres southwest of Prince George and 110 kilometres southwest of Vanderhoof.

- The capital cost of construction is estimated to be \$1.865 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).
- Five First Nations are listed on Schedule B of the section 11 Order: Lhoosk'uz Dene, Ulkatcho, Nadleh Whut'en, Saik'uz, and Stellat'en. Nazko is likely to be added to Schedule B based on new information made available to EAO.
- Nadleh Whut'en, Saik'uz and Stellat'en are signatories to the CSTC Collaboration Agreement with the Province. A Project specific Collaboration Plan for the EA is generally complete but disagreement remains regarding CSFN's request for a Ministers meeting prior to the EA decision. Drafting of Part C of the EA continues to progress. Negotiation of a similar permitting Collaboration Plan has been paused while New Gold, the Province and First Nations focus on the EA.
- EAO, Canadian Environmental Assessment Agency, Ulkatcho, and Lhoosk'uz Dene signed a collaboration Memo of Understanding for the Project EA, which is similar in concept to the CSTC Collaboration Plan.

s.16

- The District of Vanderhoof is supportive of the Anahim Lake connector road but not the Kluskus connector due to a perceived loss of economic opportunity for their community. Vanderhoof Mayor and Council have indicated that they are willing to work with the First Nation communities to find a solution that works for all communities.
- The CSTC is opposed to the connector roads primarily due to potential impacts to wildlife. The CSTC have recently indicated their support for the Project and this support may be at risk if the connector roads proceed. Consultation with all impacted First Nations is required and the potential exists to mitigate wildlife concerns with a mitigation strategy.

References:

New Gold Inc. (2015, October). Blackwater Gold Project Application for an Environmental Assessment Certificate/Environmental Impact Statement.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Brucejack Gold Mine Project

KEY MESSAGES:

- Pretium Resources Inc. was issued an Environmental Assessment Certificate (EAC) on March 26, 2015, a *Mines Act* (MA) Permit on July 22, 2015 and an *Environmental Management Act* (EMA) Effluent Discharge Permit on August 31, 2015 for the Brucejack Gold Mine (Project).
- Construction of the Project began in the summer of 2015 and is estimated to produce 2,700 tonnes per day during operations starting during the first two weeks of April 2017.
- Since permit issuance, Pretium identified numerous project changes requiring amendments to the Project EAC, MA, EMA and ancillary permits in order to continue construction.
- Phase 4 is expected to be completed and decisions issued by the end of March 2017 to coordinate with the planned initiation of mining operations.
- Through the Phase 4 MA permit amendment review, it was identified that a third amendment to the EAC is required in order to remain consistent with the MA permit. The decision on the EAC amendment will be coordinated with Phase 4 decision processes.
- Engagement with the State of Alaska is being undertaken pursuant to the Memorandum of Understanding and Statement of Cooperation.

BACKGROUND:

Project Information

- Pretium's Brucejack Gold Mine is a high grade underground gold-silver mine located at the Head of Knipple Glacier adjacent to Brucejack Lake, 65 kilometres northwest of Stewart.
- Pretium will employ approximately 500 people over a one to two-year construction period. Once fully operational, Brucejack will employ approximately 300 people full time during an estimated 16-year mine life (Pretium Resources Inc., 2014).
- The Major Mine Permitting Office is providing coordination for amendments using a phased approach.
 - Phase one included amendments to the MA permit M-243 and EAC; MA permit amendment was issued March 17, 2016 and EAC amendment was issued on March 11, 2016.

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Page 1 of 2

- Phase two related to the Special Use Permit and Occupant Licence to Cut; amendments were issued June 7, 2016.
- Phase three related to the EAC,EMA permit and MA Permit issued on July 12, 2016 (EMA permit), August 16, 2016 (MA permit) and August 16, 2016 (EAC).
- Phase 4 included a number of applications submitted in the fall and winter 2016 (with a decision anticipated at the end of March 2017) including:
 - MA permit amendments (2);
 - EMA permit amendments (2);
 - Chromium Management Plan approval;
 - Water Licence;
 - Licence of Occupation;
 - Occupant Licence to Cut; and
 - An EA amendment.

First Nations

- The mine site is located within the asserted territory of the TSKLH, a portion of the access road is located within the territory of the Tahltan First Nation, and the transmission line and the access road overlaps the Nass Area as defined under the Nisga'a Final Agreement.
- The Province will soon begin negotiations for revenue sharing with Nisga'a Lisims Government (NLG), Tahltan First Nation and Tsetsaut-Skii Km Lax Ha First Nations (TSKLH).

s.16

References

Pretium Resources Inc. (2014, 05 2). Approved Application Information Requirements for the proposed Brucejack Gold Mine Project dated May 2/14. Retrieved 03 13, 2017, from BC EAO Project Information and Collaboration:
<https://projects.eao.gov.bc.ca/p/brucejack-gold-mine/docs>

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: BURNCO Aggregate Project

KEY MESSAGES:

- BURNCO Rock Products Ltd. (Proponent) submitted their application for an Environmental Assessment (EA) certificate on August 4, 2016. The 180-day EA Application Review period is currently suspended on day 125 to allow the Proponent additional time to respond to Working Group and public comments.
- The proposed BURNCO Aggregate Mine is subject to a coordinated Federal-Provincial EA.
- The Major Mines Permitting Office (MMPO) has convened a mine review committee comprised of representatives from the Ministry of Energy and Mines, the Ministry of Forests, Lands and Natural Resource Operations, Squamish Nation, the Tsleil-Waututh Nation, and local government.
- The MMPO is working with the Proponent and the Mine Review Committee to discuss and develop adequate application information requirements for KGHM's permit applications.
- The Proponent anticipates submitting their applications for application screening in April 2017.

BACKGROUND:

- The Proponent is an independent ready-mix concrete company and a private business founded in 1912. They are based in Calgary with operations in Western Canada.
- The proposed Project is located along the northwest shore of Howe Sound (McNab Valley), approximately 35 kilometres northwest of Vancouver.
- The proposed sand and gravel pit is expected to produce approximately 1 million tonnes per year of high-quality construction aggregate over a 16 year mine life¹.
- The Project includes a gravel pit, processing plant, waste rock storage area, conveyor and marine barge loading facility.
- Aggregate will be barged through current navigable channels across Howe Sound, into the Strait of Georgia and up the Fraser River to the Proponent's existing facilities in Burnaby and Langley. The Project will replace aggregate currently sourced from Port McNeil.

¹ BURNCO Rock Products Ltd.'s Proposed BURNCO Aggregate Project Environmental Impact Statement Summary. July 2016. p. 1,

- Expected labour force consists of 80 person years for construction, and 12 full-time and 5 part-time positions during operation².
- Key issues and concerns raised to date include: air quality, noise, visual quality, water and aquatic habitat resources, potential effects to elk, and marine impacts related to construction of barge loading facility.
- The Project is within the Squamish Nation's traditional territory, and the Squamish First Nation has been participating in the EA process. The foreshore of the Project is within the traditional territory of Tsleil-Wauthuth Nation.
- As the EA is presently suspended at day 125 of 180, the end of the EA Office's Application Review period would not occur prior to the provincial election.
- There is a great deal of public interest in this Project due to the proximity of the Project to Howe Sound and North Vancouver. The EA Office held two public comment periods and several open houses to understand the public's views on the Project.

² *BURNCO Rock Products Ltd.'s Proposed BURNCO Aggregate Project Environmental Impact Statement Summary*.
July 2016. p. 33

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Giscome Quarry and Lime Plant Project

KEY MESSAGES:

- Graymont Western Canada Inc. (Graymont) received their environmental assessment (EA) certificate on December 14, 2016.
- The Coordinated Authorizations Process began on August 22, 2016 with the submission of applications for screening.
- On November 21, 2016, application screening was completed and, based on the review, it was found that the information within the *Mines Act* application was not sufficient to move forward into the application review process. As a result the application would need to be revised.
- The revised *Mines Act* application was submitted on January 27, 2017 for screening. This process ran to February 10, 2017 and found the application contained sufficient information to begin the application review process.
- The application review process began on February 17, 2017, with decision packages scheduled to be provided to Statutory Decision Makers for all project authorizations on October 3, 2017.

BACKGROUND:

Project Information

- The Proponent, Graymont, is a family-owned company that has been in the lime business for over 60 years.
- The proposed Project is located near the settlement of Giscome, approximately 27 kilometres east-northeast of Prince George.
- The Project proposal includes a limestone quarry located on Crown land, a lime processing plant site located on private land owned by Graymont, and a 4.3 kilometre conveyor belt to transport the limestone.
- The initial limestone extraction rate from the quarry is approximately 600,000 tonnes per year, with a future potential extraction rate of 1.7 million tonnes per year. The initial production rate at the plant site is expected to be 200,000 tonnes per year with 1 kiln, with a potential production rate of 600,000 tonnes per year with 3 kilns operating at the plant site.
- The proposed Project will produce high quality lime products used for flue gas desulphurization, mining applications, water treatment, and pulp and paper applications in Western Canada, Yukon and Alaska. The majority of the lime product will be shipped by rail.

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Page 1 of 2

- Initial construction of the lime plant with 1 kiln and quarry is expected to employ 40 to 60 people, totalling 15 to 20 person-years. A worker camp will not be established during initial construction or during operation. Additionally, 10 to 15 permanent positions could be created for operation of the plant site and quarry. Construction of the 2nd and 3rd kilns, if warranted by market conditions, would require about 15 person-years. (Graymont Western Canada Inc., 2014)
- Estimated initial capital cost of first phase is \$150 million and \$100 million to construct additional kilns and ancillary equipment.

Provincial Coordinated Authorizations Process

- Application Review to begin on February 17, 2017, with decision packages schedule to go to Statutory Decision Makers on October 3, 2017.
- The membership of the Giscome Mine Review Committee (MRC) is similar to the membership of the EA Office's working group, resulting in efficient knowledge transfer from the EA to the coordinated authorizations process.
- During the Application Review stage of the Coordinated Authorizations Process, the MRC will review Graymont's permit applications, discuss issues regarding their permit applications, and develop recommendations to be provided to provincial statutory decision makers for consideration.
- Public consultation will be conducted on the permit applications, consistent with applicable public consultation requirements.

First Nations

- The proposed Project is within the asserted territory of the Lheidli T'enneh First Nations (LTFN).
- A Mutual Benefits Agreement between Graymont and the LTFN was established in September 2014.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Groundhog Anthracite Coal Project

KEY MESSAGES:

- Groundhog anthracite project (Project) is located approximately 150 kilometres northeast of Stewart, in the Klappan anthracite coal deposit.
- The bulk sample application been reviewed by the Mine Development Review Committee (MDRC) and the permit amended. There were also two other permits issued Ministry of Environment discharge permit and Ministry of Forest Lands and Natural Resource Operations special use permit for the access road.
- Atrum Coal NL (the proponent) is proposing an underground anthracite coal mine with a production average of 3.2 million tonnes per year of saleable coal.
- Longer term, the broader Project has the potential to allow Atrum to become the world's largest exporter of high grade and ultra-high grade anthracite.
- The MDRC did not address all concerns related to access and the Special Use Permit regarding fish and wildlife baseline studies. There is a commitment to use the MDRC for further follow up regarding timing of construction, legacy issues of the access route and review of technical reports.

BACKGROUND:

- Anthracite is the highest-quality coal, as it has the highest carbon content with lowest volatility. While the global market for metallurgical coal is oversupplied, anthracite is in shorter supply and has a much higher market price. Atrum will market its product to the high-end steel industry, and major customers are expected to include large steel mills from China, Korea and Japan, the petrochemical industry and commodity traders.
- An October 2014 supplementary pre-feasibility study estimates the overall capital cost of the Project at \$596 million and the minimum capital required for small-scale production at \$58 million. According to the study, the projected mine life for the Project is 38 years, up from the earlier projection of 16 years.

- The bulk sample currently under review will provide Atrum with the ability to show these markets the high quality of coal this deposit is capable of producing to potential clients. Should the sample prove to be marketable, Atrum intends to start development of a mine and will go through an Environmental Assessment in 2016/2017.
- The MDRC was able to issue the permits and amendments. The applications are for the amendment to the current permit to provide for the 100,000 ton bulk sample, the Special Use Permit for the access road, the Occupant License to Cut for any trees that require clearing and the *Environmental Management Act* permit for any discharge.
- The First Nations identified who had asserted traditional territories within the Project area: the 6 Gitksan First Nation Wilps (house territories) House of Geel is within the actual bulk sample area - Tahltan, Takla Lake, and the Tsetsault Skii km Lax Ha. All have been involved in the review process. Tahltan, House of Geel, and Takla Lake are committee members. Other Gitksan wilps have still expressed concerns regarding the access route, and a MDRC is proposed for September 15, 2017 to ensure these concerns are documented.
- Both Takla Lake and Tahltan have Strategic Engagement Agreements. The Tahltan engage through a Level 4 working group through the current shared decision agreement. BC and Takla Lake are negotiating a Collaboration Plan. Both working groups will carry forward concerns regarding the Project should the program become a major project.
- The main issue of the First Nations and environmental groups is the access route along the defunct Dease Lake extension railbed. The railbed was constructed in the 1970's and has been left in poor condition through the headwaters of the three main salmon producing rivers - Stikine, Nass and Skeena. This area is known as the Klappan and has been subject to blockades and protests for any industrial activities, Shell methane gas project and Arctos Anthracite Coal project being the most noteworthy. Atrum coal licenses are located in the southern portion of the Klappan and in the Skeena River watershed.
- Through the review of the bulk sample, it has been noted that the concerns of access have not been thoroughly addressed because of the temporary use. Atrum has indicated they will only use the road for one season to transport the bulk sample and then reclaim. Should this become the main transportation route if a mine is developed, there will need to be detailed analysis and further baseline studies prior to any further authorizations.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Kemess Underground Project

KEY MESSAGES:

- AuRico Metals Inc. (AuRico) is seeking an environmental assessment (EA) certificate to develop the Kemess Underground Project (Project), a proposed underground gold-copper mine. ^{s.12}
s.12
- The three First Nations impacted by the Project, Tsay Key Dene and Takla Lake First Nation (TLFN) (territories overlap the mine site), and Kwadacha (territory adjacent and downstream of the mine site), have formed the Tse Keh Nay (TKN) to work collectively with AuRico and the Province.
- TLFN is the only TKN First Nation that is also a member of the Carrier-Sekani Tribal Council (CSTC) and signatory to the CSTC Collaboration Agreement, which requires the Province to seek consensus in relation to decisions on major approvals in CSTC territory.
- During the EA, the EA Office extended collaboration to TKN as a collective and the same approach is being taken in permitting.
- TKN issued a letter in support of EA certificate issuance, however, TKN's ongoing support for the Project is linked to the resolution of issues carried forward from EA to permitting (related to water quality and water management in the tailings storage facility) and the implementation of a government-to-government (G2G) table and Economic and Community Development Agreement (ECDA) with the Province, currently being negotiated by the Ministry of Aboriginal Relations and Reconciliation (MARR).
- The permitting pre-application phase started in fall 2016 and permit applications are expected in early July 2017.

BACKGROUND:

- The Project is located 250 kilometres north of Smithers and 430 kilometres north northwest of Prince George. It is 6.5 kilometres north of the past producing Kemess South Mine.
- The Project's initial capital cost is \$603 million, the sustaining capital is \$262 million and will employ an average of 409 people during a 13-year mine life (Bent, 2017).

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Date: March 14, 2017

Page 1 of 2

- The Project's surface disturbance is minimized by being underground and using existing infrastructure from the past-producing Kemess South Project, including the proposed use of the open pit as a tailings impoundment.
- A previous version of the Project (Kemess North) proposed an open pit mine and use of Amazay Lake as a tailings impoundment; this application was reviewed by a joint federal-provincial EA panel, which recommended the Project not proceed.
- AuRico has focused on building a strong relationship with TKN, and has designed the Project to avoid impacts to Amazay Lake and worked collaboratively with TKN to determine a location for water discharge from the Project. AuRico and TKN are negotiating an Impact Benefit Agreement.

s.16

- MARR and TKN are negotiating an ECDA and a G2G Agreement for the Project, which will establish a process for life of mine engagement. s.12

References

Bent, H. (2017, February 21). Director, Environment. Smithers, BC, Canada.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: CertainTeed Gypsum - Kootenay West Mine

KEY MESSAGES:

- The CertainTeed Gypsum Canada Inc. Elkhorn Quarry West Extension mine, near Windermere, BC, is reaching end of mine life.
- The proposed Kootenay West Mine Project (Project) near Canal Flats in southeast BC will provide 30 person-years of direct employment during construction and employ 18 full time staff during the 38 year mine operation.
- In November 2015, Canfor Corp. permanently closed the Canal Flats sawmill; a significant loss of regional employment.
- The Project represents an important potential source of employment for the Village of Canal Flats and is supported by the community.
- The Major Mines Permitting Office has been working with CertainTeed to ensure adequate government resourcing for the Project and support resolution of any major impediments to reaching a decision on Project authorizations.
- The Environmental Assessment (EA) Review of the Project is anticipated to start in late March 2017 and conclude in September 2017.
- Pending issuance of an EA certificate, permitting level decision would occur in January 2018.

BACKGROUND:

- CertainTeed is proposing to construct the Project 12 kilometres northeast of Canal Flats in southeast BC.
- CertainTeed's presently active gypsum mine, Elkhorn Quarry West Extension near Windermere, is reaching the end of mine life.
- Expected lifespan of the Project is 38 years.
- Approximately 10 person-years of direct employment will be created during construction and 18 full time staff will be employed during operations¹.
- The Project is located in the asserted traditional territories of Ktunaxa (Tun-ah-hah) First Nation and the Shuswap Indian Band. CertainTeed has established an excellent working relationship with both First Nations.

¹ Source: CertainTeed Kootenay West Mine EA Application submitted for screening; Version 1, pg. 91.

- The anticipated start of the Project's EA Review period is March 2017 to September 2017.
- *Mines Act, Environmental Management Act, Water Sustainability Act and Forest Act* applications review will start June 2017. Subject to issuance an *Environmental Act* Certificate for the Project, permitting level decisions are expected in January 2018.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Meadows Quarry (Sheridan Hill)

KEY MESSAGES:

- On March 17, 2015, the Save Sheridan Hill Society asked the Minister of Environment to designate the Meadows Quarry (Sheridan Hill) proposal as a reviewable project under Section 6 of the *Environmental Assessment Act* (EA Act).
- The Minister of Environment considered the EA Office's evaluation of the quarry and decided not to designate it as a reviewable project under the EA Act.
- The project will still undergo a thorough review by the Southwest Region Mine Development Review Committee (MDRC).
- The MDRC review would include representatives from the Katzie First Nation and the City of Pitt Meadows.
- In June 2016, the Ministry of Energy and Mines (MEM) ordered the proponent to complete an archeological assessment prior to the formation of the MDRC. To date, the archeological assessment has not been completed.
- The MEM has initiated consultations with all First Nations with interests in the area, and has agreed to an extension to allow time for their first response. The proponent was also directed by the MEM to engage with the First Nations. The proponent has offered to visit the site with First Nations and walk them through their proposal.
- No decision has been made on the Sheridan Hill permit application, and no decision will be made until appropriate consultation has taken place.
- A letter will be sent to the proponent by the end of March 2017, giving them 30 days' notice to complete the archeological assessment. If the assessment is not initiated within the 30 day window, the Notice of Work (NoW) will be cancelled. If the archeological assessment is completed as requested, an MDRC will be formed to review the application.
- Once the review process is complete, the MEM statutory decision maker will decide whether to issue a *Mines Act* permit for the proposed Sheridan Hill.

BACKGROUND:

- The MEM is currently reviewing a NoW permit application for a new quarry that would, if approved, be located on private land in Pitt Meadows.
- The NoW application was submitted by Mr. Bob Mclean, acting as an agent on behalf of Meadows Quarry proponent Mr. Brian Craig, and is on Sheridan Hill within the traditional territory of the Katzie.
- The proponent is proposing a 240,000 tonne-per-year operation that would result in the removal of the southern peak of Sheridan Hill, reducing its elevation by about 30 metres (i.e., from 75 to 45 metres).
- If the NoW is approved, a mixture of aggregate and rock (i.e., industrial minerals) could be mined at Sheridan Hill.
- The proponent submitted a NoW application for construction aggregate to FrontCounter BC on October 3, 2014. On January 30, 2015, the MEM initiated the referral period and informed the Municipality of Pitt Meadows and First Nations that it had received a NoW application from Sheridan Hill for a proposed aggregate quarry on private land on Sheridan Hill.
- The proponent met with the Katzie on September 14, 2016. The MEM and the FLNRO First Nations advisor expected the meeting to be about the ordered Archeological Assessment.^{s.21}
s.21
- On September 1, 2016, the Katzie's lawyer advised the Province that they have been successful in their application to be an Intervenor in *the K'Tunaxa Appeal* to be heard by the Supreme Court on December 1, 2016. They have again asked the Province to grant a moratorium on the processing of the application by 1015131 BC Ltd. on Sheridan Hill. The MEM and FLNRO continue to have dialogue with the Katzie on this issue.
- The Katzie asserts rights and title over the proposed quarry site; there is documented historical evidence that the Katzie consider Sheridan Hill their place of origin.
- Both the City of Pitt Meadows and the Katzie are concerned that the Sheridan Hill proposal is for an annual extraction rate of 240,000 tonnes, just under the 250,000 tonnes that would trigger an EA.
- The *Mines Act* ensures that any application to build and operate a quarry is considered independently by Government officials with relevant technical expertise, who give careful consideration to all of the concerns raised by the residents.
- Surface tenure for an aggregate mine is required even when the permit applicant holds the subsurface mineral or placer rights:
 - For aggregate extraction on Crown land, a proponent must have the *Land Act* tenure. Initially, most quarry applications receive a 5-year License of Occupation. However, a 10-year replacement license may be issued after the initial license. A Lease may be issued in cases where tenure is required for longer than a 5-year license of occupation or must be surveyed for other purposes. Most leases are for 10 years, but may be increased to a maximum of 20 years in special circumstances.

- An aggregate mine on private land, such as the proposed Sheridan Hill, requires fee-simple ownership or authorization from the land owner.

NEXT STEPS:

- MEM will give the proponent 30 days' notice to initiate the archeological assessment by the end of March 2017. If the assessment is not initiated within the 30 day window, the NoW application will be cancelled.
- If the proponent wishes to reapply with a new NoW, they will need to pay the permit fee.
- If the archeological assessment is completed as requested, an MDRC will be formed as the next step to review the application.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Morrison Copper-Gold Project

KEY MESSAGES:

- On July 7, 2015, the Minister of Environment and the Minister of Energy and Mines (the Ministers) announced their conclusion that the currently available information did not provide us with enough confidence that the design of the proposed Morrison mine could sufficiently protect the environment.
- As such, we ordered Morrison to undergo further assessment, and we set out the scope of this further assessment.
- Pacific Booker has three years to provide the additional information once a supplemental application information requirements document is approved by the BC Environmental Assessment Office (EAO).
- In making our decision on Morrison, we weighed a number of matters we considered to be in the public interest, including the following:
 - issues of risk and uncertainty associated with fundamental aspects of the mine's design;
 - issues of risk and uncertainty associated with the proposed mitigation measures;
 - insufficient baseline information about and understanding of the Morrison Lake ecosystem;
 - the environmental and other values at stake, particularly those associated with Morrison Lake and its unique population of sockeye salmon; and
 - whether there may be other design alternatives and/or mitigation measures that might support a higher level of confidence that significant adverse effects are not likely to result from the mine.

BACKGROUND:

- Pacific Booker Minerals Inc. is the proponent of the Morrison copper-gold project, located 65 kilometres northeast of Smithers and 35 kilometres north of the Village of Granisle, directly adjacent to Morrison Lake.
- Pacific Booker proposes the development of a conventional open pit mine with a planned extraction rate of about 30,000 tonnes a day and a mine life of 21 years.

- During the environmental assessment (EA) review, the Ministry of Energy and Mines and the Ministry of Environment expressed serious concerns with the proposed project's location, design, long-term impacts on water quality in Morrison Lake, and the long-term liability and risks associated with the proposed project in the event that mitigation measures were unsuccessful.
- On October 1, 2012, the Province announced that Pacific Booker's application for a BC EA certificate for Morrison had been rejected.
- On April 2, 2014, Pacific Booker filed a petition with BC Supreme Court to have the Ministers' EA decision overturned and the application reconsidered, and to be reimbursed for costs and for any other relief the court deemed appropriate.
- On December 9, 2013, Justice Affleck ruled that the EAO Executive Director had the statutory authority to make the recommendation he did, but that requirements of procedural fairness were not met because Pacific Booker was not informed that the Executive Director was making a negative recommendation when the findings of the assessment report could be seen to support issuing the certificate. The Province did not appeal this decision. Following a comment and response process, the Morrison project was re-referred to the Ministers for an EA certificate decision.
- On August 18, 2014, the Minister of Environment suspended the EA review for Morrison pending the outcome of the independent panel's investigation into the Mount Polley breach; Pacific Booker hired Kohn Krippen Berger to reassess its plan for storing tailings underwater and behind an earth-and-rock dam, but no changes in mine design resulted. The EA suspension was lifted on June 10, 2015, and the Morrison project was re-referred shortly thereafter to the Ministers for a decision.
- The Morrison project is located within the traditional territory of the Lake Babine Nation (LBN).
- On May 21, 2015, LBN Chief Wilf Adam wrote to the Ministers to state that, "contrary to claims made by Pacific Booker, LBN has never entered into a Memorandum of Understanding and does not have a working relationship or ongoing dialogue with the company."
- The LBN's letter also states that the Morrison mine remains an unacceptable project for the First Nation, which has indicated being open to projects:
 - where the proponent develops a respectful relationship with the LBN;
 - that can be built and operated in an environmentally sound manner;
 - that provide the LBN with a meaningful, ongoing role in project design and monitoring; and
 - that provide the LBN with substantial economic benefits.

However, in the LBN's view, the Morrison project does not satisfy any of these criteria.

- In July 2015, the Ministers ordered that the proposed Morrison mine must undergo further assessment and provided the details required.
- Next steps are for Pacific Booker Minerals Ltd. to develop a draft Supplemental Application Information Requirements (SAIR) document for submission to the EAO.
- Once the SAIR document is approved by the EAO, Pacific Booker Minerals Ltd. will have three years to submit their Supplemental Assessment Report.

- On December 23, 2015, the Proponent responded to the order with an initial draft First Nations consultation plan.
- EAO's response to the Proponent's letter on December 23, 2015 emphasized the importance of engaging with the LBN and asked how the Proponent will be addressing the potential adverse effects of project impacts to the LBN's rights.
- EAO emphasized to the Proponent that the scope of further assessment has been clearly outlined in the decision the Ministers made through the Section 17 Order.
- EAO is continuing to communicate and clarify requirements with the proponent.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERALS RESOURCES DIVISION**

ISSUE: Murray River Coal Mine Project

KEY MESSAGES:

- On October 1, 2015, the Minister of Environment and the Minister of Energy and Mines issued an Environmental Assessment Certificate for the Murray River Coal Mine Project (Project).
- The Project's federal environmental assessment is currently awaiting decision from Canada's Governor in Council as the Canadian Environmental Assessment Agency has assessed that the Project may cause significant adverse cumulative environmental effects to the current use of lands and resources for traditional caribou hunting purposes by Aboriginal peoples.
- In order to address impacts to caribou, the Province has drafted the Quintette Strategic Action Plan. This plan is in line with the federal government's Critical Habitat Protection Assessment and the associated BC-Canada Protection Assessment Study.
- In order to address impacts to water quality, the Province has developed the Murray River Watershed Cumulative Effects Framework. The goal of this framework is to develop protective benchmarks in relation to water quality for consideration in permitting.
- Permitting applications were submitted on November 10, 2016 for screening, which ran until January 31, 2017.
- On January 31, 2017, application screening was completed and it was found that the information within the *Mines Act* (MA) and *Environmental Management Act* (EMA) applications were not sufficient to move forward into the Application Review process. As a result, the applications would need to be revised.
- The revised MA and EMA applications were submitted on March 13, 2017 for re-screening. This process will run from March 14, 2017 to April 10, 2017. If the revised applications are found to be sufficient the Project will move to the Application Review Phase.

BACKGROUND:

Project Information

- HD Mining International Ltd. (HD Mining) is 55 percent owned by Huiyong Holdings, 40 percent owned by Canadian Dehua International Mines Group Ltd., and 5 percent owned by an unnamed Chinese partner.

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Page 1 of 3

- The Murray River Coal Mine (Murray River) would be an underground coal mine located approximately 12 kilometres south of Tumbler Ridge.
- Murray River would have a production capacity of 6 million tonnes per year, and would operate for 25 years, and would provide approximately 18 600 person-years of employment. (Canadian Environmental Assessment Agency, 2016).
- A caribou Protection Assessment was launched by Environmental and Climate Change Canada (ECCC) in 2016 to better understand impacts to caribou and caribou habitat. The Protection Assessment will be drafted via a working group composed of representatives from the federal government, British Columbia, Alberta and First Nations. The ECCC shared a draft Terms of Reference for a BC-Canada Working Group that suggested the protection assessment would take several months, with a report expected to the Federal Minister between April and June 2017.
- Key issues raised during the Provincial Murray River environmental assessment include cumulative effects to wetlands, forests, and rare plants and lichens; uncertainty regarding modelling used to predict effects; subsidence; groundwater; and surface water quantity and quality.
- Previously, labour unions launched court challenges of the federal decision to grant temporary foreign workers approval for the bulk sample program (alleging insufficient efforts to hire Canadians) and the Chief Inspector of Mines' decision to permit the bulk sample program (alleging safety issues because of non-English speaking mine workers). Both challenges were unsuccessful.

Provincial Coordinated Authorizations Process

- The Major Mines Permitting Office (MMPO) has convened a Mine Review Committee composed of representatives from First Nations, Natural Resource Sector agencies as well as the Ministry of Transportation and Infrastructure, Northern Health, BC Hydro and local government, to review the Murray River provincial permit applications.
- The Coordinated Authorizations Process for provincial permits began screening on November 10, 2016 with screening scheduled to be completed by April 10, 2017.
- During the Application Review Stage of the Coordinated Authorizations Process, the Mine Review Committee will review HD Mining's permit applications, discuss issues regarding those applications, and develop recommendations to be provided to provincial statutory decision makers for consideration.
- Public consultation will be conducted on the permit applications, consistent with applicable public consultation requirements.

First Nations

- Murray River is located within Treaty 8, and within the consultation area boundaries of Horselake First Nation (HLFN), McLeod Lake Indian Band (MLIB), West Moberly First Nations (WMFN), Halfway River First Nation (HRFN) and Saulteau First Nations (SFN).
- In January 2016, separate Regional Coal Agreements (RCA) between the Ministry of Energy and Mines and WMFN, SFN and HRFN came into force. The MMPO is working with the Ministry for Forests, Lands and Natural Resource Operations and

the First Nations to understand how the consultation framework outlined in the RCA applies to Murray River. Based on this understanding, a consultation plan consistent with the RCAs will be developed and implemented.

- HD Mining has undertaken a First Nations Independent Technical Review of the Project with SFN, WMFN and MLIB.
- SFN, WMFN and MLIB have communicated to the Province that they would like the permitting process for the Project to be put on hold until the Federal Environmental Assessment is complete. The Province has responded that we have an obligation to proceed with the provincial coordinated authorization process in the absence of a Federal environmental assessment certificate for the Project and existing joint obligations under RCAs will be followed.

Works Cited

Canadian Environmental Assessment Agency. (2016, October). Murray River Coal Mine Environmental Assessment Report. Retrieved 03 14, 2017, from Canadian Environmental Assessment Agency: <https://www.ceaa-acee.gc.ca/050/documents/p80041/115745E.pdf>

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Sukunka Project

KEY MESSAGES:

- Glencore is seeking an environmental assessment (EA) certificate to develop the Sukunka Project (Project), a proposed open pit metallurgical coal mine.
- The 180-day substituted EA Review was scheduled to end on February 9, 2016 but was suspended January 21, 2016, upon Glencore's request, to resolve issues related to water quality (WQ) and caribou.
- The main WQ issues stem from Glencore's proposed primary mitigations: the use of an unconventional water treatment system with unproven reliability and effectiveness in achieving adequate WQ; and uncertainty regarding proposed water conveyance features and effectiveness of seepage capture.
- To address these concerns, Glencore is now proposing to include active water treatment as a primary mitigation and must submit revised WQ and water treatment information. On February 15, Glencore submitted their proposed scope of the WQ and water treatment information requirements and comments were requested from the EA Working Group by March 10.
- On March 10, the Ministry of Energy and Mines (MEM) indicated that the document was very high level and lacked detail to demonstrate how the document would address MEM's comments to date, and therefore, MEM referred Glencore to the detailed comments previously provided. Glencore has not confirmed a submission date for the complete WQ and water treatment submission to the Environmental Assessment Office (EAO).
- Caribou issues relate to the Quintette herd and whether the predicted effects and proposed mitigations are consistent with the goals and objectives of provincial and federal caribou management strategies.
- EAO will consider outcomes from the federal Critical Habitat Protection Assessment (CHPA) for Southern Mountain Caribou (SMC) currently underway and determine whether further information is required.
- Three of the four Treaty 8 First Nations potentially impacted by the project have not participated in the EA to date. A First Nations Independent Technical Review, funded by Glencore, has been conducted on their behalf and is currently being reviewed by Glencore and EAO.

BACKGROUND:

- The Project is located 55 kilometres south of Chetwynd and 40 kilometres west of Tumbler Ridge.
- The capital cost for the construction of the Project is estimated to be \$443.7 million and, if approved, the Project will create up to 250 jobs during construction and an average of 543 jobs during its anticipated 20 years of operation (Glencore plc, 2015).
- Glencore is one of the world's largest diversified natural resource companies and one of the largest producers of metallurgical coal. Their experience, resources, and innovation would be a substantial asset to British Columbia's coal sector.
- Four Treaty 8 First Nations are listed on Schedule B of the section 11 Order: West Moberly First Nations, Sauteau First Nations, McLeod Lake Indian Band, and Doig River First Nation (added in mid-April 2016).
- The Project is located within the Quintette caribou herd range (part of the SMC), a federally listed Species at Risk. The herd is managed provincially by the "Implementation Plan for the Ongoing Management of South Peace Northern Caribou in BC" and federally by the "Recovery Strategy for the Woodland Caribou Southern Mountain Population in Canada".
- Environment and Climate Change Canada (ECCC) has launched a CHPA to assess adequacy of current provincial measures and to determine if additional steps need to be taken to protect SMC.
- Phase one of the CHPA, a joint Protection Study (Study) on the Central group of the SMC (includes Quintette herd) is underway and a 30-day public comment period started February 16. Phase two will focus on the southern and northern groups of the SMC and is expected in 2018.
- The Province has also recently released the Quintette Strategic Action Plan (QSAP) which aims to recover the Quintette herd in line with the *Species at Risk Act* population targets within a decade.
- As the Study, the QSAP and CHPA process may be relevant to the Sukunka EA, EAO is monitoring this work and will consider this work and advice from federal and provincial agencies, in order to assess implications for EA completion and will request further information from Glencore, if needed, prior to referring the EA for decision.

References:

Glencore plc. (2015, August 4). Environmental Assessment Certificate Application Sukunka Coal Mine Project.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Sumas Mountain Notice of Work and Mining Lease
Extension Applications

KEY MESSAGES:

- On August 19, 2016, the Chief Gold Commissioner issued reasons for a decision to issue a mining lease on Sumas Mountain to the applicant 266531 BC Ltd. for a term of one year.
- A mining lease does not authorize mining activity, and if the recorded holder of a claim or a lease wants to conduct mechanized activity, they must apply for a *Mines Act* permit.
- Mining lease applications and mine permit applications are referred to local and municipal governments as well as to other provincial agencies. First Nations are consulted on these applications.
- A Notice of Work (NoW) application for a *Mines Act* permit was received on March 9, 2017, along with the permitting fee. Once reviewed and accepted, the NoW will be referred for FN consultation. The applicant has also applied for an extension to the term of the mining lease.
- Consultation and referrals on the NoW application and mining lease term extension will be coordinated.
- This application was discussed and on the agenda during the Sto:lo SEA executive meeting on November 29, 2016. Both the Sto:lo and the Sumas First Nation expressed that no further mining should be allowed on Sumas Mountain.

BACKGROUND:

- There are a number of existing quarries on Sumas Mountain, both very large and small. These have been typically been permitted and in operation for 10 years or more.
- The issuance of a mining lease is a statutory decision of the Chief Gold Commissioner (CGC) under Section 42 of the *Mineral Tenure Act*.
- A mining lease does not authorize mining activity, and if the owner of a mining lease wants to conduct mechanized mining, they must apply for a *Mines Act* permit.
- The mining lease area is 106 hectares of Provincial Crown land on Sumas Mountain just east of Abbotsford city limits. The company is 266531 BC Ltd, owned by David Taylor from Kamloops BC. The agent is Howard Turner, also from Kamloops BC.
- It is in Electoral Area G of the Fraser Valley Regional District, adjacent to Sumas Mountain Inter-Regional Park.

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Page 1 of 3

- There has been local opposition to proposed mining activity from the application area since an aggregate quarry operation for the same area was first proposed in 2011 by the applicant. The applicant withdrew this 2011 Crown land use application after deciding not to pursue an aggregate quarry operation.
- The applicant is no longer proposing an aggregate quarry operation, but is instead proposing to produce decorative stone (green granite).
- The City of Abbotsford and the Fraser Valley Regional District are opposed to the issuance of the lease. The concerns expressed include the additional volume of heavy truck traffic on Sumas Mountain Road, and the location of the application area outside the city means no tax is collected toward road maintenance. Other concerns expressed are the adjacency of the application areas to Sumas Mountain Inter-Regional Park and a number of un-managed recreation trails traversing the application area, some of which extend into the park.
- The mining lease is located within the consultation area of the Sto:lo Nation, Hul'qumi'num Treaty Group and Semiahmoo First Nation.
- The Sumas First Nation (a band government of the Sto:lo) is opposed to the issuance of the lease and asserts a claim to Aboriginal rights and title over the application area. The consultation summary report provided by FLNRO indicates that the Sumas First Nation has a strong strength of claim to Aboriginal title over the lease application area.
- As part of the *Mines Act* permit application, they will have to submit a plan for the conservation of cultural heritage resources, which may include an archaeological assessment of the application area.
- The applicant received approval for 9000 tonne bulk sample in 2003 on this site, which resulted in a road block by the Sumas First Nation, as the traffic went through the Sumas Indian Reserve. The City of Abbotsford has since constructed a road on the mountain for truck traffic, which does not go through the Sumas Indian Reserve.
- On advice from the Ministry of Justice (JAG), a letter was sent to the Sto:lo council on March 16, 2016 inviting further comment and input, as well as offering an in-person meeting with the CGC to discuss the lease application. Sto:lo council did not respond to this letter. JAG also reviewed the First Nations consultation summary report completed by FLNRO.
- The applicant has fulfilled all of the requirements of section 42(1) of the Mineral Tenure Act; as per section 42(4), "if the chief gold commissioner is satisfied that the recorded holder has met all of the requirements of subsection (1), the chief gold commissioner must issue a mining lease for an initial term not longer than 30 years on conditions the chief gold commissioner considers necessary."
- The Sto:lo Nation is concerned that mining will open the door to future impacts such as tree cutting and a loss of access to cultural pursuits, such as harvesting, hunting, as well as traditional and ceremonial practices. There are no known archaeological features or heritage objects or sites in the application area, and there is no specific information on how the area contributes to harvesting or hunting activities.
- It is noted that Sumas Mountain generally is an area of cultural and spiritual significance to the Sumas people. It is also noted that there are burial grounds

and a transformation site at Lightning Rock, which is approximately six kilometers to the southwest of the lease application area.

- The CGC considered relevant information, including information received from local governments and provincial agencies, and the content and adequacy of consultation with the Sto:lo Nation, Hul'qumi'num Treaty Group and Semiahmoo First Nation on the mining lease application.

SUMMARY / NEXT STEPS:

- The Notice of Work application will be reviewed for completeness and sent back to the proponent for amendment if not complete.
- Once accepted, the Notice of Work and Mining Lease extension applications will be sent out for FN consultation and agency referrals. s.16
s.16

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Operating Coal Mines in B.C.

KEY MESSAGES:

- There are currently seven coal mines operating in B.C., employing approximately 3,800 workers.
- The Brule and Wolverine mines in Northeast B.C. have restarted operations due in part to the recent recovery in metallurgical coal prices.
- The estimated value of the coal produced in the Province in 2016 was \$2.9 billion; approximately 45 percent of B.C.'s total mining production value of \$6.3 billion from coal, metal, aggregate and industrial mineral mining.
- B.C. remains Canada's largest exporter of coal.

BACKGROUND:

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

Operation	Company	Community	s.21	Primary Type of Coal
Brule	Conuma Coal	Tumbler Ridge		Metallurgical
Coal Mountain	Teck	Sparwood		Metallurgical
Elkview	Teck	Sparwood		Metallurgical
Fording River	Teck	Elkford		Metallurgical
Greenhills	Teck	Elkford		Metallurgical
Line Creek	Teck	Sparwood		Metallurgical
Wolverine	Conuma Coal	Tumbler Ridge		Metallurgical

- With a production value of \$2.9 billion in 2016, coal accounted for about 45 percent of the overall production value of the B.C. mining industry, which was estimated to be \$6.3 billion in 2016.
- Five of B.C.'s seven 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 as well as the provincial economy as a whole.
 - They employ nearly 3,400 people, and approximately 80 percent of the mineral tax the Province collected from B.C. mines in 2015/16 came from these five operations.

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Page 1 of 2

- In January 2016, Walter Energy Canada Holdings, Inc. announced that it had received approval from the Supreme Court of B.C. to commence a sale and investment solicitation process for the company's Canadian assets.
- In September 2016, Conuma Coal purchased Walter Energy's coal mines in the Northeast (Brule, Wolverine and Willow Creek). The company restarted the Brule mine in September 2016 followed by the Wolverine mine in January 2017. Conuma Coal is currently developing a proposal to restart the Willow Creek mine in mid-2017.
- Anglo American's Trend-Roman mine located near Tumbler Ridge has been in care and maintenance since late-2014.
- In January 2016, Hillsborough Resources announced the closure of the Quinsam coal mine located near Campbell River on Vancouver Island, affecting approximately 65 employees.
- Following the market downturn in the mining sector in 2015 and early 2016, coal prices have improved significantly in recent months. Spot prices for metallurgical coal were US\$76/tonne at the beginning of 2016 and rose 300 percent during the year. The surge in spot prices began in August reflecting the shortage of metallurgical coal, which continued into September and October. November saw these prices peak at US\$310/tonne but prices have declined since and are currently US\$162/tonne.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Operating Metal Mines in British Columbia

KEY MESSAGES:

- There are currently seven metal mines operating in B.C., employing approximately 3,900 workers.
- The key metals mined in B.C. are copper, gold, silver and molybdenum.
- B.C. is Canada's largest producer of copper and among the top three provinces in the production of gold.

BACKGROUND:

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

Operation	Company	Community	Commodities
Copper Mountain	Copper Mountain Mining Corporation	Princeton	Copper/Gold/Silver
Gibraltar	Taseko Mines Limited	Williams Lake	Copper/Molybdenum
Highland Valley Copper	Teck Resources Limited	Logan Lake	Copper/Molybdenum
Mount Polley	Imperial Metals Corporation	Likely	Copper/Gold
Mt. Milligan	Centerra Gold Inc.	Prince George	Copper/Gold/Silver
New Afton	New Gold Inc.	Kamloops	Copper/Gold/Silver
Red Chris	Imperial Metals Corporation	Iskut	Copper/Gold

- According to preliminary estimates from Natural Resources Canada, the estimated production value of B.C. metal mines in 2016 was \$3 billion.
- The Mount Polley mine received a full restart permit in June 2016.
- Operations at the Endako mine are temporarily suspended due to low molybdenum prices.
- Operations at the Myra Falls mine were temporarily suspended in May 2015 to restore and upgrade the mine's infrastructure. In October 2015, Nyrstar postponed funding of the mine upgrades given the weak commodity price environment.
- In August 2016, the Huckleberry mine located near Houston was placed into care and maintenance as a result of low copper prices, affecting approximately 200 employees.



British Columbia Geological Survey
Open File 2017-1

Gordon Clarke, Jim Britton, Paul Jago, Fiona Katay, and Bruce Northcote
Cartography by Holly Arnold







- Primary commodity**

Geology

Post accretionary assemblages

Terranes

Ancestral North
America platform

-  Cassiar
-  Basinal strata
-  Platform strata
-  Craton and cover



British Columbia Ministry of Energy and Mines
Stephen Rowins, Chief Geologist and Executive Director
Larry Jones, Resource Information Director
Adrian Hickin, Cordilleran Geoscience Director
Gordon Clarke, Mineral Development Office Director

Page 50 of 220 EGM-2017-71966 MMRD

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Health and Safety at B.C. Mines

KEY MESSAGES:

- Mining is one of the safest heavy industries in B.C.
- This record is a result of the co-operative efforts of mine employees, mine management, unions and regulators.
- Ministry of Energy and Mines' health and safety inspectors are involved in all aspects of the mining cycle, from the exploration phase to operations and final reclamation to ensure the health and safety of workers, environmental protection and compliance with the Health, Safety and Reclamation Code for Mines in B.C.
- While the industry and the Province are justifiably proud of the safety record of B.C. mining, the Ministry of Energy and Mines (MEM) recognizes the need for due diligence and continuous improvement.
- In response to the May 2016 Office of the Auditor General (OAG) report on compliance and enforcement of the mining sector, government established a Compliance and Enforcement Deputy Ministers board to oversee implementation of the 16 sub-recommendations of the OAG report.
- MEM has hired a C&E Deputy Chief Inspector to lead a group of C&E staff to increase oversight of compliance at mining operations.

BACKGROUND:

- B.C. has a diverse mining industry, ranging from small-scale placer and gravel operations to world-class surface mines and underground metal and coal mines.
- MEM achieves mine health and safety objectives through inspections, audits, serious accident and fatality investigations, and mentoring and training programs.
- The mine audit program is a distinct component of MEM's mine health and safety program. An audit involves a team of inspectors conducting a focused review of regulatory requirements at a mine site.
- In addition to the audit program, inspectors carry out routine inspections of exploration sites, placer operations, mines and aggregate pits within their regions.
- Inspections conducted annually by inspectors have doubled from 2005 numbers:
- In 2016 more than 1200 inspections were conducted. The exact number of inspections is being tabulated.

Year	Number of Mine Inspections
2005	511
2006	614
2007	723
2008	673
2009	797
2010	810
2011	494
2012	874
2013	904
2014	1228
2015	1203
2016	Estimate >1250

- There were no mine operations fatalities in B.C. in 2010 or 2011. This was the longest period of time with no mine fatalities since records started to be collected in 1898.
- In 2012, there was one fatality related to an avalanche on an exploration site in northwest B.C., at which time MEM undertook an investigation. There were no mine operations fatalities at B.C. mines in 2013. A fatality occurred at Teck's Coal Mountain operation near Sparwood, B.C. in March 2014, when a worker was struck by frozen muck that had accumulated in the rear of a haulage truck box. A double fatality occurred at the Swansea quarry in September 2014. ^{s.15}
- In July of 2015 there was one fatality at Polar Jade when an ^{s.15} There were no mine operations fatalities at BC mines in 2016.
- In 2015 (latest figures available from WorkSafeBC), major mines, quarries and sand and gravel operations experienced an estimated injury rate of approximately 1 injury claim per 100 person years worked.
- The injury rate at B.C. mines continued to compare favourably against the estimated injury rates of other B.C. heavy industries in 2015:

Industry	Injury Rate
Mining (metal, coal mines, quarries)	1
Forestry	5
General Construction	4
Heavy Construction	3
Road Construction	3
Wood and Paper	3

- MEM organizes the annual Provincial Mine Rescue and First Aid Competition in B.C., in which mine rescue and first aid teams from mine operations across the province compete in a number of emergency response events. The competition, now in its 62nd year, is key to making sure every mine site in the province has certified, trained and highly competent emergency response teams.
- MEM also sponsors the Mine Safety Awards, held annually for the past 55 years. The awards are handed out to mining operations that have had zero fatalities and the lowest injury rates in their respective operation categories in the past year. The Chief Inspector of Mines also honours individuals or small groups for outstanding achievements in health and safety.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Mineral Tax Revenue Forecast

KEY MESSAGES:

- Mineral tax revenue depends on a strong mining sector supported by Provincial policies that encourage investments in exploration, mine expansions, mine life extensions and new mine developments.
- With the latest surge in commodity prices, the Ministry of Finance forecasts mineral tax revenues to increase from approximately \$103 million in 2015/16 to \$185 million in 2016/17
- Up to 37.5 percent of mineral taxes are shared with First Nations for new mines and expansions with over \$4 million shared in 2015/16

BACKGROUND:

- The mineral tax is a profit-based tax payable by the mines and quarries operating in B.C. The tax was enacted in 1990.
- The program applies a tax on prescribed commodities:
 1. Coal (approximately 91 percent of forecasted revenue) - Metallurgical, Thermal, PCI
 2. Base and Precious Metals (approximately 9 percent of revenue) – Copper, Molybdenum, Zinc, Gold and Silver
 3. Other (less than 1 percent) – Industrial Minerals, Gemstones, rare elements and dimension stones
- The Mineral Tax Revenue projections are based on forecasted commodity prices, various economic indicators and knowledge of the industry. The Ministry of Energy and Mines (MEM) is responsible for forecasting the commodity prices while the Ministry of Finance is responsible for the Mineral Tax Revenue projections.
- There are two tiers of mineral tax:
 1. The lower tier is called the net current proceeds tax and is calculated at 2 percent of operating cash flows (i.e. revenues plus recoveries minus operating expenditures for the period). This tax is paid before recovery of all operating and capital costs and other deductions.
 2. The higher tier is called the net revenue tax and is calculated at 13 percent of profits over the life of the mine (i.e. cumulative revenue minus cumulative operating and capital costs and other tax-related deductions). The higher net revenue tax is only paid after recovery of all operating and capital costs and other deductions.

Operating Mines

- B.C. mineral tax revenues from coal and metal mines were over \$350 million in 2010/11 and 2011/12 at the height of commodity prices (coal in particular). Actual mineral tax revenue for 2015/16 was \$102 million.
- Current mineral tax forecasts for fiscal 2016/17 are approximately \$185 million: \$169 million by coal mines and \$16 million by metal mines. These forecasts were made in January 2017 and actual results will be reported in the Public Accounts, due summer 2017.
- Mineral tax payments are sensitive to mine profitability (i.e. volumes, prices and operating costs) and capital expenditures, which are fully deductible. Gross revenues declined in 2015/16 due to depressed commodity prices. This has resulted in a reduction of mineral tax payable at this time.
- Prices for metallurgical coal (which represents the majority of mineral tax in B.C.) have surged since summer 2016 due to supply disruptions in China and Australia. Similar prices are expected for metallurgical coal in 2017/18 with global demand expected to remain strong..
- In addition to the commodity price forecast supplied by MEM, the Ministry of Finance incorporates other projected factors such as production levels and operating costs into their mineral tax revenue forecast.
- Government shares mineral tax revenue from some mines through Economic and Community Development Agreements with First Nations. Payments to First Nations totalled over \$4 million in 2015/16.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Revenue Sharing with First Nations

KEY MESSAGES:

- The Province is committed to sharing mineral tax revenue with First Nations as a means to create certainty on the land and to make First Nations partners in resource development.
- Ministry of Finance's mineral tax revenue forecast for 2016/17 is approximately \$185 million
- Twenty-four agreements have been signed for the following projects: New Afton, Mt. Milligan, Elk Valley coal projects, Mount Polley expansion, Copper Mountain, Highland Valley Copper, Gibraltar expansion, Huckleberry, Quinsam Coal, Kitsault, Red Chris and coal projects in the Northeast .
- Negotiations towards further agreements are underway, including emergent mine projects such as Brucejack, Kemess Underground, Blackwater and Silvertip, with further negotiations planned for the near future.

BACKGROUND:

- In 2008, B.C. became the first province in Canada to introduce a policy to share with First Nations direct provincial mineral tax revenue from new and expanded mines.
- Economic and Community Development Agreements (ECDAs) secure support for mining projects, increase process certainty for the Province, First Nations and industry, and reduce litigation risks for the life of the agreement.
- The Ministry of Aboriginal Relations and Reconciliation leads the negotiation of ECDAs, and First Nations receive a percentage of up to 37.5 percent of incremental mineral tax revenue from mine developments in First Nations traditional territories.
- Revenue sharing is typically low during the initial years of a mine that has been operating prior to the ECDA because only mineral tax revenue generated from the incremental ore (i.e. ore generated from a mill or pit expansion) is eligible to be shared.
- In situations where multiple impacted First Nations have to be scoped into the negotiation of ECDAs over the project, the Province seeks agreement amongst impacted First Nations to agree on a division of the percentage mandate for the project. In the event that the First Nations cannot agree on the division of the mandate, the revenue share percentages tabled with First Nations are determined by the Province based on a number of factors. These may include the potential impact of

the project, the distance from the mine, the centre of the closest reserve to a First Nation, and the number of First Nations and their populations.

- The Province has 24 agreements that cover all fourteen of the operating metal and coal mines in B.C.
- ECDA payments have been made to First Nations on 20 of the 24 agreements. Of the four agreements where payments have not been made, three of them are new agreements established for coal mines in the northeast which may generate a payment as early as 2017/18. s.16,s.21

s.16,s.21

s.16,s.21

Contact: Peter Robb
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Date: March 17, 2017

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Financial Securities for Mines

KEY MESSAGES:

- The Ministry of Energy and Mines (MEM) requires security at the time of mine permitting and regular review of the amount as conditions change throughout the life of the mine.
- Acceptable forms of security include cash, safe keeping agreements, irrevocable letters of credit and surety bonds.
- Following the Auditor General's 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:
 - MEM has already 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 B.C.
 - Many aspects of the ministry's current practice are sound but should be formalized into a well-defined policy that is clear to industry and the public.
- The Ernst and Young report provides a good foundation and offers the ministry some potential policy components to consider moving forward. This will require further analysis before the ministry can finalize its reclamation securities approach. This work is currently underway and will be completed in 2018.

BACKGROUND:

- Ministry of Energy and Mines (MEM) reclamation security practice seeks to provide reasonable 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 permit stage, regularly reviews them during mine operations, and can adjust them as liability or other factors change at any point during mine life.
- Current reclamation security policy is the result of a comprehensive review by experts from government ministries, industry and non-governmental environmental organizations in the 1990's and early 2000.
- The Auditor General's report of May 2016 highlighted a security shortfall of \$1.2 billion.
- Lack of clear policy and insufficient security have been identified in several recent Auditor General reports across the country (Ontario 2015, Alberta 2015, Nova Scotia

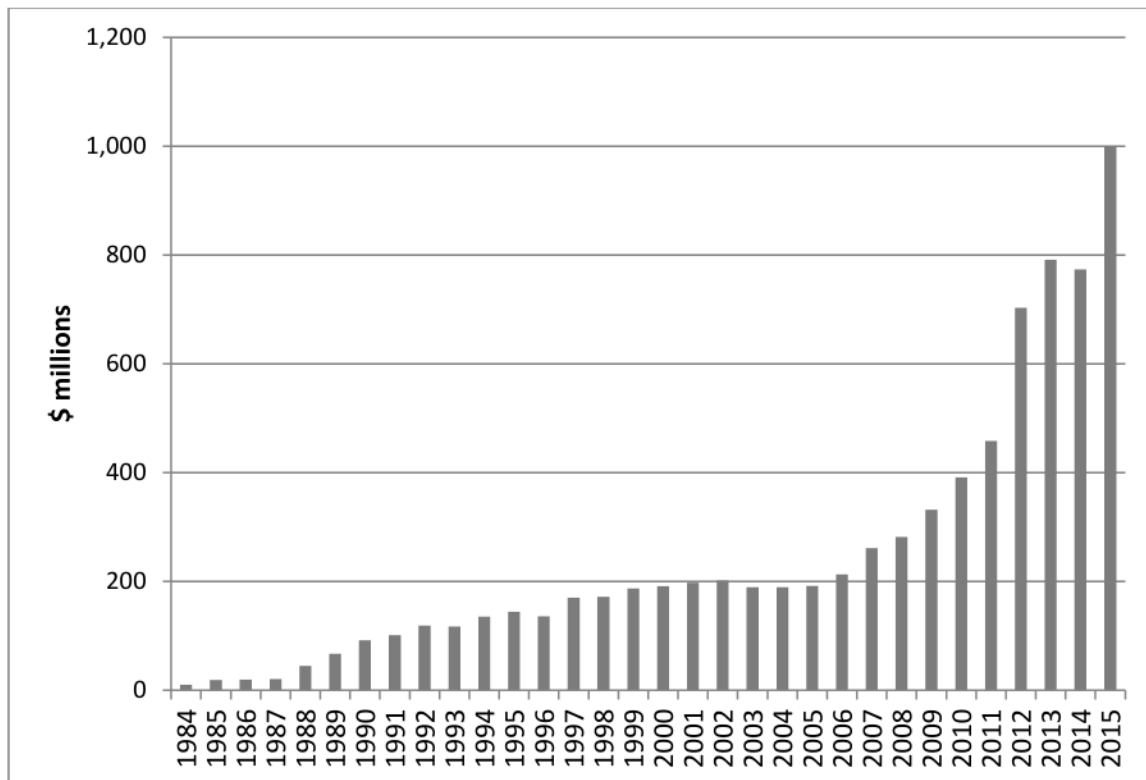
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Page 1 of 2

2014). This is an evolving area of policy development.

- MEM is currently reviewing its reclamation policy to update it based on current best practices as informed by the Ernst and Young report. Recommendations from this report include improving the rigor of MEM's risk assessment process for determining required security, leveraging policy tools to better incentivize strong environmental performance, and basing key factors such as discount rates on independent standards.
- Security held by the province has risen from \$10 million in 1984 to more than \$1 billion by the end of 2015 according to the latest Chief Inspector of Mines Annual Report.
- The total reclamation security currently held (as of March, 2017) by the province is \$1.3 billion.

Reclamation Security Deposits held by the Province



**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Red Chris Copper-Gold Mine Project

KEY MESSAGES:

- Imperial Metals Corporation was issued an Environmental Assessment Certificate (EAC) in August 2005 and *Mines Act* (MA) and *Environmental Management Act* (EMA) permits in May 2012 for the construction of the Red Chris Copper and Gold Mine (Mine) operated by Red Chris Development Company (RCDC).
- Construction of the Mine began in the spring of 2012 and operations began in February 2015.
- The Tailings Impoundment Area (TIA) consists of three main dams (North Dam, Northeast Dam and South Dam).
- The South Dam was not approved during initial permitting due to uncertainty surrounding the area's hydrogeology and potential impacts to downstream water quality.
- In April 2016, RCDC submitted applications to amend its EAC, MA permit and EMA effluent discharge permit for South Dam construction and operation. Amendments were required due to substantial changes to the dam design and overall water management of the TIA.
- The review of all amendments was undertaken by the Mine Review Committee. The coordinated approach enabled efficient use of resources given the overlap of technical review and consultation.
- All necessary authorizations for the South Dam have been issued:
 - EAC amendment and MA permit amendment authorizing South Dam construction issued on August 19, 2016.
 - The EMA and MA permit amendments authorizing South Dam operation issued on October 26, 2016 and February 28, 2017, respectively.
- In 2016, the Ministry of Energy and Mines (MEM) issued a number of Orders and letters in relation to compliance issues at the Mine. MEM continues to work proactively with RCDC to ensure compliance with permits and the Code.

BACKGROUND:

- The Red Chris Mine is a copper-gold Project located 80 kilometres south of Dease Lake and 18 kilometres east of the village of Iskut in northwestern British Columbia. The Mine was built at a capital cost of \$680 million and has 300 full time employees working on site during its anticipated 28-year mine life (Robertson, 2016).

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Estimate Note: 27

Page 1 of 2

- RCDC constructed an extension of the Northwest Transmission Line which came into service in December 2014.
- In April 2015, the Tahltan Nation announced a co-management agreement with RCDC. The agreement was supported by 86.9 percent of Tahltan voters and ensures Tahltan oversight of environmental issues surrounding the Mine, guarantees training and careers for Tahltan members and revenue-sharing.
- On January 26, 2017, the Province and Tahltan signed the Red Chris Mine Management Agreement which establishes a framework for engagement on existing and proposed Provincial authorizations, environmental management, monitoring, compliance and incident reporting. Implementation planning is underway.
- The Tailings Facility has been subject to three independent reviews done to assess seepage and design considerations, including the November 2014 study by Kloth Crippen Berger (KCB) which was conducted in order to address concerns about the Mount Polley tailings dam breach.
- A recommendation from the KCB report was to establish an Independent Engineering Review Panel (IERP). The IERP is to provide independent review of all aspects of the design, construction, operation, closure, and post closure planning for the Mine's tailings storage facility and to provide recommendations and guidance to RCDC and to Tahltan.
- Operation of the South Dam is conditional on the receipt of a Site Wide Water Management Plan that includes RCDC's strategy for early use tailings storage facility water management.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Southeast B.C. Coal Mines

KEY MESSAGES:

- Teck currently operates five coal mines in southeast B.C. which directly employs close to 4,000 people
- Environmental Assessment (EA) certificates have been granted for 3 Teck coal mines since 2013.
- In November 2014, the Minister of Environment approved the Elk Valley Area Based Management Plan which sets out stringent and legally enforceable water quality standards.
- The Area Based Management Plan not only addresses potential impacts from the proposed new mine expansions but also mitigates cumulative impacts from historic mining in the area.
- To meet the stringent water quality standards set out in the Area Based Management Plan, Teck is heavily investing in active water treatment facilities and other clean water technology solutions.

BACKGROUND:

- Teck Coal Limited, a fully owned subsidiary of Vancouver-based Teck Resources Limited, operates five coal mines in southeast B.C. which directly employ close to 4,000 people full time:
 - Coal Mountain, Elkview, Fording River, Greenhills, Line Creek.
- Teck received an amendment to its EA certificate for Line Creek Operations on September 25, 2013 and subsequently received permit approvals for its Phase II Project.
- Teck received an amendment to its EA Certificate for the Fording River Operations Project on September 10, 2015 and subsequently received permit approvals for its Swift Project. Teck applied for further permit amendments at Fording River Operations through the North Spoil Rehandle Project to increase economics of the mine. Decisions on permit amendments were received December 2016.
- Teck received permit amendment approvals between April and May 2016 for the Greenhills Operations Cougar Pit Extension Project.
- Teck received an amendment to its EA Certificate for Elkview Operations Baldy Ridge Extension Project on September 19, 2016 and subsequently received a *Mines Act* permit amendment.
- Teck has suspended the Coal Mountain Phase 2 Project until market conditions improve substantially. Mining at the existing Coal Mountain Operations will end in late 2017 and it is expected employees at Coal Mountain Operations will have an opportunity to transfer to other Teck Coal mines.

Water Quality

- In November 2014 the Minister of Environment approved the Elk Valley Area Based Management Plan that identifies long-term water quality targets for selenium, cadmium, nitrate, and sulphate as well as targets to address calcite formation in receiving streams. The Area Based Management Plan considers current concentrations, current and emerging economically achievable treatment technologies to treat these parameters, sustained balance of environmental, economic and social costs and benefits, and current and emerging science regarding the effects of contaminants.
- The Area Based Management Plan is endorsed by all relevant provincial government agencies and supported by the Ktunaxa Nation Council who participated in the development of the plan.
- Implementation of the Area Based Management Plan has not been completed due to challenges

s.21

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

Comment [HAM1]:

ISSUE: South Island Aggregates**KEY MESSAGES:**

- On March 21, 2016 the BC Supreme Court issued a ruling finding that the importation of contaminated soils onto the site constituted a landfill and therefore the site is subject to the local zoning bylaw prohibiting a landfill on the site.
- South Island Aggregates (SIA) appealed the ruling and asked for a stay to the order while the appeal was heard.
- The two-day court hearing on the appeal from SIA ended on August 18, 2016. The appeal judgement ruled that a quarry is a mine and site reclamation, which includes backfilling of the quarry cavity, is a mining activity.
- On January 27, 2017, an order was issued to various parties, including Cobble Hill Holdings Ltd, from the Ministry of the Environment (MOE). In this order, the waste discharge permit was suspended and a Spill Prevention Order issued. The Spill Prevention Order requires leachate collected on site to be removed from the facility, as opposed to treatment and discharge on site.
- On February 2, 2017, a Stop Work Order was issued by the Ministry of Energy and Mines (MEM) for failure to comply with an order issued on December 14, 2016, to complete a fence around the property boundary.
- On February 23, 2017, MOE cancelled the waste discharge permit, as the items ordered on January 27 had not been received by February 20, 2017. The Spill Prevention Order remains in place and was amended to order SIA to provide plans by April 17, 2017 to either permanently close the landfill or to remove all contaminated soil from the facility.
- The MEM permit will be amended prior to lifting the stop work order to reflect that the Waste Discharge Permit is no longer in affect. No further contaminated soils will be allowed to be received at the quarry. The mine will not be allowed to resume quarrying until the stop work order is lifted and blasting plans are approved.
- The mine was inspected on March 15 (MEM) and March 22 (MEM and MOE). During the inspections, the site was found to be secure, leachate was being transferred to the holding pond, and several non-compliances related to electrical works, unlocked internal doors and gates, and a new

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Date: April 13, 2017

Estimate Note: 29

Page 1 of 3

non-approved small pond were observed and orders were issued to correct these.

- The Ministry of Environment (MOE) and MEM continue to carefully monitor activities on SIA's Stebbings Road quarry site to ensure compliance with the Spill Prevention Order and permit conditions, respectively.

BACKGROUND:

- South Island Aggregates has operated a quarry on Stebbings Road since 2008.
- The quarry is located in the Cowichan Valley Regional District (CVRD), near Shawnigan Lake.
- Two separate adjacent properties have been the subject of public concern: Lot 23, which is permitted by MOE under the *Environmental Management Act* to receive contaminated soil, and Lot 21.
- The registered owner of Lot 23 is Cobble Hill Holdings Ltd., and the register owner of Lot 21 is 0782484 BC Ltd.—both companies are affiliated with SIA.
- Both lots are also permitted by MEM under the *Mines Act*.
 - Lot 23 is permitted by MEM for quarry activities.
 - Lot 21 is also permitted by MEM for quarry activities—specifically, to accept soil for eventual reclamation of Lot 23.
- The reclamation security for Lot 21 for *Mines Act* Permit G-8-331 is \$5,000.
- The reclamation for Lot 23 is \$55,000 for its *Mines Act* permit.
- On May 1, 2015, MEM issued a stop work order to SIA with respect to the importation of soil on Lot 21 (activity covered by a MEM permit).
 - As requested by MEM, SIA forwarded all documentation relating to the importation of soil onto the site by May 8, 2015.
 - The stop work order remains in effect.
 - Prior to the stop work order, any soils received at Lot 21 had to meet residential land use soil standards.

Lot 23 EMA Permit

- In August 2013, SIA/Cobble Hill Holdings was granted a permit under EMA to receive contaminated soil at a site on Lot 23.
- The EMA permit allows for this material to be processed through bioremediation or landfilling, and for treated effluent to be discharged to an ephemeral stream.
- The EMA permit decision was appealed, and the Environmental Appeal Board (EAB) upheld the decision; the permit was amended on June 4, 2015 to incorporate additional requirements as directed by the EAB.
- The Shawnigan Residents Association has challenged the EAB decision in BC Supreme Court. The Supreme Court ruled on January 24, 2017 that the decision is set aside and the appeal is remitted to the Board for reconsideration. At the time of writing, no decision has been announced by the EAB.

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 Date: April 13, 2017

Estimate Note: 29

Page 2 of 3

Operating Mines

- In November 2015, the BC Supreme Court also heard a petition from the CVRD to enforce its zoning bylaw in relation to the contaminated soils facility on Stebbings Road.
 - SIA appealed a March 2016 BC Supreme Court decision that ruled in favour of the CVRD.
 - The two-day court hearing on the appeal from SIA ended on August 18, 2016. The appeal judgement ruled that a quarry is a mine and its site reclamation, which includes backfilling of the quarry cavity, is a mining activity.
- On January 27, 2017, an order was issued to various parties, including Cobble Hill Holdings Ltd, from MOE. In this order, the waste discharge permit was suspended and a Spill Prevention Order issued. Under the order, the parties had 15 business days to provide various plans, reports and adjusted financial security to MOE or the waste discharge permit may be cancelled. The Spill Prevention Order requires leachate collected on site to be removed from the facility, as opposed to treatment and discharge on site.
- On February 2, 2017, a Stop Work Order was issued by MEM for failure to comply with an order issued on December 14, 2016, to complete a fence around the property boundary.
- On February 23, 2017, MOE cancelled the waste discharge permit, as the items ordered above had not been received by February 20, 2017. The Spill Prevention Order remains in place and was amended to order SIA to provide plans by April 17, 2017 to either permanently close the landfill or to remove all contaminated soil from the facility.
- The MEM permit will be amended to reflect that the Waste Discharge Permit is no longer in affect. No further contaminated soils will be allowed to be received at the quarry. The mine will not be allowed to resume quarrying until the stop work order is lifted and plans are approved for blasting.
- SIA had sealed the contaminated soils in the cell on Lot 23 with a geomembrane liner, but had not completed the soil cover over the liner.
- As of March 22, 2017, the mine operator had begun to dismantle equipment, including the water treatment plant. The stop work order from February 2 specifies that equipment from site can only be removed with the written permission of the inspector.
- The mine was inspected on March 15 (MEM) and March 22 (MEM and MOE). During the inspections, the site was found to be secure, leachate was being transferred to the holding pond, and several non-compliances related to electrical works, unlocked internal doors and gates, and a new non-approved small pond were observed and orders were issued to correct these.

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Estimate Note: 29

Page 3 of 3

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Banks Island Gold (Yellow Giant mine)

KEY MESSAGES:

Shutdown and Reclamation

- The Yellow Giant Property, located on Banks Island in NW BC was owned and operated by Banks Island Gold. The property is comprised of three separate exploration sites and one permitted mine (TEL mine).
- On July 9, 2015 a Ministry of Energy and Mines (MEM) inspector ordered a shutdown of all exploration activities at the Yellow Giant Property.
- On July 15, 2015, a MEM inspector ordered a shutdown of all mining activities at the TEL mine. The mine and all exploration activities remain closed.
- The initial shutdown was ordered because the company was not complying with the conditions of its *Mines Act* permit, and MEM inspectors determined that continued operation of the activities would lead to detrimental environmental impacts.
- In addition, Ministry of Environment staff issued a Pollution Abatement Order on July 10, 2015 requiring the company to immediately cease all unauthorized discharges and implement clean-up activities at the exploration sites.
- The Yellow Giant mine remains shutdown. On January 8, 2016, Banks Island Gold filed for bankruptcy.
- As a condition of *Mines Act* permits, proponents must provide financial security. This security is held until the Chief Inspector is satisfied that all reclamation requirements for a mine site have been fulfilled.
- The Province has confiscated all securities associated with Banks Island Gold.
- The MEM has recently completed a reclamation plan for the final Closure of the Yellow Giant Mine property.

Charges

- Following an investigation and subsequent Report to Crown Counsel by the Conservation Officer Service (COS), on July 13, 2016, charges were sworn in connection with a COS investigation initiated last summer.

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Date: April 28, 2017

Estimate Note: 30

Page 1 of 4

- Provincial Crown Counsel approved 35 charges against Banks Island Gold Ltd, under the *Environmental Management Act* (Sections 79 & 120) the Department of Fisheries and Oceans , (Sections 36,38,78) and the *Water Act* (Section 93)
- These charges relate to the unauthorized discharges of mine effluent and tailings, and failure to comply with requirements of the permit by exceeding the allowed rate of discharge.

BACKGROUND:

- Banks Island Gold Ltd. owns the Yellow Giant project, which comprises three small underground mine sites and a small processing plant.
- Yellow Giant is located on Banks Island, a remote setting off the coast about 105 kilometres south of Prince Rupert in the asserted territory of the Kitselas and Gitxaala First Nations.
- Only one of the sites, the Tel Mine, was permitted to produce ore—Banks Island Gold had an exploration permit for activities at the Discovery, Kim and Bob sites.
- Yellow Giant's Tel mine received its *Mines Act* permit in March 2014, and production at the site began in August 2014.
- Between 2014 and 2015, Yellow Giant produced over 20,000 ounces of gold.
- In response to allegations from the Chief of the Gitxaala First Nation and MLA Norm Macdonald, a team from the MEM, Ministry of Environment (MOE), the Conservation Officer Service and Environment Canada inspected the Yellow Giant (Tel, Bob, Discovery and Kim sites) on July 9, 2015; the mine was found to be in non-compliance with both the *Environmental Management Act* and the *Mines Act*.
- While onsite on July 9, 2015, the Inspector of Mines issued two stop-work orders under the authority of section 15 of the *Mines Act* to immediately stop unauthorized discharge to the environment from two exploration sites at Yellow Giant.
- On July 10, 2015, MOE issued a Pollution Abatement Order requiring Banks Island Gold to immediately cease all unauthorized discharges and implement clean-up activities.
- On July 15, 2015, MEM technical staff travelled to the Yellow Giant mine to inspect the underground workings to ensure compliance and safety. As a result of issues discovered during the inspection, MEM inspectors immediately ordered a full shut-down of the Tel mine based on the following issues:
 - Tailings management practices at the site were in contravention of the company's approved mine plan.
 - Tailings were not being deposited in the approved storage area.
 - Water management was not being conducted in accordance with the approved mine plan.
- On December 21, 2015, Banks Island Gold Ltd. provided notice that the company could no longer meet its financial obligations with its lenders; the company provided notice of termination to all of its remaining employees effective December 31, 2015.

- On January 8, 2016, Banks Island Gold filed for bankruptcy.
- In a February 26, 2016 letter, Gitxaala Environmental Monitoring expressed a number of concerns, including that following the tailings spill on Banks Island, almost nothing had been done by the Province to attempt to understand the seriousness of the spill as it relates to environmental contamination or human health effects.
- On March 15, 2016, MEM staff met with and presented issue history and updates to a group of 50 Hereditary and Matriarchal Elders at Prince Rupert. A commitment was made (and subsequently met) to address immediate concern of the community regarding planned disposal of explosives.
- An MEM hazardous materials assessment visit in May 2016 revealed that the site condition was deteriorating (e.g., machinery and chemicals) and that ongoing liability is increasing.
- In mid-August 2016, MEM conducted a site visit to gather information for planning and costing of the reclamation work.
- As the Yellow Giant site is currently subject to bankruptcy proceedings, the Receiver was overseeing the work to address the Pollution Abatement Order issued by MOE and hired an on-site caretaker.
- During mid 2016 to early 2017, the Receiver removed and sold assets of value from site, and its primary role has been completed. MEM worked with the receivers to facilitate the removal of all explosives, chemicals, hydrocarbons, and significant amounts of refuse. Mill structures and immobile equipment remain, and the site is presently unattended.
- The generators and pumps for maintenance of water levels at the Tel sediment control pond and the Bob open stope have been removed by the receiver.
- A detailed reclamation plan report was delivered to MEM in December 2016. Total reclamation costs are estimated at ^{s.17} most of which is for underground geoengineering work. Reclamation will require all equipment, buildings and structures to be removed, portals to be plugged and some areas needing to be de-compacted and re-contoured.
- MEM continues to develop the details of the reclamation plan for the Yellow Giant Mine site. Planning is scheduled for early to mid-summer 2017 and the reclamation work during late summer/fall 2017.
- The Province has confiscated all securities held for *Mines Act* permits for the Yellow Giant site, amounting to approximately \$420,000. About \$200,000 remains as of April 2017. It is expected that the reclamation cost for this site is approximately ^{s.17}
- The major shareholders are in very preliminary discussions with the Gitxaala First Nation about restarting the project. Acceptance of additional mining activity would likely depend upon MEM demonstrating to the community a successful reclamation plan.

Charges

- On March 14, 2017, 35 charges were filed by the Conservation Officer Service under the *Environmental Management Act* and federal *Fisheries and Water Acts*, listed against three defendants. Final court appearance is scheduled for May 2017.
- The charges are in relation to the unauthorized discharges of mine effluent and tailings, and failure of the company to comply with requirements of their permit by exceeding the allowed rate of discharge at the company's Yellow Giant mine site.
- The first court appearance was September 7, 2016 in Prince Rupert.
- A separate investigation by MEM is currently underway.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Tulsequah Chief Mine

KEY MESSAGES:

- Tulsequah Chief Mine in Northwest BC is currently owned by Chieftain Metals (Chieftain), who acquired the property in 2010 from the bankrupt Redfern Resources Ltd.
- On Sept 6, 2016, after several unsuccessful attempts by the company to re-initiate the new mine project, the company and project once again went into receivership.
- Historic mining activities between 1951 and 1957 at the Tulsequah Chief Mine have left a legacy of acid rock drainage (ARD) issues which the company agreed to address with the new mine plan.
- In 2015 the Minister, in meetings with the Lt. Governor of Alaska, agreed to address Alaska's concerns regarding the potential impacts to the Tulsequah and Taku Rivers caused by the mine.
- BC is completing an Aquatic Ecological Risk Assessment for the site, expected this spring.
- BC is also preparing to tender a Reclamation and Closure Plan for the mine; the plan should be completed by fall 2017.
- BC will take all necessary steps to access and address potential concerns at the site.

BACKGROUND:

- Concerns about the Tulsequah Chief Mine in Northwest BC were raised by Alaska state officials, tribal groups and stakeholder groups during discussions with Minister Bennett and representatives of the Ministry of Energy and Mines (MEM) and Ministry of Environment (MOE) in 2015. At that time BC committed to taking action to address the concerns being raised.
- Historic mining activities between 1951 and 1957 at the Tulsequah Chief Mine have left a legacy of acid rock drainage (ARD) issues. The original mine was developed long before most jurisdictions had mine reclamation or bonding legislation. The mine is currently owned by Chieftain Metals (Chieftain), who acquired the property in 2010 and received an Environmental Assessment (EA) certificate in 2012. Chieftain agreed to address the historical ARD issues as part of re-development of the mine.
- In 2012, Chieftain Metals obtained a *Mines Act* permit and an *Environmental Management Act* (EMA) permit for effluent discharge associated with limited construction of works associated with the first phase of mine development.

- In 2014 Chieftain completed an Aquatic Ecological Risk Assessment which indicated that overall the potential risks to aquatic receptors in theTulsequah and Taku Rivers is low and potentially moderate during certain times of the year. The results of this Risk Assessment have been questioned by groups from Alaska. In October 2016, the Alaska Department of Fish and Game released a report that basically showed no difference in fish health captured near the Tulsequah Chief mine site compared to fish captured upstream and downstream.
- On September 6, 2016, due to lack of continued financing, the company and project were put into receivership. There were no advances to the mine project since 2010. The \$1.2 million security bond held by Chieftain has been confiscated by MEM and is being used towards assessing and temporarily securing the site areas disturbed by Chieftain and their predecessors Redfern Resources Ltd. Liabilities associated with the historical works are being evaluated.
- Shortly after Chieftain was placed under receivership, Ministry of Environment and Ministry of Energy and Mines staff mobilized to organize a coordinated site inspection. The inspection took place on Sept. 26, 2016, conducted by inspectors from the Ministry of Energy and Mines, the Ministry of Environment and a member of the Taku River Tlingit.
- The Ministry of Energy and Mines has hired a contractor to store and properly secure all chemicals identified on site. This work was completed at the beginning of December. Due to winter and freezing conditions experienced on site, the plan to do further temporary remedial work is now be scheduled for the spring. Ministry staff are also preparing to tender a request for proposal for a Mine Reclamation and Closure Plan for the mine, to be completed by fall 2017.
- Additionally, under the Statement of Cooperation between the B.C. government and the State of Alaska, a joint technical working group is currently developing a water monitoring program for the collection, summary and distribution of baseline, regional and project-specific water quality data.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Conuma Coal Resources Ltd Projects

KEY MESSAGES:

- Conuma Coal Resources Ltd (Conuma) completed the purchase of Brule, Wolverine and Willow Creek Mines, and associated assets, from Walter Energy Canada on September 9, 2016.
- The Major Mines Permitting Office (MMPO) worked with Conuma, the Ministry of Energy and Mines (MEM), the Ministry of Environment (MoE), the Ministry of Forests, Lands and Natural Resource Operations (FLNR), the Environmental Assessment Office, and the Ministry of Justice and Attorney General (JAG), as well as Treaty 8 First Nations to transfer the permits associated with the mines from Walter Canada to Conuma.
- MMPO also worked with relevant permitting agencies and First Nations on the Brule and Wolverine Mine restart processes.
- The Brule restart has resulted in 170 direct jobs¹, and the Wolverine restart has resulted in 190 direct jobs².
- Water quality and caribou are overarching key First Nation concerns.

BACKGROUND:

- The Brule, Wolverine, and Willow Creek coal mines are located in the northeast BC coal belt. Brule is located approximately 35 kilometres south of Chetwynd, Willow Creek is located approximately 30 kilometres southwest of Chetwynd, and Wolverine is located approximately 15 kilometres west of Tumbler Ridge.
- Brule restarted in October 2016, and Wolverine restarted in January 2017. Conuma is currently evaluating whether to restart the Willow Creek Mine. The Willow Creek Mine restart will be based on coal prices.
- On December 7, 2015, Walter Canada filed a motion for protection pursuant to the Companies' *Creditors Arrangement Act*, to give Walter Canada a temporary stay from its creditors and allow Walter Canada to restructure.
- On August 16, 2016, the Supreme Court of BC approved the sale transaction of the Brule, Wolverine, and Willow Creek coal mines and related assets and permits to ERP Compliant Fuels (ERP), which will operate as Conuma Coal Resources Ltd in Canada.
- The sale of the mines and associated assets closed on September 9, 2016.
- ERP is a West Virginia-based mining company that focuses on acquiring assets within the coal and steel-making cycle. ERP Common Ownership, to which ERP

¹ *Brule Transition to Operations from Care and Maintenance Status*. September 9, 2016. pp. 3-5.

² *Conuma Business Plan*. January 18, 2017.

Compliant Fuels is a subsidiary, owns a number of coal mines in West Virginia and Alabama, including several mines previously owned by Walter Energy.

- Per the August 16, 2016 court Order, upon completion of the sale, the coal tenures held by Walter Canada will be transferred to Conuma. To support this transfer, MEM worked with Conuma to ensure that MEM is provided the required information and fees to complete the registration of Conuma as the new holder of those coal tenures. There was no First Nation consultation obligations associated with this registration.
- To allow the restart of operations at Brule before the permits and authorizations were formally transferred, Walter subcontracted the operations of Brule to Conuma until the transfers were complete. JAG and MEM reviewed the contract mining agreement between Walter Canada and Conuma and found it sufficient to manage liability.
- The Province, Walter Energy and Conuma signed an indemnity agreement that applied to operations at Brule while the permits were being transferred to ensure that Provincial liability and securities were protected while Conuma is subcontracting at Brule, in order to protect the Province.
- Brule Mine currently has a large amount of water in one end of the pit. Conuma, MoE, FLNR, MMPO and the First Nations are reviewing Conuma's dewatering application.

Consultation with First Nations

- These mines are located within Treaty 8 Territory, specifically within the consultation areas of Saulteau First Nations, West Moberly First Nations, McLeod Lake Indian Band, Prophet River First Nation, Doig River First Nation, Halfway River First Nation, Blueberry River First Nations, and the Horse Lake First Nation (located in Alberta, by the BC-Alberta border).
- The Province requested that Conuma provide the Province with an outline of activities they anticipate at the Brule, Willow Creek and Wolverine properties this year. The Province is working with Conuma, First Nations and agency representatives on a workplan for this work.
- Saulteau First Nations, West Moberly First Nations and McLeod Lake Indian Band have been undertaking First Nations Independent Technical Reviews (FNITR) for major projects that overlap with their consultation boundaries. The FNITR mirror the environmental assessment and permitting processes, and involve proponents and the First Nations working together to identify and resolve issues. If the issues are unable to be resolved between the proponent and the First Nations, they are generally raised with government.
- The FNITR process is comprehensive in nature, and MMPO is working with other agencies and Treaty 8 First Nations to determine expectations of how FNITRs could be applied in the review of various components of the Conuma projects.
- Water quality and caribou are overarching regional First Nation concerns.
- First Nations consultation on the upcoming reviews and amendments will be determined by the potential impacts of these amendments to the First Nations' treaty rights and in accordance with applicable agreements, including the Regional Coal Agreements.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Mount Polley – First Nations Letter of Understanding

KEY MESSAGES:

- The Province signed a letter of Understanding (LOU) with Williams Lake and Soda Creek Indian Bands (WLIB and SCIB) to ensure directly impacted First Nations are fully engaged in activities relating to the Mount Polley Mine Breach.
- The Province allocated First Nation capacity funding for their participation in Mount Polley LOU related initiatives and engagement in a mining dialogue from August 2014 to the end of fiscal 2016/2017.
- Funding provided allows First Nations to fully participate in Mount Polley related remediation and permitting activities and allows consultation to continue in a high quality and timely manner.
- Both the Williams Lake and Soda Creek Indian Bands have been fully involved in the permitting decisions regarding the dam repair, re-start and water discharge permitting of the Mount Polley mine.
- Funding was provided to ensure the First Nations had the capacity to review and provide their comments during the permitting process.

BACKGROUND:

- The Province signed a (LOU) with Williams Lake and Soda Creek Indian Bands (WLIB and SCIB) to ensure directly impacted First Nations are fully engaged in activities relating to the Mount Polley Mine following the breach in 2014. The LOU commits to:
 - Establishing a Principals table consisting of Ministers and Chiefs
 - Establishing a Senior Officials Committee
 - Providing capacity funding and;
 - Engaging in a dialogue about current laws and regulations
- The Province has allocated s.16,s.17 for First Nation capacity funding for their participation in Mount Polley LOU related initiatives and engagement in a mining dialogue since the tailing breach occurred in August 2014.
- Funding provided allows First Nations to fully participate in Mount Polley related clean up remediation and permitting activities and allows consultation on complex and overlapping issues to continue at an expedited rate. It also ensures the Province is upholding commitments made in the LOU to engage in a mining dialogue on existing laws, regulations and policy relating to mining in BC.

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Date: March 8, 2016

Estimate Note: 35

Page 1 of 2

- Funding for the LOU since the breach is as follows:

Table 1: Summary of Mount Polley Related First Nations Costs (\$)	2014/15	2015/16	2016/17
MARR – capacity funding for WLIB and SCIB	s.16,s.17		
FNEMC SOC and Principals Table capacity			
MARR – Mining Dialogue			
MARR – Spill Audit Capacity			
Total			

s.16,s.17

**MINISTRY OF ENERGY AND MINES
MINING AND MINERAL RESOURCES DIVISION**

ISSUE: Mount Polley Investigations and Response

KEY MESSAGES:

Investigations

- Shortly after the August 4, 2014 breach at Mount Polley, three investigations were initiated by the Province:
 - Independent Expert Engineering Investigation and Review Panel (Independent Expert Panel) Report
 - Chief Inspector of Mines' Investigation
 - Conservation Officer Service investigation
- The Chief Inspector of Mines found, as did the Independent Expert Panel, that the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.
- The Conservation Officer Service investigation, which is being assisted by Environment Canada, Department of Fisheries and Oceans Canada and the RCMP, is ongoing.

Response

- Government accepted the 26 combined recommendations of the Independent Expert Panel and the Chief Inspector of Mines.
- To date, 22 of the 26 recommendations made have been addressed.
- Many recommendations were addressed through a government established Code Review Committee, chaired by the Chief Inspector of Mines and consisting of an equal number of representatives from First Nations, mine labour unions and industry.
- The Code Review resulted in significant updates to the tailings storage facility requirements in the Code. After the updates, international engineering, geoscience and environmental consulting firm Kloth Krippen Berger completed a third-party comparison of mining legislation and guidelines in British Columbia, Montana and Alaska finding B.C.'s requirements to be equal to or better than those in Montana or Alaska.
- The changes to the Health and Safety portion of the Code came into force in February 2017. With these updates to the Code, British Columbians can have confidence that B.C.'s standards are as good as or better than anywhere in the world.

- With these and other measures implemented over the last two years, Compliance and Enforcement for mining in BC is more robust and transparent than ever before.

BACKGROUND:

- On Jan. 30, 2015, the Independent Expert Engineering Investigation and Review Panel delivered a Final Report on its investigation. The report also included the release of 35,000 pages of documentation related to the panel's investigation.
- The Chief Inspector's investigation was the largest and most complex of its kind in more than a century of regulated mining in British Columbia and was completed November 30, 2015.
- The Chief Inspector of Mines report found, as did the Independent Expert Panel, that the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises. The Chief Inspector also found other factors including the slope of the perimeter embankment; inadequate water management, insufficient beaches and a sub-excavation at the outside toe of the dam exacerbated the collapse of the dam and the ensuing environmental damage.
- While the breach would not have occurred had it not been for the undetected glaciolauustrine layer of soils, the consequences of the breach were made worse by the other factors. Although operations on the mine site were not in contravention of any regulation, the Chief Inspector found that the mine failed to operate using best available practices.
- The Chief Inspector of Mines, with advice from the Ministry of Justice, did not find sufficient evidence that Mount Polley Mining Corporation contravened existing regulatory requirements. Based on these findings, the Chief Inspector of Mines determined there were no actions that would warrant a report to Crown Counsel pursuant to the *Mines Act*.
- The British Columbia Conservation Officer Service (COS) is still conducting its investigation into the Mount Polley accident. This investigation may find non-compliance under other enactments that warrant a report to Crown Counsel.

ATTACHMENTS:

- Update on Implementation of Recommendations from the Expert Panel Report and the Chief Inspector of Mines Investigation Report
- Recommendations from the Auditor General's Report on Mining

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>1. Implement Best Available Technologies (BAT) using a phased approach.</p> <ul style="list-style-type: none"> • For existing tailings impoundments. Rely on best practices for the remaining active life. • For new tailings facilities (TSF). BAT should be actively encouraged for new tailings facilities at existing and proposed mines. • For closure. BAT principles should be applied to closure of active impoundments so that they are progressively removed from the inventory by attrition. 	<p>Changes made to the tailings portion of the Health, Safety and Reclamation Code for Mines in BC (Code):</p> <ul style="list-style-type: none"> • Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications • Environmental Assessment Office requires new mine projects to assess BAT for tailings management 	<p>Completed, July 2016</p>
<p>2. Improve corporate governance:</p> <ul style="list-style-type: none"> • Corporations proposing to operate a tailings storage facility (TSF) should be required to be a member of the Mining Association of Canada (MAC) or be obliged to commit to an equivalent program for tailings management, including the audit function. 	<p>Changes made to the tailings portion of the code:</p> <p>Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits</p> <ul style="list-style-type: none"> • The Mining Association of Canada (MAC) established independent expert task force to review its tailings management requirements under its Towards Sustainable Mining (TSM) program. Recommendations were released in December 2015 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>3. Expand corporate design commitments:</p> <ul style="list-style-type: none"> • Future permit applications for a new TSF should be based on a bankable feasibility that would have considered all technical, environmental, social and economic aspects of the project in sufficient detail to support an investment decision, which might have an accuracy of +/- 10-15%. More explicitly it should contain the following: <ul style="list-style-type: none"> • A detailed evaluation of all potential failure modes and a management scheme for all residual risk • Detailed cost/benefit analyses of BAT tailings and closure options so that economic effects can be understood, recognizing that the results of the cost/benefit analyses should not supersede BAT safety considerations • A detailed declaration of Quantitative Performance Objectives (QPOs). 	<p>Changes made to the tailings portion of the code:</p> <p>New permit application requirements for alternatives assessment of BAT, declaration of QPOs, and proposed program for prediction, identification and management of physical, chemical, and other risks associated with tailings storage facilities and dams.</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> • Environment • Society • Economics 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>4. Enhance validation of safety and regulation of all phases of a TSF:</p> <ul style="list-style-type: none"> • Increase utilization of Independent Tailings Review Boards. • Utilize the concept of Quantitative Performance Objectives (QPOs) to improve regulator evaluation of ongoing facilities. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> • All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. • The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines. • Mines must submit an annual report to the Chief Inspector of Mines that include details on the activities of the mine's independent tailings review board including: <ul style="list-style-type: none"> • a summary of the reviews conducted that year; • whether the work reviewed that year by the ITRB meets the Board's expectations of reasonably good practice; • any conditions that compromise Tailings Storage Facility integrity or occurrences of non-compliance with recommendations from the engineer of record; and, • a signed acknowledgement by the members of the Independent Tailings Review Board, confirming that the report is a true and accurate representation of their reviews. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
5. Strengthen current regulatory operations: <ul style="list-style-type: none"> Utilize the recent inspections of TSFs in the province to ascertain whether they may be at risk due to the following potential failure modes and take appropriate actions <ul style="list-style-type: none"> Filter adequacy Water balance adequacy Undrained shear failure of silt and clay foundations 	<p>Final submissions received June 30, 2015. More information available here: http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/dam-safety-inspections-2014</p>	<p>Completed, June 2015</p>
6. Improve professional practice: <ul style="list-style-type: none"> Encourage the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) to develop guidelines that would lead to improved site characterization for tailings dams with respect to the geological, geomorphological, hydrogeological and possibly seismotectonic characteristics. 	<p>APEGBC professional practice guidelines for dam site characterization assessments</p> <p>https://www.apeg.bc.ca/getmedia/34e1bb3f-cd39-450d-800e-614ac3850bc5/APEG_2016_Site-Characterization-for-Dam-Foundations_WEB_2.pdf.aspx</p>	<p>Completed, August 2016</p>
7. Improve dam safety guidelines: <ul style="list-style-type: none"> Recognizing the limitations of the current Canadian Dam Association (CDA) guidelines incorporated as a statutory requirement, develop improved guidelines that are tailored to the conditions encountered with TSFs in British Columbia and that emphasize protecting public safety. 	<p>Changes made to the tailings portion of the code:</p> <p>The mining code now includes design standards for TSFs that are tailored to the conditions encountered in British Columbia and that emphasize protecting the public and environment including:</p> <ul style="list-style-type: none"> TSF design requirements for the steepness of downstream slopes. A minimum static factor of safety. New seismic and flood design criteria. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
1-1 Mine Dam Safety Manager <ul style="list-style-type: none"> Any mine with tailings storage facilities (TSFs) should have a qualified individual designated as a mine dam safety manager responsible for oversight of planning, design, operation, construction 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall designate a TSF Qualified Person for safe management of the Tailings Storage Facility 	<p>Completed, July 2016</p>
1-2 Water Balance Management <ul style="list-style-type: none"> Water management and water balance issues for mining projects must be designed by a qualified professional. These issues require the integration of relevant mine departments. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> Impoundments, tailings storage facilities and water management facilities and dams shall be designed by a Professional Engineer Tailings storage facilities must have a water balance and water management plan for the permitted life of mine that is prepared by a qualified person Water balance and water management plans shall be reconciled annually and updated as required, after the commencement of operations 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>1-3 TSF Operations, Maintenance and Surveillance Manual</p> <ul style="list-style-type: none"> The mine manager should ensure the Operation, Maintenance and Surveillance manual (OMS) required by the Code for all impoundments adheres to applicable CDA and MAC guidelines. Additional guidance for the OMS should include incorporation of an annual risk assessment/risk management plan and relevant findings of an independent technical review board. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> An Operations, Maintenance and Surveillance (OMS) manual shall be prepared by one or more qualified person and submitted to the chief inspector prior to operation of the facilities The OMS manual must be reviewed annually and revised regularly during operations, decommissioning and closure of a tailings storage facility or dam and the the risk assessment for all tailings storage facilities and associated dams must also be reviewed annually to ensure that the quantifiable performance objectives and operating controls are current and manage the facility risks QPOs and operating controls are included as part of the OMS 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>1-4 Mine Emergency Response Plan</p> <ul style="list-style-type: none"> The mine manager must ensure that the Mine Emergency Response Plan (MERP) adheres to applicable regulations, is maintained on a regular basis for currency, incorporates appropriate response measures to emergencies including those involving the TSF, and is written and distributed in such format as to serve as a procedural guide during an emergency or other event. 	<p>Changes made to the Health and Safety portion of the Code (Part 3.7.1):</p> <ul style="list-style-type: none"> The manager shall develop a Mine Emergency Response Plan (MERP), which shall be kept up to date and followed in the event of an emergency; this plan must be tested annually and filed with the Chief Inspector. The Mine Emergency Response Plan must outline the response procedures, contain all of the elements required in the “Mine Emergency Response Plan Guidelines for the Mining Industry” include the emergency preparedness and response plans regarding tailings storage facilities, and include affected communities and First Nations in the identification of potential hazards, emergency communications and responses 	<p>Completed, February 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>1-5 Risk Recognition and Communication</p> <ul style="list-style-type: none"> All mine personnel have a role to play in recognizing and reporting risk conditions, especially those that could affect health, safety and environmental protection; and should be educated in the recognition of conditions and events that could impact TSF safety or contravene applicable permit conditions and regulations. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> The engineer of record shall immediately notify the manager in writing of any unresolved safety issue that compromises the integrity of a tailings storage facility The OMS sets out information on QPOs, and performance goals for the mine and TSF. Ensuring employees have been trained in the use of the manual and its operational controls will provide the means for them to determine who to notify and will provide the education to know when an event or conditions occur that could impact TSF safety or integrity. 	<p>Completed, July 2016</p>
<p>2-1 Design Objectives</p> <ul style="list-style-type: none"> Tailings storage and water management systems and structures should be designed for worker and public safety and the protection of the environment. TSF design should incorporate a comprehensive feasibility assessment that considers technical, environmental, social, and economic aspects of the mining project in sufficient detail to support the submitted design. 	<p>Changes made to the tailings portion of the code:</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> Environment Society Economics <p>Minimums have been outlined for Seismic and Flood Design Criteria, Design Slopes (2:1), Static Factor of Safety (1.5), Beach and Inundation Study and Failure Runout Assessments</p>	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>2-2 Independent Technical Review Board</p> <ul style="list-style-type: none"> Mines with impoundments should each develop independent technical review boards (ITRB) to provide additional perspectives on site investigation, site selection, design, construction, maintenance, operations, surveillance, water management and closure. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines. 	<p>Completed, July 2016</p>
<p>3-1 Professional Reliance</p> <ul style="list-style-type: none"> The Chief Inspector recognizes the necessity of reliance on professional practice for the design, construction, operation and closure of mines and mine facilities. The Regulator does not design the mine or associated structures, and thus is reliant on the professional practice of the designer. Reliance on professional practice requires that the organizations overseeing the professionals or developing guidelines and standards for the professional community incorporate best available practices into their oversight. 	<p>Changes made to the tailings portion of the code:</p> <p>The Code outlines requirements for the designation and reporting responsibility for the mine to designate an Engineer of Record who is a professional engineer.</p> <p>The Engineer of Record has a duty to report any unresolved safety issue that compromises the integrity of the TSF.</p> <p>Additionally, the Code sets out requirements for professionals or designated responsibilities for the creation of water management and water balance plans.</p>	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
3-2 Integration of Standards <ul style="list-style-type: none"> The Regulator should consider and incorporate as appropriate guidelines from these external associations as applicable and consistent with MEM objectives. 	<p>Changes made to the tailings portion of the code:</p> <p>Sections added specifying:</p> <p><u>10.1.8</u> Seismic and Flood Design Criteria, <u>10.1.9</u> Design Slopes <u>10.1.10</u> Minimum Factor of Safety <u>10.1.11</u> Breach and Inundation Study and Failure Runout Assessments</p> <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits 	<p>Completed, July 2016</p>
4-1 Review of the Code <ul style="list-style-type: none"> MEM should undertake a comprehensive review of the Code to ensure that the lessons learned and recommendations from this report are fully considered and appropriately incorporated; and that all relevant standards and guidelines from external bodies (such as MAC, CDA, and APEGBC) are fully considered in the review as appropriate. 	<p>The Minister of Energy and Mines appointed a Code Review Committee, pursuant to section 34 of the Mines Act in June 2015.</p>	<p>Completed, February 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>4-2 Life of Mine Planning for Permitting</p> <ul style="list-style-type: none"> Short-term, incremental Mines Act permit amendment applications can obscure life-of-mine conditions and long-term risks. The Regulator should ensure a perspective that spans the life of the mine be considered for Mines Act permit applications, while acknowledging that the nature of mining frequently requires changes to the life-of-mine plan. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> A mine plan must be included in the Mines Act permitting application that includes an inventory of areas disturbed to date, and projected over the next 5 years and over the projected life of the mine Mine, environmental protection, reclamation and closure plans shall be prepared in consideration of the HSRC Guidance Document, by qualified professionals or persons who in the opinion of the chief inspector are qualified to perform the work. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>4-3 Investigation, Compliance and Enforcement Review</p> <ul style="list-style-type: none"> The Regulator must enhance its investigative capacity, as well as its ability to exercise its existing compliance and enforcement authority under the Mines Act and Code. A supported director-equivalent position specific to investigation, compliance and enforcement should be established to evaluate and oversee these roles. This oversight should extend to applying recommended standards to the Regulator's compliance and enforcement function. A full range of regulatory tools, such as incentives, administrative penalties, outside agency collaboration and other best practices should be considered. 	<p>Deputy Chief Inspector of Mines position in place.</p> <p>The legislation increased penalties available for court prosecutions under the act from \$100,000 and/or up to one year imprisonment to \$1 million and/or up to three years imprisonment</p> <p>Regulation for administrative penalties now in effect to enable penalties for non-compliance (February 2017)</p> <p>Deputy Minister Compliance and Enforcement board created to establish compliance and enforcement oversight.</p> <p>Budget lift for MEM for mines permitting and oversight.</p>	<p>Completed, February 2017</p>
<p>4-4 Geotechnical Oversight</p> <ul style="list-style-type: none"> The Regulator has a responsibility to oversee the decisions of the EoR. The Regulator must maintain sufficient technical capacity to conduct appropriate oversight of the professional opinions on which it relies. A Regulatory Dam Safety Manager dedicated to the coordinated regulatory oversight of tailings dams in the Province could be responsible for ongoing policy development, technical review, and inspection capacity as it relates to tailings impoundments. 	<p>The position of Dam Safety Manager within MEM has been created and filled. Dam Safety Manager to start April 1, 2017</p>	<p>Completed February, 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
4-5 Organizational Review of Inspectorate <ul style="list-style-type: none"> There exists an ongoing need to adequately support the increased tempo of review, monitoring and inspection that would be placed on MEM's inspectorate. It is recommended that a comprehensive internal review of operational and business practices be conducted. 	Organizational effectiveness strategy under review.	Underway
5-1 Internal Records Management <ul style="list-style-type: none"> A formal MEM management system of documentation for all mines from development to post-closure should be established. The system will assist the Chief Inspector in integrating regulatory oversight capabilities; assist with investigation, project tasking, formal documentation and indexing; and enhance the ability of MEM to meet the expectations for transparency and appropriate disclosure within the limits of privacy considerations. 	Records management systems under review.	Underway
6-1 Alignment of Regulatory Objectives <ul style="list-style-type: none"> Agency objectives (environmental protection, worker health and safety, facilities integrity) overlap but are not always integrated. MOE and MEM interests, disciplines and standards should be reviewed for alignment opportunities to support timely and effective program outcomes while optimally fulfilling the mandates of both agencies. 	<p>EAO, MEM and MOE board established to oversee compliance and enforcement oversight.</p> <p>Mining Compliance and Enforcement Strategic plan released. Optimization of resources to effectively coordinate activities for major mines, and protect the environment, human health and public safety.</p>	Underway

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
6-2 Permitting Process Alignment <ul style="list-style-type: none"> Separate permitting processes for MEM and MOE should be reviewed for opportunities to integrate and align these processes as appropriate to avoid duplication and increase efficiencies. 	<p>Integration between Ministry of Energy and Mines and Ministry of Environment is a key priority and the Major Mines Permitting Office was created in 2015.</p> <p>Permitting process is being led by the Major Mines Permitting Office which is accountable to a cross-sector project board. MMPO is working to ensure continuous improvement and process alignment.</p>	Completed 2015
7-1 Collaborative Education <ul style="list-style-type: none"> MEM, the industry, professional organizations, and educational institutions should continue to seek new collaborative opportunities to foster education (including formal academic, onsite or online employee-focused, public-facing, and professional continuing education). 	<p>Ongoing educational programs being supported by Mining Association of BC, BCIT, Community College School of Exploration and Mining, UBC, Northwest Community College and others.</p> <p>Early proponent education program under development to ensure understanding of regulatory requirements and encourage best practices</p>	Underway

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>7-2 Research and Development</p> <ul style="list-style-type: none"> Current technologies in tailings processing, dewatering, and discharge water treatment have not achieved a sufficient level of technical and economic feasibility in many projects. Both government and industry should support research and development efforts to improve these technologies for practical application. 	<p>Changes made to the tailings portion of the code:</p> <p>Government is now requiring an assessment of BAT/BAP under the new EAO requirements.</p> <p>Government participated in various initiatives such as the Mine Environment Neutral Drainage (MEND) Committee who commissioned a study on Tailings Management Technologies which was completed in 2016.</p> <p>Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications</p> <p>Environmental Assessment Office requires new mine projects to assess BAT for tailings management</p>	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining**

Recommendation by Expert Panel	Implementation
<p>1. Implement Best Available Technologies (BAT) using a phased approach.</p> <ul style="list-style-type: none"> • For existing tailings impoundments. Rely on best practices for the remaining active life. • For new tailings facilities (TSF). BAT should be actively encouraged for new tailings facilities at existing and proposed mines. • For closure. BAT principles should be applied to closure of active impoundments so that they are progressively removed from the inventory by attrition. 	<p>Complete, based on the following changes to the Health, Safety and Reclamation Code for Mines in BC (Code):</p> <ul style="list-style-type: none"> • Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications • Environmental Assessment Office requires new mine projects to assess BAT for tailings management
<p>2. Improve corporate governance:</p> <ul style="list-style-type: none"> • Corporations proposing to operate a tailings storage facility (TSF) should be required to be a member of the Mining Association of Canada (MAC) or be obliged to commit to an equivalent program for tailings management, including the audit function. 	<p>Complete, based on the following changes to the code:</p> <p>Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits</p> <ul style="list-style-type: none"> • The Mining Association of Canada (MAC) established independent expert task force to review its tailings management requirements under its Towards Sustainable Mining (TSM) program. Recommendations were released in December 2015

**Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining**

Recommendation by Expert Panel	Implementation
<p>3. Expand corporate design commitments:</p> <ul style="list-style-type: none"> • Future permit applications for a new TSF should be based on a bankable feasibility that would have considered all technical, environmental, social and economic aspects of the project in sufficient detail to support an investment decision, which might have an accuracy of +/- 10-15%. More explicitly it should contain the following: <ul style="list-style-type: none"> • A detailed evaluation of all potential failure modes and a management scheme for all residual risk • Detailed cost/benefit analyses of BAT tailings and closure options so that economic effects can be understood, recognizing that the results of the cost/benefit analyses should not supersede BAT safety considerations • A detailed declaration of Quantitative Performance Objectives (QPOs). 	<p>Complete, based on the following changes to the code:</p> <p>New permit application requirements for alternatives assessment of BAT, declaration of QPOs, and proposed program for prediction, identification and management of physical, chemical, and other risks associated with tailings storage facilities and dams.</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> • Environment • Society • Economics

**Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining**

Recommendation by Expert Panel	Implementation
<p>4. Enhance validation of safety and regulation of all phases of a TSF:</p> <ul style="list-style-type: none"> • Increase utilization of Independent Tailings Review Boards. • Utilize the concept of Quantitative Performance Objectives (QPOs) to improve regulator evaluation of ongoing facilities. 	<p>Complete, based on the following changes to the code:</p> <ul style="list-style-type: none"> • All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. • The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines. • Mines must submit an annual report to the Chief Inspector of Mines that include details on the activities of the mine's independent tailings review board including: <ul style="list-style-type: none"> • a summary of the reviews conducted that year; • whether the work reviewed that year by the ITRB meets the Board's expectations of reasonably good practice; • any conditions that compromise Tailings Storage Facility integrity or occurrences of non-compliance with recommendations from the engineer of record; and, • a signed acknowledgement by the members of the Independent Tailings Review Board, confirming that the report is a true and accurate representation of their reviews.

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Recommendation by Expert Panel	Implementation
<p>5. Strengthen current regulatory operations:</p> <ul style="list-style-type: none"> Utilize the recent inspections of TSFs in the province to ascertain whether they may be at risk due to the following potential failure modes and take appropriate actions <ul style="list-style-type: none"> Filter adequacy Water balance adequacy Undrained shear failure of silt and clay foundations 	<p>Completed.</p> <p>Final submissions received June 30, 2015. More information available here: http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/dam-safety-inspections-2014</p>
<p>6. Improve professional practice:</p> <ul style="list-style-type: none"> Encourage the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) to develop guidelines that would lead to improved site characterization for tailings dams with respect to the geological, geomorphological, hydrogeological and possibly seismotectonic characteristics. 	<p>Completed.</p> <p>APEGBC has now completed their professional practice guidelines for dam site characterization assessments</p>
<p>7. Improve dam safety guidelines:</p> <ul style="list-style-type: none"> Recognizing the limitations of the current Canadian Dam Association (CDA) guidelines incorporated as a statutory requirement, develop improved guidelines that are tailored to the conditions encountered with TSFs in British Columbia and that emphasize protecting public safety. 	<p>Complete, based on the following changes to the code:</p> <p>The mining code now includes design standards for TSFs that are tailored to the conditions encountered in British Columbia and that emphasize protecting the public and environment including:</p> <ul style="list-style-type: none"> TSF design requirements for the steepness of downstream slopes. A minimum static factor of safety. New seismic and flood design criteria.

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
1-1 Mine Dam Safety Manager <ul style="list-style-type: none"> Any mine with tailings storage facilities (TSFs) should have a qualified individual designated as a mine dam safety manager responsible for oversight of planning, design, operation, construction 	<p>Complete, based on the following changes to the code:</p> <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall designate a TSF Qualified Person for safe management of the Tailings Storage Facility
1-2 Water Balance Management <ul style="list-style-type: none"> Water management and water balance issues for mining projects must be designed by a qualified professional. These issues require the integration of relevant mine departments. 	<p>Complete, based on the following changes to the code:</p> <ul style="list-style-type: none"> Impoundments, tailings storage facilities and water management facilities and dams shall be designed by a Professional Engineer Tailings storage facilities must have a water balance and water management plan for the permitted life of mine that is prepared by a qualified person Water balance and water management plans shall be reconciled annually and updated as required, after the commencement of operations

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
<p>1-3 TSF Operations, Maintenance and Surveillance Manual</p> <ul style="list-style-type: none"> The mine manager should ensure the Operation, Maintenance and Surveillance manual (OMS) required by the Code for all impoundments adheres to applicable CDA and MAC guidelines. Additional guidance for the OMS should include incorporation of an annual risk assessment/risk management plan and relevant findings of an independent technical review board. 	<p>Complete, based on the following changes to the code:</p> <ul style="list-style-type: none"> An Operations, Maintenance and Surveillance (OMS) manual shall be prepared by one or more qualified person and submitted to the chief inspector prior to operation of the facilities The OMS manual must be reviewed annually and revised regularly during operations, decommissioning and closure of a tailings storage facility or dam and the the risk assessment for all tailings storage facilities and associated dams must also be reviewed annually to ensure that the quantifiable performance objectives and operating controls are current and manage the facility risks QPOs and operating controls are included as part of the OMS
<p>1-4 Mine Emergency Response Plan</p> <ul style="list-style-type: none"> The mine manager must ensure that the Mine Emergency Response Plan (MERP) adheres to applicable regulations, is maintained on a regular basis for currency, incorporates appropriate response measures to emergencies including those involving the TSF, and is written and distributed in such format as to serve as a procedural guide during an emergency or other event. 	<p>The Health and Safety Portion of the Code Review is expected to be completed and in force by early 2017, this committee will consider revisions to allow the Mine Emergency Response Plan (MERP) and how it will align with the EPRP (Emergency Preparedness and Response Plan).</p>

**Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
<p>1-5 Risk Recognition and Communication</p> <ul style="list-style-type: none"> All mine personnel have a role to play in recognizing and reporting risk conditions, especially those that could affect health, safety and environmental protection; and should be educated in the recognition of conditions and events that could impact TSF safety or contravene applicable permit conditions and regulations. 	<p>Complete, based on the following changes to the code:</p> <ul style="list-style-type: none"> The engineer of record shall immediately notify the manager in writing of any unresolved safety issue that compromises the integrity of a tailings storage facility The OMS sets out information on QPOs, and performance goals for the mine and TSF. Ensuring employees have been trained in the use of the manual and its operational controls will provide the means for them to determine who to notify and will provide the education to know when an event or conditions occur that could impact TSF safety or integrity.
<p>2-1 Design Objectives</p> <ul style="list-style-type: none"> Tailings storage and water management systems and structures should be designed for worker and public safety and the protection of the environment. TSF design should incorporate a comprehensive feasibility assessment that considers technical, environmental, social, and economic aspects of the mining project in sufficient detail to support the submitted design. 	<p>Complete, based on the following changes to the code:</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> Environment Society Economics <p>Minimums have been outlined for Seismic and Flood Design Criteria, Design Slopes (2:1), Static Factor of Safety (1.5), Beach and Inundation Study and Failure Runout Assessments</p>

**Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
<p>2-2 Independent Technical Review Board</p> <ul style="list-style-type: none"> Mines with impoundments should each develop independent technical review boards (ITRB) to provide additional perspectives on site investigation, site selection, design, construction, maintenance, operations, surveillance, water management and closure. 	<p>Complete, based on the following changes to the code:</p> <ul style="list-style-type: none"> All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines.
<p>3-1 Professional Reliance</p> <ul style="list-style-type: none"> The Chief Inspector recognizes the necessity of reliance on professional practice for the design, construction, operation and closure of mines and mine facilities. The Regulator does not design the mine or associated structures, and thus is reliant on the professional practice of the designer. Reliance on professional practice requires that the organizations overseeing the professionals or developing guidelines and standards for the professional community incorporate best available practices into their oversight. 	<p>Complete, based on the following changes to the code:</p> <p>The Code outlines requirements for the designation and reporting responsibility for the mine to designate an Engineer of Record who is a professional engineer.</p> <p>The Engineer of Record has a duty to report any unresolved safety issue that compromises the integrity of the TSF.</p> <p>Additionally, the Code sets out requirements for professionals or designated responsibilities for the creation of water management and water balance plans.</p>

**Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
<p>3-2 Integration of Standards</p> <ul style="list-style-type: none"> The Regulator should consider and incorporate as appropriate guidelines from these external associations as applicable and consistent with MEM objectives. 	<p>Complete, based on the following changes to the code:</p> <p>Sections added specifying:</p> <p><u>10.1.8</u> Seismic and Flood Design Criteria, <u>10.1.9</u> Design Slopes <u>10.1.10</u> Minimum Factor of Safety <u>10.1.11</u> Breach and Inundation Study and Failure Runout Assessments</p> <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits
<p>4-1 Review of the Code</p> <ul style="list-style-type: none"> MEM should undertake a comprehensive review of the Code to ensure that the lessons learned and recommendations from this report are fully considered and appropriately incorporated; and that all relevant standards and guidelines from external bodies (such as MAC, CDA, and APEGBC) are fully considered in the review as appropriate. 	<p>Completed.</p> <p>The Minister of Energy and Mines appointed a Code Review Committee, pursuant to section 34 of the Mines Act in June 2015.</p>

**Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
<p>4-2 Life of Mine Planning for Permitting</p> <ul style="list-style-type: none"> Short-term, incremental Mines Act permit amendment applications can obscure life-of-mine conditions and long-term risks. The Regulator should ensure a perspective that spans the life of the mine be considered for Mines Act permit applications, while acknowledging that the nature of mining frequently requires changes to the life-of-mine plan. 	<p>Complete, based on the following changes to the code:</p> <ul style="list-style-type: none"> A mine plan must be included in the Mines Act permitting application that includes an inventory of areas disturbed to date, and projected over the next 5 years and over the projected life of the mine Mine, environmental protection, reclamation and closure plans shall be prepared in consideration of the HSRC Guidance Document, by qualified professionals or persons who in the opinion of the chief inspector are qualified to perform the work.
<p>4-3 Investigation, Compliance and Enforcement Review</p> <ul style="list-style-type: none"> The Regulator must enhance its investigative capacity, as well as its ability to exercise its existing compliance and enforcement authority under the Mines Act and Code. A supported director-equivalent position specific to investigation, compliance and enforcement should be established to evaluate and oversee these roles. This oversight should extend to applying recommended standards to the Regulator's compliance and enforcement function. A full range of regulatory tools, such as incentives, administrative penalties, outside agency collaboration and other best practices should be considered. 	<p>Completed.</p> <p>Deputy Chief Inspector of Mines position now in place. Legislation to enable Administrative Penalties under Mines Act passed in the Spring 2016 session.</p> <p>The legislation also increased penalties available for court prosecutions under the act from \$100,000 and/or up to one year imprisonment to \$1 million and/or up to three years imprisonment</p> <p>Deputy Minister Compliance and Enforcement board created.</p> <p>EAO, MEM and MOE board established to oversee compliance and enforcement oversight.</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
4-4 Geotechnical Oversight <ul style="list-style-type: none"> The Regulator has a responsibility to oversee the decisions of the EoR. The Regulator must maintain sufficient technical capacity to conduct appropriate oversight of the professional opinions on which it relies. A Regulatory Dam Safety Manager dedicated to the coordinated regulatory oversight of tailings dams in the Province could be responsible for ongoing policy development, technical review, and inspection capacity as it relates to tailings impoundments. 	<p>Province is reviewing how best to clarify accountability for this role within the inspectorate.</p>
4-5 Organizational Review of Inspectorate <ul style="list-style-type: none"> There exists an ongoing need to adequately support the increased tempo of review, monitoring and inspection that would be placed on MEM's inspectorate. It is recommended that a comprehensive internal review of operational and business practices be conducted. 	<p>Review underway and will form part of the compliance and enforcement strategic plan.</p>
5-1 Internal Records Management <ul style="list-style-type: none"> A formal MEM management system of documentation for all mines from development to post-closure should be established. The system will assist the Chief Inspector in integrating regulatory oversight capabilities; assist with investigation, project tasking, formal documentation and indexing; and enhance the ability of MEM to meet the expectations for transparency and appropriate disclosure within the limits of privacy considerations. 	<p>Field inspection tools information technology projects are in design phase, expectation to be completed by early 2017.</p> <p>MEM reviewing records management systems and options.</p>
6-1 Alignment of Regulatory Objectives <ul style="list-style-type: none"> Agency objectives (environmental protection, worker health and safety, facilities integrity) overlap but are not always integrated. MOE and MEM interests, disciplines and standards should be reviewed for alignment opportunities to support timely and effective program outcomes while optimally fulfilling the mandates of both agencies. 	<p>EAO, MEM and MOE board established to oversee compliance and enforcement oversight.</p> <p>Strategic planning underway for compliance and enforcement.</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation
<p>6-2 Permitting Process Alignment</p> <ul style="list-style-type: none"> Separate permitting processes for MEM and MOE should be reviewed for opportunities to integrate and align these processes as appropriate to avoid duplication and increase efficiencies. 	<p>Completed.</p> <p>Integration between Ministry of Energy and Mines and Ministry of Environment is a key priority and the Major Mines Permitting Office has been created and is in place.</p> <p>Permitting process is being led by the Major Mines Permitting Office which is accountable to a cross-sector project board.</p>
<p>7-1 Collaborative Education</p> <ul style="list-style-type: none"> MEM, the industry, professional organizations, and educational institutions should continue to seek new collaborative opportunities to foster education (including formal academic, onsite or online employee-focused, public-facing, and professional continuing education). 	<p>Ongoing educational programs being supported by Mining Association of BC, BCIT, Community College School of Exploration and Mining, UBC, Northwest Community College and others.</p>
<p>7-2 Research and Development</p> <ul style="list-style-type: none"> Current technologies in tailings processing, dewatering, and discharge water treatment have not achieved a sufficient level of technical and economic feasibility in many projects. Both government and industry should support research and development efforts to improve these technologies for practical application. 	<p>Complete, based on the following changes to the code:</p> <p>Government is now requiring an assessment of BAT/BAP under the new EAO requirements.</p> <p>Government is also participating in various initiatives such as the Mine Environment Neutral Drainage (MEND) Committee who has commissioned a study on Tailings Management Technologies which is expected to be complete in 2016.</p> <p>Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications</p> <p>Environmental Assessment Office requires new mine projects to assess BAT for tailings management</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Auditor General Recommendations	
Part 1: Recommendations for Government	
<p>Recommendation 1.0 – Overall Recommendation</p> <p>We recommend that the Government of British Columbia create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment.</p> <p>Given that the Ministry of Energy and Mines is at high risk of regulatory capture, primarily because MEM's mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.</p>	<p>Response:</p> <p>It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure. Many provincial governments across Canada have agencies and ministries with the role of promoting and regulating an industry. In the absence of evidence by the Auditor General that this has compromised the integrity of the ministry or its staff, Government does not see the need for a reorganization of the ministries, however we are prepared to further discuss this with the OAG. Government will establish a Mining C&E Board that will address the need for greater integration between the ministries, as well as with the Environmental Assessment Office.</p> <p>Deputy Minister Compliance and Enforcement board created.</p>
Part 2: Recommendations for Ministry of Energy and Mines and Ministry of Environment	
<p>Recommendation 1.1 – Strategic Planning</p> <p>We recommend that government develop a strategic plan that would detail the activities of an integrated and coordinated regulatory approach, and the necessary capacity, tools, training and expertise required to achieve its goals and objectives.</p>	<p>Response:</p> <p>A Mining C&E Board has been created to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board consists of the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office.</p> <p>The Board is developing compliance and enforcement plans to map out proactive annual activities based on a risk-based approach. The board is also responsible for furthering longer term strategic improvements in other areas such as: enhancing training; developing policies, procedures and tools; conducting evaluations; and expanding public reporting.</p> <p>Deputy Chief Inspector of Mines position has been created.</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.2 – Permit Language We recommend that government ensure both historical and current permit requirements are written with enforceable language.</p>	<p>Response: Permits now being written with measureable and enforceable requirements.</p> <p>Both ministries are developing further policy to ensure enforceable and measurable requirements are used in all new and amended permits.</p>
<p>Recommendation 1.9 – Incentives We recommend that government create effective incentives to promote environmentally responsible behavior by industry.</p>	<p>Response: The ministries agree that it is useful to consider incentives as part of the compliance and enforcement regime governing mines and will continue to consider additional opportunities to recognize and reward good environmental performers. Furthermore, it is expected that expanded public reporting of compliance and enforcement activities will serve as a very effective incentive for promoting environmentally responsible behaviour.</p>
<p>Recommendation 1.10 – Risk-Based Approach We recommend that government develop a risk-based approach to compliance verification activities, where frequency of inspections are based on risks such as industry's non-compliance record, industry's financial state, and industry's activities (e.g., expansion), as well as risks related to seasonal variations.</p>	<p>Response: Compliance verification activities conducted by the ministries are founded on a risk-based approach; however, the ministries are reviewing policies in this regard.</p> <p>The annual compliance and enforcement planning that is taking place at the Mining C&E Board, established under recommendation 1.1, will be risk-based to optimize the capacity and effectiveness of the ministries' collective compliance and enforcement resources.</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.12 – Qualified Professionals</p> <p>We recommend that government establish policies and procedures for the use and oversight of qualified professionals (QP) across the natural resources sector. These policies and procedures should have the following:</p> <ul style="list-style-type: none"> • guidance for staff that outlines the specific nature and amount of oversight expected of a QP's work • guidance for staff as to expected timeframe for review and response to QP reports • updated guidance for staff for recognizing and responding to misconduct by a QP • controls in place to ensure that there is no undue influence on the QPs by industry • controls in place to ensure that recommendations by QPs are adhered to 	<p>Response:</p> <p>The Code now outlines requirements for the designation and reporting responsibility for the mine to designate an Engineer of Record who is a professional engineer.</p> <p>The Engineer of Record has a duty to report any unresolved safety issue that compromises the integrity of the TSF.</p> <p>Additionally, the Code sets out requirements for professionals or designated responsibilities for the creation of water management and water balance plans.</p> <p>The Mining C&E Board, established under recommendation 1.1, is considering how MoE and MEM can strengthen the use and oversight of qualified professionals in the mining sector specifically.</p> <p>The Ministry of Forests, Lands and Natural Resource Operations has established a Qualified Persons in the Natural Resource Sector Framework. This framework guides the development and implementation of Qualified Persons policies and procedures specifically for the mining sector. The framework is based on the three essential components of guidance, competency and accountability and ensures the interests of government, resource users, qualified persons and other stakeholders are recognized and addressed.</p>
<p>Recommendation 1.14 – Policies, Procedures and Tools</p> <p>We recommend that government develop policies, procedures and enforcement tools for responding to non-compliances when industry does not meet government's specified timeline.</p>	<p>Response:</p> <p>The ministries agree on the importance of clear policies, procedures and tools to aid in their compliance and enforcement activities. The ministries are reviewing in light of the recommendations. The establishment of the Mining C&E Board, under recommendation 1.1, is serving to further inter-ministry collaboration and sharing of best practices.</p> <p>Government has passed amendments to the <i>Mines Act</i> to provide for Administrative Monetary Penalties in the spring 2016 legislative session.</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.15 – Evaluation and Adjustment</p> <p>We recommend government regularly evaluate the effectiveness of its compliance promotion, compliance verification, and enforcement activities and tools, and make changes as needed to ensure continuous improvement.</p>	<p>Response:</p> <p>Annual compliance and enforcement planning and reporting will provide a means to evaluate the effectiveness of the program, to ensure ongoing improved targeting of areas of concern and recognition of strong performers. The ministries are addressing this recommendation through the Mining C&E Board under recommendation 1.1.</p>
<p>Recommendation 1.16 – Public Reporting</p> <p>We recommend that government report publicly the:</p> <ul style="list-style-type: none"> • results and trends of all mining compliance and enforcement activities • effectiveness of compliance and enforcement activities in reducing risks and protecting the environment • estimated liability and the security held for each mine. 	<p>Response:</p> <p>The ministries support public reporting and have made progress in this area. The Ministry of Environment has been reporting its enforcement actions for many years through published reports and an online searchable database. It reports all of its enforcement actions including orders, administrative sanctions, administrative monetary penalties, violation tickets and court prosecutions. The ministry is working with Ministry of Energy and Mines to explore including their enforcement actions in the reporting.</p> <p>In 2012, the Ministry of Environment published all of its permits for industrial and municipal facilities that discharge waste into the environment, including mines. This dataset provides the opportunity for citizens to access province-wide data on those facilities, including information on fees, locations and discharges.</p> <p>The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015. The ministry is continuing work to further publish further information on all major mines in British Columbia.</p> <p>The ministries will report on trends and effectiveness of C&E in the mining sector.</p>
Part 3: Recommendations for Ministry of Energy and Mines	

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.3 – Security – Adequate Coverage We recommend that government safeguard taxpayers by ensuring the reclamation liability estimate is accurate and that the security held by government is sufficient to cover potential costs.</p>	<p>Response: As seen in the 2014 Chief Inspector's Annual Report, "In the past few years, the value of security deposits has increased to reflect more closely the true costs of reclamation. The total value of securities held by the Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014."</p>
<p>Recommendation 1.4 – Security – Catastrophic Events We recommend that government review its security mechanisms to ensure taxpayers are safeguarded from the costs of an environmental disaster.</p>	<p>Response: Environmental disasters, like the one seen as a result of the Mount Polley tailing facility breach, can result in damage both on and off a mine site. It is the responsibility of the mine operator to ensure sufficient environmental liability insurance is held to meet the risk of such disasters.</p> <p>The <i>Environmental Management Act</i> contains authority for spill response actions and cost recovery to require persons in possession or control of any polluting substance to prepare contingency plans and to implement those plans at their expense in the event of a spill. The Act also provides for the recovery of costs should action to respond to a spill be declared by the Minister.</p> <p>This Act is being amended to proactively require potential polluters to pay into a spill preparedness and response organization. These amendments are due for introduction to the Legislature this year.</p>
<p>Recommendation 1.8 – Reclamation Guidance We recommend that government develop clear and comprehensive reclamation guidance for industry.</p>	<p>Response: Internal work has begun on developing additional guidance materials on a range of reclamation aspects, including erosion and sediment control plans, closure management manuals, reclamation security, etc.</p>
<p>Recommendation 1.11 – Systematic Compliance Verification We recommend that government systematically monitor and record compliance with high-risk mine permit requirements.</p>	<p>Response: As with Recommendation 1.10, a risk-based approach to compliance and enforcement workforce planning will uncover poor performers for closer scrutiny.</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.13 – Mine Design We recommend that government adopt appropriate standards, review mine designs to ensure that they meet these standards, and ensure that mines, as constructed, reflect the approved design and standards.</p>	<p>Response: This recommendation is presented at the conclusion of the Audit Report section on the Mount Polley TSF breach.</p> <p>There had been nine design stages over the life of the TSF at Mount Polley Mine. All stages, including the design stage in place at the time of the breach had been prepared by the design engineer; a qualified professional. MEM reviewed and authorized permit amendments for each stage of the TSF. Each stage of construction was certified by the Engineer of Record in the as-built reports. The failure of the TSF was not an enforcement issue.</p> <p>Through legislation like the <i>Engineers and Geoscientists Act</i>, government has created technical bodies to formalize accountability and protect the public interest. As appropriate in their role, in response to the Expert Panel findings on Mount Polley the Association of Professional Engineers and Geoscientists BC has completed their professional practice guidelines for dam site characterization assessments with a public release expected in August 2016.</p> <p>Within the Code Review minimums have been outlined for Seismic and Flood Design Criteria, Design Slopes (2:1), Static Factor of Safety (1.5), Beach and Inundation Study and Failure Runout Assessments</p> <p>The Code now requires permit applications to show an alternatives assessment of BAT, declaration of QPOs, and proposed program for prediction, identification and management of physical, chemical, and other risks associated with tailings storage facilities and dams.</p>
Part 4: Recommendations for Ministry of Environment	
<p>Recommendation 1.5 – Environmental Management Act Waste Discharge Fees We recommend that government review its fees under the <i>Environmental Management Act</i> and ensure that the fees are effective in reducing pollution at mine sites.</p>	<p>Response: The Ministry of Environment is committed to reviewing the fee structure for waste discharges under the <i>Environmental Management Act</i>. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.</p>

Update on Implementation of Recommendations
from the Expert Panel Report, the Chief Inspector of Mines Investigation Report and Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.6 – Cost Recovery</p> <p>We recommend that government adopt a cost recovery model for permitting and compliance verification activities that is consistent across all ministries in the natural resources sector.</p>	<p>Response:</p> <p>The Ministry of Environment recognizes that other natural resource sector ministries, including the Environmental Assessment Office, have begun imposing fees on industry for permitting and compliance verification activities. The ministry will be examining the imposition of fees for these activities.</p> <p>Effective April 1, 2015 permit fees were introduced under the <i>Mines Act</i> and the existing inspection fees were raised. This enabled a budget increase of approx. \$9.3M to the Ministry of Energy and Mines in Budget 2016.</p>
<p>Recommendation 1.7 – Decision Making – Use of section 137 of the <i>Environmental Management Act</i></p> <p>We recommend that government publically disclose its rationale for granting a permit under section 137 of the <i>Environmental Management Act</i>. Specifically, information should include how factors such as economic, environmental, and social attributes were considered in the determination of public interest.</p>	<p>Response:</p> <p>As provided for in Section 137 of the <i>Environmental Management Act</i>, Cabinet may consider factors that are in the public interest and beyond those that a ministry director may consider. Discussions underlying the approval of an OIC are a matter of Cabinet confidentiality. However, the results of Cabinet decisions, when they are issued in the form of OICs, are published on the BC Laws website.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
Part 1: Recommendations for Government	
<p>Recommendation 1.0 – Overall Recommendation</p> <p>We recommend that the Government of British Columbia create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment.</p> <p>Given that the Ministry of Energy and Mines is at high risk of regulatory capture, primarily because MEM's mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.</p>	<p>Response:</p> <p>It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure. Many provincial governments across Canada have agencies and ministries with the role of promoting and regulating an industry. In the absence of evidence by the Auditor General that this has compromised the integrity of the ministry or its staff, Government does not support the need for a reorganization of the ministries; however we are prepared to further discuss this with the OAG. Government will establish a Mining C&E Board that will address the need for greater integration between the ministries, as well as with the Environmental Assessment Office.</p>
Part 2: Recommendations for Ministry of Energy and Mines and Ministry of Environment	
<p>Recommendation 1.1 – Strategic Planning</p> <p>We recommend that government develop a strategic plan that would detail the activities of an integrated and coordinated regulatory approach, and the necessary capacity, tools, training and expertise required to achieve its goals and objectives.</p>	<p>Response:</p> <p>A Mining C&E Board will be established to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. The Board will develop compliance and enforcement plans to map out proactive annual activities based on a risk-based approach. The board will also be responsible for furthering longer term strategic improvements in other areas such as: enhancing training; developing policies, procedures and tools; conducting evaluations; and expanding public reporting. MEM will appoint a new Deputy Chief Inspector of Mines for compliance and enforcement to oversee and implement improved C&E.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.2 – Permit Language</p> <p>We recommend that government ensure both historical and current permit requirements are written with enforceable language.</p>	<p>Response:</p> <p>The ministries agree that permits must be written with measureable and enforceable requirements. Both ministries will develop policy to ensure enforceable and measurable requirements are used in all new and amended permits.</p>
<p>Recommendation 1.9 – Incentives</p> <p>We recommend that government create effective incentives to promote environmentally responsible behavior by industry.</p>	<p>Response:</p> <p>The ministries agree that it is useful to consider incentives as part of the compliance and enforcement regime governing mines and will continue to consider additional opportunities to recognize and reward good environmental performers. Furthermore, it is expected that expanded public reporting of compliance and enforcement activities will serve as a very effective incentive for promoting environmentally responsible behaviour.</p>
<p>Recommendation 1.10 – Risk-Based Approach</p> <p>We recommend that government develop a risk-based approach to compliance verification activities, where frequency of inspections are based on risks such as industry's non-compliance record, industry's financial state, and industry's activities (e.g., expansion), as well as risks related to seasonal variations.</p>	<p>Response:</p> <p>Compliance verification activities conducted by the ministries are founded on a risk-based approach; however, the ministries commit to review policies in this regard. The annual compliance and enforcement planning that will take place at the Mining C&E Board, established under recommendation 1.1, will also be risk-based to optimize the capacity and effectiveness of the ministries' collective compliance and enforcement resources.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.12 – Qualified Professionals</p> <p>We recommend that government establish policies and procedures for the use and oversight of qualified professionals (QP) across the natural resources sector. These policies and procedures should have the following:</p> <ul style="list-style-type: none"> • guidance for staff that outlines the specific nature and amount of oversight expected of a QP's work • guidance for staff as to expected timeframe for review and response to QP reports • updated guidance for staff for recognizing and responding to misconduct by a QP • controls in place to ensure that there is no undue influence on the QPs by industry • controls in place to ensure that recommendations by QPs are adhered to 	<p>Response:</p> <p>MEM's efforts are guided by the Mines Act and the Health, Safety and Reclamation Code for Mines in British Columbia. In particular, the Code Review currently underway is considering specific matters such as the need for a qualified individual designated as a mine dam safety manager to oversee all work associated with a tailings storage facility and will clarify the roles and responsibilities of the Engineer of Record at a mine. The Mining C&E Board, established under recommendation 1.1, will consider how MoE and MEM can strengthen the use and oversight of qualified professionals in the mining sector specifically. The Ministry of Forests, Lands and Natural Resource Operations has established a Qualified Persons in the Natural Resource Sector Framework. This framework guides the development and implementation of Qualified Persons policies and procedures specifically for the mining sector. The framework is based on the three essential components of guidance, competency and accountability and ensures the interests of government, resource users, qualified persons and other stakeholders are recognized and addressed.</p>
<p>Recommendation 1.14 – Policies, Procedures and Tools</p> <p>We recommend that government develop policies, procedures and enforcement tools for responding to non-compliances when industry does not meet government's specified timeline.</p>	<p>Response:</p> <p>The ministries agree on the importance of clear policies, procedures and tools to aid in their compliance and enforcement activities. The ministries will review these in light of the recommendations. The establishment of the Mining C&E Board, under recommendation 1.1, will serve to further inter-ministry collaboration and sharing of best practices. Government will also introduce amendments to the Mines Act to provide for Administrative Monetary Penalties in the spring 2016 legislative session.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.15 – Evaluation and Adjustment</p> <p>We recommend government regularly evaluate the effectiveness of its compliance promotion, compliance verification, and enforcement activities and tools, and make changes as needed to ensure continuous improvement.</p>	<p>Response:</p> <p>Annual compliance and enforcement planning and reporting will provide a means to evaluate the effectiveness of the program, to ensure ongoing improved targeting of areas of concern and recognition of strong performers. The ministries will address this recommendation through the establishment of a Mining C&E Board under recommendation 1.1.</p>
<p>Recommendation 1.16 – Public Reporting</p> <p>We recommend that government report publicly the:</p> <ul style="list-style-type: none"> • results and trends of all mining compliance and enforcement activities • effectiveness of compliance and enforcement activities in reducing risks and protecting the environment • estimated liability and the security held for each mine. 	<p>Response:</p> <p>The ministries support public reporting and have been making progress in this area. The Ministry of Environment has been reporting its enforcement actions for many years through published reports and an online searchable database. It reports all of its enforcement actions including orders, administrative sanctions, administrative monetary penalties, violation tickets and court prosecutions. The ministry will work with Ministry of Energy and Mines to explore including their enforcement actions in the reporting. In 2012, the Ministry of Environment published all of its permits for industrial and municipal facilities that discharge waste into the environment, including mines. This dataset provides the opportunity for citizens to access province-wide data on those facilities, including information on fees, locations and discharges. The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015. The ministry will continue to publish further documents for all major mines in British Columbia. The ministries will report on trends and effectiveness of C&E in the mining sector.</p>
Part 3: Recommendations for Ministry of Energy and Mines	
<p>Recommendation 1.3 – Security – Adequate Coverage</p> <p>We recommend that government safeguard taxpayers by ensuring the reclamation liability estimate is accurate and that the security held by government is sufficient to cover potential costs.</p>	<p>Response:</p> <p>As seen in the 2014 Chief Inspector's Annual Report, "In the past few years, the value of security deposits has increased to reflect more closely the true costs of reclamation. The total value of securities held by the Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014."</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.4 – Security – Catastrophic Events We recommend that government review its security mechanisms to ensure taxpayers are safeguarded from the costs of an environmental disaster.</p>	<p>Response: Environmental disasters, like the one seen as a result of the Mount Polley tailing facility breach, can result in damage both on and off a mine site. It is the responsibility of the mine operator to ensure sufficient environmental liability insurance is held to meet the risk of such disasters. The Environmental Management Act contains authority for spill response actions and cost recovery to require persons in possession or control of any polluting substance to prepare contingency plans and to implement those plans at their expense in the event of a spill. The Act also provides for the recovery of costs should action to respond to a spill be declared by the Minister. This Act is being amended to proactively require potential polluters to pay into a spill preparedness and response organization. These amendments are due for introduction to the Legislature this year.</p>
<p>Recommendation 1.8 – Reclamation Guidance We recommend that government develop clear and comprehensive reclamation guidance for industry.</p>	<p>Response: Internal work has begun on developing additional guidance materials on a range of reclamation aspects, including erosion and sediment control plans, closure management manuals, reclamation security, etc.</p>
<p>Recommendation 1.11 – Systematic Compliance Verification We recommend that government systematically monitor and record compliance with high-risk mine permit requirements.</p>	<p>Response: As with Recommendation 1.10 above, a risk-based approach to compliance and enforcement workforce planning will uncover poor performers for closer scrutiny.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.13 – Mine Design</p> <p>We recommend that government adopt appropriate standards, review mine designs to ensure that they meet these standards, and ensure that mines, as constructed, reflect the approved design and standards.</p>	<p>Response:</p> <p>This recommendation is presented at the conclusion of the Audit Report section on the Mount Polley TSF breach. There had been nine design stages over the life of the TSF at Mount Polley Mine. All stages, including the design stage in place at the time of the breach had been prepared by the design engineer; a qualified professional. MEM reviewed and authorized permit amendments for each stage of the TSF. Each stage of construction was certified by the Engineer of Record in the as-built reports. The failure of the TSF was not an enforcement issue. Through legislation like the Engineers and Geoscientists Act, government has created technical bodies to formalize accountability and protect the public interest. As appropriate in their role, in response to the Expert Panel findings on Mount Polley the Association of Professional Engineers and Geoscientists BC is developing professional practice guidelines for dam site characterization assessments. Government is also undertaking a review of the Mining Code with labour, First Nations and industry representatives to determine how best to implement the expert panel findings.</p>
Part 4: Recommendations for Ministry of Environment	
<p>Recommendation 1.5 – Environmental Management Act Waste Discharge Fees</p> <p>We recommend that government review its fees under the <i>Environmental Management Act</i> and ensure that the fees are effective in reducing pollution at mine sites.</p>	<p>Response:</p> <p>The Ministry of Environment is committed to reviewing the fee structure for waste discharges under the Environmental Management Act. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.</p>
<p>Recommendation 1.6 – Cost Recovery</p> <p>We recommend that government adopt a cost recovery model for permitting and compliance verification activities that is consistent across all ministries in the natural resources sector.</p>	<p>Response:</p> <p>The Ministry of Environment recognizes that other natural resource sector ministries, including the Environmental Assessment Office, have begun imposing fees on industry for permitting and compliance verification activities. The ministry will be examining the imposition of fees for these activities. Effective April 1, 2015 permit fees were introduced under the Mines Act and the existing inspection fees were raised. This enabled a budget increase of approx. \$9.3M to the Ministry of Energy and Mines in Budget 2016.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations

Recommendation 1.7 – Decision Making – Use of section 137 of the *Environmental Management Act*

We recommend that government publically disclose its rationale for granting a permit under section 137 of the *Environmental Management Act*. Specifically, information should include how factors such as economic, environmental, and social attributes were considered in the determination of public interest.

Response:

As provided for in Section 137 of the Environmental Management Act, Cabinet may consider factors that are in the public interest and beyond those that a ministry director may consider. Discussions underlying the approval of an OIC are a matter of Cabinet confidentiality. However, the results of Cabinet decisions, when they are issued in the form of OICs, are published on the BC Laws website.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Health, Safety and Reclamation Code Review

KEY MESSAGES:

- As part of government's response to Mount Polley, the Ministry of Energy and Mines has recently completed a review of the Health, Safety and Reclamation Code (Code) for Mines in British Columbia.
- Minister Bennett appointed a Code review committee in June 2015, chaired by the Chief Inspector of Mines and an equal number of representatives from First Nations, mine labour unions and industry.
- The BC government committed to implementing the recommendations of the independent expert panel and the recommendations that were made by the Chief Inspector of Mines that investigated the Mount Polley tailings storage facility (TSF) failure.
- These updates to the Code, which came into force July 20, 2016, along with the new site characterization guidelines from the Association of Professional Engineers and Geoscientists of BC, have made our standards for tailings storage facilities as good as exists anywhere in the world.
- The implementation of the seven recommendations from the Independent Expert Engineering Panel's investigation into the Aug. 4, 2014, tailings pond breach at the Mount Polley Mine is now complete.
- With these revisions to the mining code, government has addressed 20 of the 26 recommendations from the Independent Expert Panel and the Chief Inspector of Mines reports.
- A review of health and safety portions of the Code was completed and new provisions or revised requirements came into force on February 27, 2017.
- These revisions included a requirement for supervisor certification; a reduction in worker chemical exposure limits; clarity regarding mine emergency response plans; certification for skilled trades; requirements for explosion proof underground coal mine equipment; first aid certifications; and, improved requirements for roll over protection for all terrain vehicles.

BACKGROUND:

- The review of the Health, Safety and Reclamation Code for Mines in BC, pursuant to section 34 of the *Mines Act*, determined how best to implement the 7 recommendations from the Expert Panel and also considered the 19 recommendations stemming from the Chief Inspector of Mines investigation into Mount Polley released during the Code Review.
- The Minister appointed the Code Review Committee on June 24, 2015. The Code Review Committee was chaired by the Chief Inspector of Mines and included an equal number of representatives nominated by First Nations, mine labour unions and industry.
- First Nations, industry and mine unions were asked to provide nominations for candidates with suitable mining and relevant technical experience for the Code Review committees.
- The public had opportunity to provide written submissions to the Code Review Committee from mid-July to mid-October. A second public submission period regarding the Health and Safety portion of the Code Review was held from July to September 30, 2016.
- The review consisted of three separate committees: an overarching Code Review Committee and two sub-committees that provided technical reviews for the tailings storage facilities and the health and safety sections of the code.
- The tailings storage facility portion of the Code Review is now complete, and revisions came legally in force on July 20, 2016.
- Updates to the TSF portion of the mining code include new design and operations criteria for TSFs, requiring water balance and water management plans for TSFs and requiring mines with TSFs to establish Independent Tailings Review Boards.
- The health and safety technical review continued through the fall of 2016, with all revisions coming into force on February 27, 2017.
- First Nations were provided funding to ensure full participation as members of each of the Code Review committees.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: B.C. Mineral Exploration and Mining Industry Snapshot

KEY MESSAGES:

- Mineral exploration and mining is a key economic driver in B.C.
- This industry provides thousands of well-paying jobs for British Columbians, especially in rural areas of the Province.
- In 2016, approximately \$205 million was spent on exploration in B.C., down from \$272 million in 2015. However, expenditures on grassroots and early-stage exploration projects increased, which is a positive sign for mineral exploration investment.
- Copper and metallurgical coal prices have increased significantly in recent months following the downturn in commodity markets in 2015 and early 2016.
- Government revenues from exploration and mining activities support essential infrastructure and programs that benefit all British Columbians.

BACKGROUND:

- Following the market downturn in the mining sector in 2015 and early 2016, prices for key commodities mined in B.C. have improved significantly in recent months.
- Copper prices have increased by over 20 percent since October 2016 and are currently US\$2.63/lb. Spot prices for metallurgical coal rose 300 percent last year and peaked in November as a result of supply disruptions in China and Australia. Prices have been trending downward since but are currently US\$162/tonne compared to US\$80/tonne in March 2016.
- According to preliminary estimates from Natural Resources Canada, B.C. mines produced \$6.3 billion worth of commodities in 2016—16 percent of the Canadian total.
- In 2016, approximately \$205 million was spent on exploration in B.C. and the shift to grassroots and early-stage exploration is a positive sign that could signal a “reset” for B.C.’s mining exploration lifecycle.
- B.C. is Canada’s single largest exporter of coal and the country’s largest producer of copper.
- There are currently seven coal mines, seven metal mines, approximately thirty industrial mineral mines, and hundreds of aggregate pits and quarries in operation.
- Over 30,000 people are employed in mineral exploration, mining and related sectors, mostly in rural B.C.
- The industry also provides thousands of spin-off jobs and business opportunities for suppliers and service providers located close to project sites.

- According to data from Statistics Canada and PwC, the average mine worker in B.C. made about \$113,000 in 2015 (salary plus benefits).
- B.C. is an attractive mineral exploration and mining jurisdiction for investors. The province has rich geology, abundant low-cost power, world-class infrastructure, a stable political climate and competitive taxation.
- More than 700 exploration and mine development companies are headquartered in British Columbia.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Funding for Mine Permitting and Fees

KEY MESSAGES:

- From 2011 to 2015, temporary funding measures (e.g., \$4.8M of contingency funding in fiscal 2014/15) were used to increase inspection staff and improve permit turnaround times.
- Average Notice of Work permitting times were reduced from 110 days in 2011 to under 50 days currently.
- To sustain this level of service, long term dedicated funding replaced the temporary funding measures in 2015. The annual budget of the Ministry of Energy and Mines (MEM) was increased by \$9.3 million in 2015/16.
- Permit fees were expected to contribute \$3 million of this total annual increase (\$1.5M from major mines and \$1.5M from regional mines); however, regional mine permit fee revenue (from gravel pits/quarries) fell significantly short of the \$1.5M projection generating only \$388,000.
- To address the shortfall, MEM reviewed the fee structure for pits/quarries and proposed amendments to the Mines Fee Regulation. A decision is pending on whether to proceed with the proposal.
- Budget 2017 increased MEM's budget by \$18 million over three years for mines permitting and oversight. This is in addition to the budget lift in 2015/16.

BACKGROUND:

- Beginning in September 2011, natural resource ministries received temporary funding from Treasury Board to reduce the backlog of permit and tenure applications and to improve permit turnaround times. Funding has been used to maintain and hire staff and for operational costs related to permitting.
- Since 2011, average Notice of Work permitting times have been reduced from 110 days to under 50 currently. The target to reduce the backlog of mining and placer lease applications by fifty percent was also met.
- By the end of 2015, the temporary additional funding was moved to the base budget of MEM to ensure these improvements could be maintained. \$6.3 million was directly contributed to base and the additional \$3 million of this \$9.3 million increase was to be funded through permit fees.
- The Mines Fee Regulation was developed and permit fees commenced on April 1, 2015.

- Industry's response to the introduction of the permit fee was generally negative but they agreed that should fees be implemented, Government needs to continue to streamline services, improve turnaround times, and develop performance standards.
- While major mine permit fees generated revenue close to budget of \$1.5 million, the regional mine permit fees, particularly for sand/gravel and quarries, have been significantly lower than expected. This group only generated \$388,000 in invoiced permit fees (\$320,000 paid as of March 31, 2016), well down from the expected \$1.5 million.
- Reasons for lower than expected permit fees for sand/gravel and quarry operations include possible changes in industry behaviour, such as applying for lower annual tonnages to stay below fee thresholds or postponing the submission of five year mine plan updates that often result in permit amendments which trigger the permit fee.
- The proposed fee structure would remain consistent with key design objectives used for the initial fee regulation such as not exceeding six cents per tonne of material extracted and exempting small scale operators.
- The revised fee model would:
 - Begin charging fees at 5,000 tonnes (instead of current 10,000 tonnes). Only very small scale operators will be exempted from fees.
 - Move to 13 fee steps from the current 4 steps to reduce incentive for operators to underestimate extraction amounts (fee avoidance).
 - Increase maximum fee to \$50,000 up from the current \$32,000 (still within six cents per tonne objective).
- Based on the preliminary analysis of sand/gravel permit applications received during fiscal 2015/16, it is projected that these changes would increase permit fee revenue for this group to approximately \$1.3 million.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Dominion Coal Blocks

KEY MESSAGES:

- The Dominion Coal Blocks is in an area of high environmental, economic and social value and is a very important area for British Columbians.
- The BC government has been negotiating with Canada for a number of years on the best approach for the federal government to divest its ownership interests.
- Canada has stated that it intends to transfer a portion of the Dominion Coal Blocks to the Province, including a portion in the Flathead that would protected for conservation purposes, and put the remainder of the holdings for market auction.
- On May 29, 2015, Minister Bennett wrote the federal minister for Natural Resources proposing an alternative process that would reflect the Ktunaxa Nation's direct interests in the land, generate support for sustainable resource development while protecting environmental values.
- The value proposition would reflect fair market value determined by independent appraisal. The Ktunaxa Nation is supportive of BC's approach.
- On July 31, 2015, the federal government rejected the Province's proposal. However, in spring 2016, the federal government made overtures to both the BC government and the Ktunaxa to re-open discussions.
- In September, 2016 Minister Bennett met with Natural Resources Minister Carr to reiterate BC's desire for the federal government to transfer the DCB. Minister Carr responded that he was supportive in principal and has instructed his staff to prepare options for his consideration.
- NRCAN staff has signalled some issues: KNC's preparedness to accept the properties as fee simple holders given liability and taxation issues; and fair value for tax payers.
- Further discussions between BC and Ktunaxa have led to a preferred option of the direct transfer of the DCB to the Ktunaxa Nation, to meet the objectives of reconciliation, sustainable economic development and environmental land stewardship.

- Given the sudden rise of the price of coal, the market value of DCB may be considerably higher than when NRCan re-engaged with BC in spring 2016, potentially making a free market sale more attractive. However the most, and perhaps only, valuable block, Block 73, is a stranded asset as it has no free access, having to cross Teck private land.
- Since then, further discussions between BC and Ktunaxa led to a preferred option by both parties of the direct transfer of the DCB to the Ktunaxa Nation, to meet the objectives of reconciliation, sustainable economic development and environmental land stewardship.
- BC is hopeful that a positive resolution on the Dominion Coal Blocks will benefit all three parties.

BACKGROUND:

- The Dominion Coal Blocks (DCB) are two parcels of land located in the East Kootenay in which the land surface and coal are owned by the Federal Government.
- The DCB were created by the federal *Crow's Nest Pass Act* 1897, which required the railway to give the Federal Government 20,000 hectares of coal lands, out of coal lands previously granted by the Province of British Columbia. This was to prevent the Canadian Pacific Railway and its affiliates from acquiring a monopoly over coal.
- The Province owns all other minerals, the petroleum and natural gas in the DCB.
- Development of the DCB coal resources has never occurred because the Federal Government has no mechanism to permit or regulate coal mining within a province.
- The larger (18,212 hectares) southern DCB (Parcel 82) is surrounded by a mix of provincial Crown and private land, and the coal deposits are deep and unexplored.
- About one-third of Parcel 82 lies within the Flathead Valley (Flathead) and the remainder is in the Elk Valley. Pursuant to the 2011 Flathead Watershed Area Conservation Act, coal falling under provincial jurisdiction in the Flathead cannot be tenured or mined.
- The smaller (2,024 hectares) northern DCB (Parcel 73) is located in the Elk Valley and is surrounded by private coal land owned by Teck. Parcel 73's coal resources are considered to be economic under normal market conditions and surface mineable with a low strip ratio.
- The DCB lie within the traditional territory asserted by the Ktunaxa First Nation.
- The Province and the Ktunaxa are parties to an Economic and Community Development Agreement (2013 ECDA) which provides the Ktunaxa a share in provincial revenues from any new coal mine project in the Elk Valley, and a Strategic Engagement Agreement (2010 SEA) which guides government-to-government discussions on natural resource decisions.
- Coal companies have expressed interest in the past in developing the coal resources of the DCB. In particular, Teck has been interested in developing the coal in Parcel 73. Teck's Coal Mountain development, 18 kilometres to the east, is expected to be exhausted by 2018 and planned to extend the life of the Coal Mountain coal plant by transporting coal mined on its Marten Wheeler property to Coal Mountain for processing. The Marten Wheeler property is contiguous with Parcel 73. Teck's proposed project is on hold until market coal prices rebound.

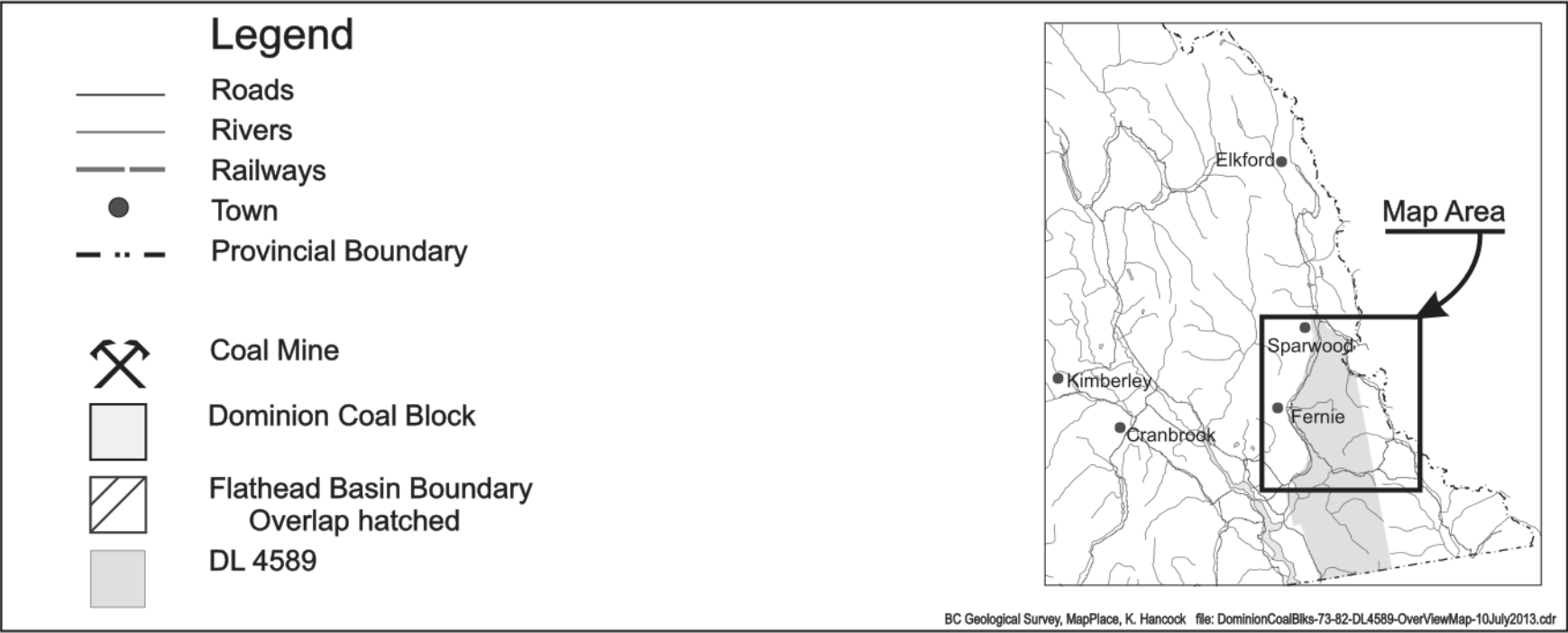
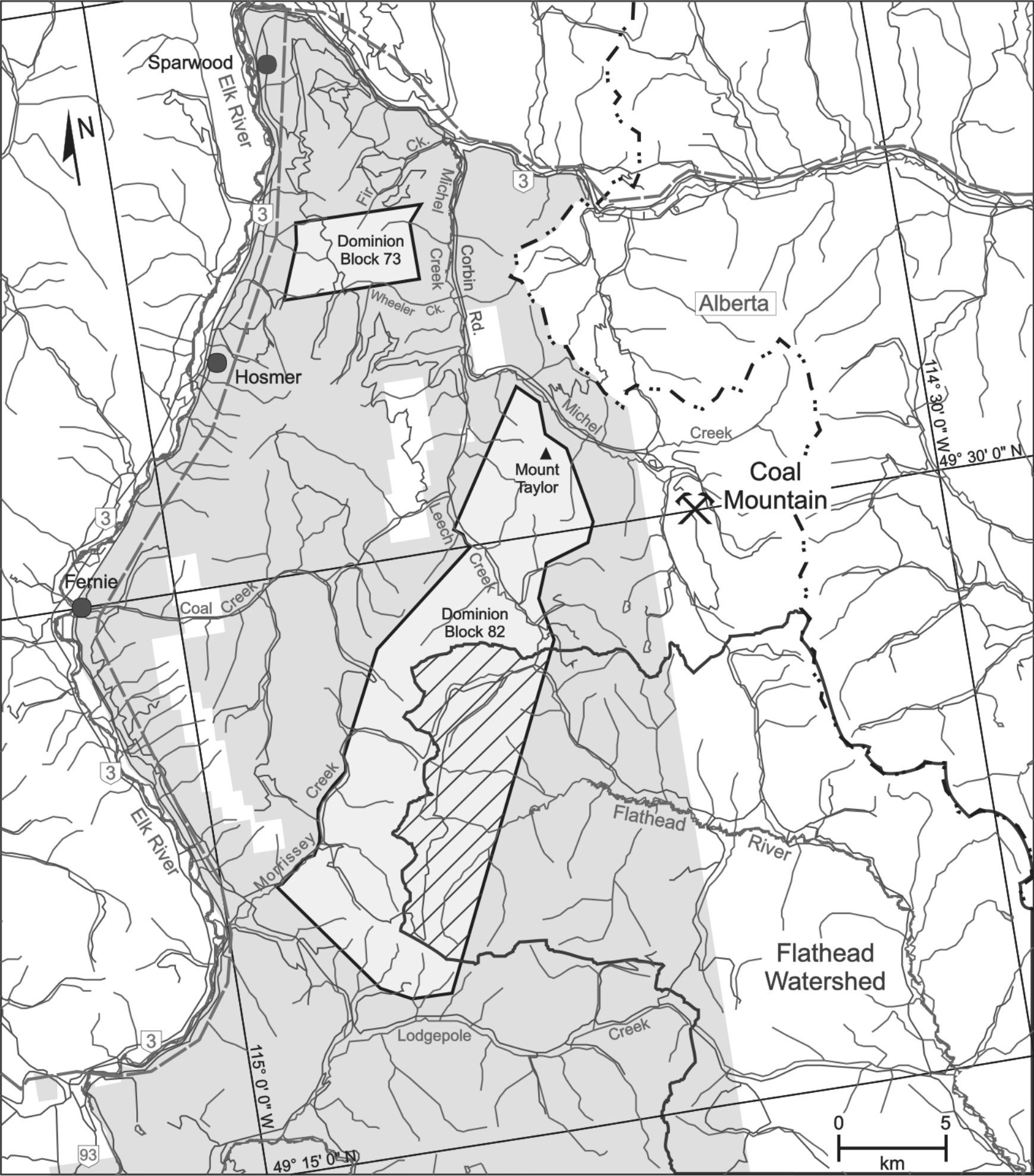
- Being large areas of relatively undeveloped federal Crown land, both DCB are also of interest to the environmental community for protection as wildlife corridors.
- In spring 2013, NRCAN officials advised the Ministry that they had been directed to sell Parcel 73 and that portion of Parcel 82 located in the Elk Valley. The remainder of Parcel 82 is to be transferred to the Province in accordance with the land uses allowed under the *Flathead Watershed Area Conservation Act*.
- After discussion with the Province and the Ktunaxa, the federal government has agreed that the Morrissey portion of Parcel 82 also would be transferred to the Province and only the northwest area of Parcel 82 known as Mount Taylor would be offered for sale. See the attached map.
- Since the Federal Government is interested in selling its interests in the DCB, the Federal Government has the duty to consult and accommodate First Nations on the sale.
- If the sale is successful, the provincial government would become solely responsible for meeting consultation and accommodation requirements for any proposed development on either of the DCB. The 2013 ECDA and 2010 SEA would inform the provincial consultation and accommodation processes.
- The provincial *Mineral Tax Act* would apply to any coal produced in the DCB.
- More recently, concerns were raised that foreign investors may acquire and develop the DCB sale properties in a manner that would negatively impact Ktunaxa and provincial interests. Conversely, given current instability in market conditions, the federal sale process could remain in limbo for many years to come.
- On May 29, 2015, Minister Bennett wrote the federal minister for Natural Resources proposing an alternative process that would reflect the Ktunaxa Nation's direct interests in the land, generate support for sustainable resource development while protecting environmental values.
- The value proposition would reflect fair market value determined by independent appraisal.
- On June 3, 2015, The Ktunaxa Nation Council wrote the Federal Government supporting the Province's proposal.
- On July 31, 2015, the Federal Government rejected the Province's proposal. However, in spring 2016, Natural Resources Canada made overtures to both the Ministry of Energy and Mines and the Ktunaxa Nation Council and met with the two parties on April 19th to re-open discussions and revisit BC's proposal. There has been little communication with NRCAN since that time.
- Since then, further discussions between BC and Ktunaxa led to a preferred option by both parties of the direct transfer of the DCB to the Ktunaxa Nation, to meet the objectives of reconciliation, sustainable economic development and environmental land stewardship.
- Minister Bennett met with Minister Carr to re-initiate the conversation around the DCB. Minister Carr subsequently instructed his staff to develop options for his consideration; either transferring DCB to BC, transferring to KNC or the original open market sale.
- NRCAN staff has signalled some issues: KNC's preparedness to accept the properties as fee simple holders given liability and taxation issues; and fair value for taxpayers.

- Given the sudden rise of the price of coal, the market value of DCB may be considerably higher than when NRCan re-engaged with BC in spring 2016, potentially making a free market sale more attractive. However the most, and perhaps only, valuable block, Block 73, is a stranded asset as it has no free access, having to cross Teck private land.
- BC is hopeful that a positive resolution on the Dominion Coal Blocks will benefit all three parties.

CROSS-REFERENCE / ATTACHMENTS:

39A – Dominion Coal Blocks Map - Numbers 73 and 82 plus DL 4589

Map Of Southeastern British Columbia Showing Dominion Coal Blocks Numbers 73 and 82 plus DL 4589



**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Fraser Institute Annual Survey of Mining Companies

KEY MESSAGES:

- The 2016 Fraser Institute's Annual Survey of Mining Companies concluded that B.C.'s score and rankings in two indices explored by the survey—Best Practices Mineral Potential and Overall Investment Attractiveness—have decreased in comparison to 2015 ratings.
- Focusing on policy alone, after seeing its score fall in 2014, B.C.'s Policy Perception Index score rebounded in 2015 and remained relatively unchanged in 2016, indicating that uncertainty in the province may have lessened—B.C.'s overall ranking remained the same at 41st out of 104 jurisdictions.
- Mineral exploration and mining activity in B.C. still remains strong. In 2016, exploration spending was \$205 million and the value of mineral and coal production was \$6.3 billion.
- Our government has also ensured B.C. remains a competitive place to do business, by extending the B.C. Mining Flow-Through Share Tax Credit and expanding the Mining Exploration Tax Credit.
- The Province's tax incentives, balanced budget, rich mineral deposits, world-class infrastructure and abundant source of clean and affordable energy continue to make B.C. an attractive jurisdiction for mine investors.

BACKGROUND:

- On February 28, 2017, the Fraser Institute released its Survey of Mining Companies 2016 for overall investment attractiveness of 104 jurisdictions worldwide.
- The survey is an attempt to assess how mineral endowments and public policy factors affect exploration investment. The survey was circulated electronically to approximately 2,700 individuals between August 30 and November 18, 2016. The Fraser Institute Survey is a perception-based survey and it has a response rate of less than 20 percent. It is difficult to say how representative the results are.
- The survey consists of three indices: Overall Investment Attractiveness, Policy Perception and Best Practices Mineral Potential.

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Page 1 of 2

Overall Investment Attractiveness Index

- B.C. ranked 27th out of 104 for overall investment attractiveness (a combination of pure mineral attractiveness and policy perception). In 2015, B.C. ranked 18th out of 109 jurisdictions for overall investment attractiveness.
- In this current survey, three Canadian jurisdictions were in the top 10 spots – Saskatchewan, Manitoba and Quebec.

Policy Perception Index

- B.C. ranked 41st out of 104 for overall policy attractiveness and had the third lowest score compared to other 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 survey notes that although B.C.'s policy perception index score increased slightly, ongoing tensions in the province over land title issues continue to hamper B.C.

Best Practices Mineral Potential Index

- B.C. ranked 24th out of 104 for pure mineral potential under “best practices” conditions.
- This index ranks each jurisdiction based on whether their geology encourages exploration investment.
- Three Canadian jurisdictions were in the top 10 spots – Manitoba, Saskatchewan and Quebec.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Major Mines Permitting Office within the Ministry of Energy and Mines

KEY MESSAGES:

- Funding from the 2015 Budget was used to establish the Major Mines Permitting Office (MMPO) to improve co-ordination of major mine project reviews across government.
- This office is part of the Mines and Mineral Resources Division of the Ministry of Energy and Mines (MEM).
- Oversight is provided by the Major Mine Permitting Board (MMPB), comprised of senior provincial government representatives from the natural resource ministries.
- While no changes have been made to the Environmental Assessment Office (EAO) responsibilities or EA process in its review of major mine projects, MMPO works closely with EAO to ensure effective and transparent communication throughout the EA creating a smooth transition from the EA into permitting.
- The Province continues to respond to what we have heard from industry, First Nations and other stakeholders that senior-level attention is needed to ensure that accountability, prioritization and issues management are addressed in the permitting of major mines.
- Several new mines are expected to proceed in the next few years and continued funding for MMPO will ensure high quality and timely decisions on major mining projects in B.C.
- MMPO has led a number of successful mine permitting review processes and is continuing its work with industry proponents, First Nations, stakeholders and other levels of government to ensure that co-ordinated, timely and enduring decisions continue to be delivered for major mining projects in B.C.
- MMPO coordination in 2016/17 has resulted in: Brucejack Mine EA and permitting amendments, Red Chris Mine South Dam permitting and Red Chris Management Agreement, Baldy Ridge permitting decision, Giscome EA, Conuma Administrative Transfers, Ajax Government-to-Government Agreement and the Amalgamation of Southeast Coal to MMPO.
- Mining is a key industry in B.C., and today we have significant opportunity to create thousands of jobs by opening new mines and

expanding existing ones.

BACKGROUND:

- The creation of MMPO returns the project management of authorizations for new major mines and major mine expansions/extensions to MEM from the Major Projects Office of the Ministry of Forests, Lands, and Natural Resource Operations.
- Using an approach to co-ordinated authorizations piloted in southeast B.C. on the expansion of 5 major coal mines, MMPO brings clear accountability to both industry and government to ensure timely, high-quality decisions are made with respect to major mine permitting.
- The establishment and continued operation of MMPO within MEM ensures that regulatory responsibilities associated with mining are managed closer to the technical experts involved in the approval processes for proposed mine developments in B.C.
- The MMPB guides resourcing, prioritization, and issues management to addresses the specific needs of the mining sector.
- MMPO includes project leads and directors who have detailed knowledge of the mining sector.
- Technical experts in relevant ministries remain responsible for reviewing the applications.
- Statutory responsibility for permitting decisions and compliance and enforcement are unaffected by MMPO.
- Major mine projects assigned to MMPO may include mining proposals that trigger the environmental assessment process and any other proposals that require the establishment of a project specific Mine Review Committee (MRC).
 - An MRC is an advisory committee comprising provincial and federal government agencies, local governments and First Nations established by the Chief Inspector of Mines for a specific mine project, and is the primary forum for the co-ordinated authorizations process.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Regional Coal Agreements with Treaty 8 First Nations

KEY MESSAGES:

- The Province signed the Regional Coal Agreements (RCAs) in late 2015 with three Treaty 8 First Nations: Halfway River First Nations, Saulteau First Nations, and West Moberly First Nations.
- The RCAs represent a strategic approach to resource development in BC's northeast coal belt. They provide greater consultation and process certainty on proposed coal exploration and development applications and reduce the risk of future litigation.
- The RCAs include:
 - Engagement timelines for coal-related activities, a shared decision making process, and a government-to-government forum for overseeing implementation of the agreements;
 - Support for areas of high First Nations interest and value through the creation of a 852,000 hectare Coal Land Reserve (CLR) in Northeast BC, preventing further coal licencing in this area;
 - Emphasis on future coal development and streamlined consultation processes in the Tumbler Ridge Zone; and
 - Stable capacity funding to signatory First Nations to support their participation and engagement on coal-related applications.
- Associated Economic and Community Development Agreements (ECDAs) provide mineral tax revenue-sharing for new and expanding coal mines in the area. ECDAs support participating First Nations to pursue their governance goals and activities that enhance the social, economic, and cultural well-being of their members.
- Due to depressed coal prices, there was limited implementation of the RCAs throughout 2016; the recent uptick in mining activity now provides an excellent opportunity for the Province to work with the First Nations and industry to put the agreements into practice and set ourselves up for success in Northeast BC.

BACKGROUND:

- The northeast coal belt has significant untapped potential that could provide long-term economic benefits to BC.
- RCA negotiations began in 2011/12 due to a deadlock on coal development between the Province and First Nations in Northeast BC:
 - In 2010-11, West Moberly First Nations successfully overturned permits for an advanced exploration program (First Coal) through both the BC Supreme Court and the BC Court of Appeal;
 - First Nations opposition had delayed environmental assessment and permitting processes for major projects; and
 - First Nations opposition to granting coal licences had resulted in a backlog of more than 250 applications.
- In response to these challenges, the Ministry of Energy and Mines (MEM) developed a Northeast Coal Strategy in collaboration with other provincial agencies. For the RCA component of the Strategy, the Ministry of Energy and Mines led negotiations with West Moberly First Nations, the Saulteau First Nations, and the Halfway River First Nation.
- The Ministry of Aboriginal Relations and Reconciliation is currently leading ongoing negotiations toward an RCA and associated ECDA with McLeod Lake Indian Band.
- RCA negotiations helped address First Nations' objections on major coal projects and secured First Nations' support for an expedited one-year process to bundle consultation on the Province's significant backlog on coal licence applications. This expedited process resulted in the approval of 157 coal licences.
- The establishment of the CLR did not affect any existing coal tenures, but it did affect 152 coal licence applications.
 - Concepts were broadly shared with industry, including contact with the Mining Association of BC and the Association of Mineral Exploration British Columbia during negotiations. However, specifics of the negotiations were confidential, including details of the proposed CLR.
 - Once the RCAs and CLR came into effect, MEM contacted affected tenure applicants individually. For licence applications entirely within the CLR boundary, fees and applications were returned to the proponent. In instances where the application was only partially within the CLR boundary, proponents were given the opportunity to amend and re-submit their applications.
 - No compensation was considered proponents who received returned applications as no rights are granted as a result of making an application for a coal licence.
- A successful meeting of the Senior Coal Officials, Engagement Coordinators, and supporting Provincial and First Nations staff was held in January 2017 to discuss implementation, to date, strategic issues, and next steps. A subsequent meeting is expected to be held in summer 2017.
- MEM is continuing to engage with MABC and Northeast coal project proponents to ensure industry awareness and engagement on the RCAs.

- RCA structures such as the periodic Senior Coal Officials meetings allow for the identification of strategic issues for further discussion and engagement outside of the permitting process. Among the current priorities are:
 - **RCA Implementation** – the Province is currently working with the signatory First Nations to implement the agreements and set expectations regarding processes and procedures. West Moberly First Nations, in particular, has been slow to implement the agreement and has yet to submit its financial report for 2016, which is necessary to receive its 2017 annual capacity funding.
 - **Water Quality** – First Nations are concerned about water quality throughout Northeast BC, particularly due to the cumulative effects of industrial development on their Treaty 8 rights. Treaty 8 First Nations have been invited to participate in the development of the Murray River Watershed Aquatic Cumulative Effects Framework with the Province and industry, which is aimed at developing a better understanding of the aquatic ecosystem and cumulative effects of development. The Framework will, in turn, inform the Murray River Watershed Permitting Project, which aims to establish protective benchmarks for selenium, nitrate, and sulphate for consideration in permitting.
 - **Caribou Recovery** – the Province is engaging with Treaty 8 First Nations as it develops new strategies for caribou recovery (i.e. Quintette Strategic Action Plan) and revises the Peace Northern Caribou Plan.
 - **First Nations Independent Technical Review (FNITR) process** – the Province is working with First Nations and industry to determine the appropriate application of the FNITR process and its alignment with provincial permitting timelines, including those established under the RCAs. A set of principles has been developed for supporting the Province's response to First Nations' requests for the application of the FNITR.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2016/17**

ISSUE: First Nations Dialogue on Mining

KEY MESSAGES:

- As part of the Letter of Understanding signed (LOU) with Williams Lake and Soda Creek Indian Bands (WLIB and SCIB) to ensure directly impacted First Nations are fully engaged in activities relating to the Mount Polley Mine Breach, the Province agreed to engage in a broader mining dialogue.
- The First Nations identified focus areas for the dialogue, including tailings storage facility management, mine revenue sharing, environmental assessment process and the mineral tenure process.
- The Mining Dialogue is about establishing a collaborative working environment between First Nations and government, ensuring First Nations' views are incorporated into key changes in mining policy and regulation.

BACKGROUND:

- The Province signed a LOU with Williams Lake and Soda Creek Indian Bands to ensure directly impacted First Nations are fully engaged in activities relating to the Mount Polley Mine Breach. The LOU committed to:
 - Establishing a Principals table consisting of Ministers and Chiefs
 - Establishing a Senior Officials Committee
 - Providing capacity funding and;
 - Engaging in a dialogue about current laws and regulations
- The Province allocated s.16,s.17 for First Nation funding for their engagement in a mining dialogue in 2016-17.
- Ministers and First Nations agreed to focus mining dialogue engagement in 16/17 on the review of the current Environmental Assessment process, First Nations participation in the mine code review and a review of Mineral Tenure.
- Funding for the mining dialogue has been provided to First Nations participating in the mine code review committee and now the health and safety technical review sub-committee and has been a positive experience.
- Total funding provided for 2016-17 was s.16,s.17 s.16,s.17 was allocated towards providing First Nations representation on the Code Review and s.16,s.17 was allocated to the FNEMC for the mining dialogue.

- The Mine code review continues to move forward and has First Nations representation on the mine code review committee and health and safety technical review sub-committee. The work on the tailings portion of the Code Review has been completed and changes to Part 10 of the Code are now in force.
- It is expected 2016/17 will be the last year of Mount Polley funding to be provided for the Mining Dialogue, if it continues beyond 2016/17 funding will be required from another source.
- A number of activities have been completed for the Mining Dialogue that work towards building a common understanding of mining, tailings storage facilities and the recommendations made by the Expert Panel
- A workshop was held in March 2015 and further work is being completed with the Environmental Assessment Office.
- Additionally, an interest paper regarding Mineral Tenure is being developed, with an MOU already signed in July 2015 between First Nations and AMEBC that outlines further collaboration.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Temporary Relief and Competitiveness for Major Mines

KEY MESSAGES:

- In 2015 and early 2016, low copper and coal prices put operations at a number of British Columbia mines at risk, forcing some to reduce production and employee levels. At this time, there were seven metal mines and five coal mines operating in the province, employing approximately 7,300 workers.
- On February 5th 2016, government announced a program to provide temporary cost relief to mining companies by allowing them to defer a portion of their hydro bills.
- This program was intended to help mines get through the commodity market downturn with the hope that prices and revenues would rise over time.
- Six mines participated in the program ^{s.21}
^{s.21} at a 75 percent hydro payment deferral rate. This deferral rate remained until copper prices went above 3.04 CAD\$/lb. The price of copper as of March 10, 2017 is 3.50 CAD\$/lb which means that companies are now required to begin repayment of their deferred hydro bills.
- As of February 28, 2017, the total balance of the mines' deferred bills (including interest) was \$71.5 million.
- Other steps have been taken to improve competitiveness, including the Budget 2017 announcement that the Province intends to remove PST from the purchase of clean energy over the next two years, which will benefit energy-intensive resource sectors such as mining.

BACKGROUND:

- In late 2015, the Ministry of Energy and Mines staff initiated conversations with industry through the Mining Association of British Columbia to identify strategies to address the short to medium term levers to assist the mining sector.
- After initial proposals were exchanged, the Province developed a strategy to temporarily assist BC mines to remain open by allowing companies to defer a portion of their monthly BC Hydro electricity bills.
- Under the five-year term of the program, which has been delivered by BC Hydro, companies operating metal and coal mines in BC are able to defer a portion of their BC Hydro electricity payments.

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Estimate Note: 46

Page 1 of 2

- The amount any mine is allowed to defer is capped at the equivalent of up to 75 percent of its electricity costs over two years of the program. As commodity prices recover, the mines will repay the amounts deferred, plus interest and in some cases a premium on their electricity bills.
- Companies with relatively lower levels of debt pay an interest rate of 12 percent. Others are charged the interest rate that BC Hydro currently charges of prime plus 5 percent, or about 8 percent annually.
- Each company that chooses to participate in the program is required to enter into a formal agreement with BC Hydro.
- Similar programs have been used in British Columbia before. The *Economic Development Electricity Rate Discount Act* and the *Critical Industries Act* were implemented during the 1980s as a response to BC Hydro having surplus power and to support industry as it emerged from a recession. Also, in 1997, government implemented the *Power for Jobs Development Act* to provide specific industries with a preferential development power rate based on available surplus power.
- On February 23rd, 2017, the Province announced its intention to remove the PST from the purchase of clean energy over the next 2 years which will benefit the energy-intensive mining sector.

**MINISTRY OF ENERGY AND MINES
MINING AND MINERAL RESOURCES DIVISION**

ISSUE: Compliance and Enforcement Strategy

KEY MESSAGES:

- Government is committed to ensuring BC remains a leader in mining regulation with a robust and transparent compliance and enforcement (C&E) program.
- Government accepted the recommendations of the Auditor General's (AG) report on oversight of the mining sector and established a Deputy Ministers Mining C&E Board to oversee planning across BC in all aspects of mineral exploration and development.
- The BC Mining Compliance and Enforcement Strategic Plan outlines Government's vision for integrated oversight of the sector by the Ministry of Energy and Mines (MEM), the Ministry of Environment (MOE) and the Environmental Assessment Office.
- The Strategic Plan was release in February 2017 along with a number of measures, including a new integrated BC Mine Information website, changes to the Health, Safety and Reclamation Code for Mines in BC (Code), the addition of administrative monetary penalties under the *Mines Act*, and an independent report by Ernst & Young on reclamation securities.
- Government has demonstrated its commitment to enhancing mining C&E with a budget increase of \$18 million over three years for mines permitting and oversight, announced in Budget 2017.

BACKGROUND:

- The Mount Polley tailings facility breach in 2014 increased scrutiny of the mining sector (see Transition Note 34 for details of the investigations into Mt. Polley).
- In addition to the Independent Expert Engineering Investigation and Review Panel (Panel) Report (January 2015) and the Chief Inspector of Mines (CIM) Investigation Report (December 2015), the AG of BC released a report (May 2016) that re-fueled criticisms of the MEM's oversight of mines.
- Government has accepted the combined 43 recommendations from the Panel, the CIM and the AG reports.
- The AG examined the MEM's and MOE's compliance and enforcement programs to determine whether the ministries are protecting the Province from significant environmental risks.

- Government has made significant changes to how mining is done in BC, including new policies, additional resources and funding to improve permitting processes and strengthen compliance and enforcement. Actions include:
 - Completion of Health and Safety portion of Code Review – updates to the Code based on the unanimous recommendations from the Code Review Committee chaired by the CIM, which includes an equal number of representatives from First Nations, mine labour unions and industry;
 - Major changes to the management and oversight of tailings storage facilities;
 - Administrative Monetary Penalties regulations brought into force – regulations and related penalties for non-compliance with the *Mines Act* and the Code;
 - A new Compliance Board and a new Strategic Plan for C&E of mining in BC that outlines Government's three-year vision for mining oversight in the Province;
 - Completion of a cross-jurisdictional review of reclamation securities and release of Ernst & Young reclamation securities report; and
 - Launched the BC Mine Information website that provides greater openness and transparency around mining operations in BC.

ATTACHMENTS:

- Update on Implementation of Recommendations from the Expert Panel Report and the Chief Inspector of Mines Investigation Report
- Recommendations from the Auditor General's Report on Mining

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>1. Implement Best Available Technologies (BAT) using a phased approach.</p> <ul style="list-style-type: none"> • For existing tailings impoundments. Rely on best practices for the remaining active life. • For new tailings facilities (TSF). BAT should be actively encouraged for new tailings facilities at existing and proposed mines. • For closure. BAT principles should be applied to closure of active impoundments so that they are progressively removed from the inventory by attrition. 	<p>Changes made to the tailings portion of the Health, Safety and Reclamation Code for Mines in BC (Code):</p> <ul style="list-style-type: none"> • Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications • Environmental Assessment Office requires new mine projects to assess BAT for tailings management 	<p>Completed, July 2016</p>
<p>2. Improve corporate governance:</p> <ul style="list-style-type: none"> • Corporations proposing to operate a tailings storage facility (TSF) should be required to be a member of the Mining Association of Canada (MAC) or be obliged to commit to an equivalent program for tailings management, including the audit function. 	<p>Changes made to the tailings portion of the code:</p> <p>Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits</p> <ul style="list-style-type: none"> • The Mining Association of Canada (MAC) established independent expert task force to review its tailings management requirements under its Towards Sustainable Mining (TSM) program. Recommendations were released in December 2015 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>3. Expand corporate design commitments:</p> <ul style="list-style-type: none"> • Future permit applications for a new TSF should be based on a bankable feasibility that would have considered all technical, environmental, social and economic aspects of the project in sufficient detail to support an investment decision, which might have an accuracy of +/- 10-15%. More explicitly it should contain the following: <ul style="list-style-type: none"> • A detailed evaluation of all potential failure modes and a management scheme for all residual risk • Detailed cost/benefit analyses of BAT tailings and closure options so that economic effects can be understood, recognizing that the results of the cost/benefit analyses should not supersede BAT safety considerations • A detailed declaration of Quantitative Performance Objectives (QPOs). 	<p>Changes made to the tailings portion of the code:</p> <p>New permit application requirements for alternatives assessment of BAT, declaration of QPOs, and proposed program for prediction, identification and management of physical, chemical, and other risks associated with tailings storage facilities and dams.</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> • Environment • Society • Economics 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>4. Enhance validation of safety and regulation of all phases of a TSF:</p> <ul style="list-style-type: none"> • Increase utilization of Independent Tailings Review Boards. • Utilize the concept of Quantitative Performance Objectives (QPOs) to improve regulator evaluation of ongoing facilities. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> • All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. • The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines. • Mines must submit an annual report to the Chief Inspector of Mines that include details on the activities of the mine's independent tailings review board including: <ul style="list-style-type: none"> • a summary of the reviews conducted that year; • whether the work reviewed that year by the ITRB meets the Board's expectations of reasonably good practice; • any conditions that compromise Tailings Storage Facility integrity or occurrences of non-compliance with recommendations from the engineer of record; and, • a signed acknowledgement by the members of the Independent Tailings Review Board, confirming that the report is a true and accurate representation of their reviews. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>5. Strengthen current regulatory operations:</p> <ul style="list-style-type: none"> Utilize the recent inspections of TSFs in the province to ascertain whether they may be at risk due to the following potential failure modes and take appropriate actions <ul style="list-style-type: none"> Filter adequacy Water balance adequacy Undrained shear failure of silt and clay foundations 	<p>Final submissions received June 30, 2015. More information available here: http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/dam-safety-inspections-2014</p>	<p>Completed, June 2015</p>
<p>6. Improve professional practice:</p> <ul style="list-style-type: none"> Encourage the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) to develop guidelines that would lead to improved site characterization for tailings dams with respect to the geological, geomorphological, hydrogeological and possibly seismotectonic characteristics. 	<p>APEGBC professional practice guidelines for dam site characterization assessments</p> <p>https://www.apeg.bc.ca/getmedia/34e1bb3f-cd39-450d-800e-614ac3850bc5/APEG_2016_Site-Characterization-for-Dam-Foundations_WEB_2.pdf.aspx</p>	<p>Completed, August 2016</p>
<p>7. Improve dam safety guidelines:</p> <ul style="list-style-type: none"> Recognizing the limitations of the current Canadian Dam Association (CDA) guidelines incorporated as a statutory requirement, develop improved guidelines that are tailored to the conditions encountered with TSFs in British Columbia and that emphasize protecting public safety. 	<p>Changes made to the tailings portion of the code:</p> <p>The mining code now includes design standards for TSFs that are tailored to the conditions encountered in British Columbia and that emphasize protecting the public and environment including:</p> <ul style="list-style-type: none"> TSF design requirements for the steepness of downstream slopes. A minimum static factor of safety. New seismic and flood design criteria. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
1-1 Mine Dam Safety Manager <ul style="list-style-type: none"> Any mine with tailings storage facilities (TSFs) should have a qualified individual designated as a mine dam safety manager responsible for oversight of planning, design, operation, construction 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall designate a TSF Qualified Person for safe management of the Tailings Storage Facility 	<p>Completed, July 2016</p>
1-2 Water Balance Management <ul style="list-style-type: none"> Water management and water balance issues for mining projects must be designed by a qualified professional. These issues require the integration of relevant mine departments. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> Impoundments, tailings storage facilities and water management facilities and dams shall be designed by a Professional Engineer Tailings storage facilities must have a water balance and water management plan for the permitted life of mine that is prepared by a qualified person Water balance and water management plans shall be reconciled annually and updated as required, after the commencement of operations 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>1-3 TSF Operations, Maintenance and Surveillance Manual</p> <ul style="list-style-type: none"> The mine manager should ensure the Operation, Maintenance and Surveillance manual (OMS) required by the Code for all impoundments adheres to applicable CDA and MAC guidelines. Additional guidance for the OMS should include incorporation of an annual risk assessment/risk management plan and relevant findings of an independent technical review board. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> An Operations, Maintenance and Surveillance (OMS) manual shall be prepared by one or more qualified person and submitted to the chief inspector prior to operation of the facilities The OMS manual must be reviewed annually and revised regularly during operations, decommissioning and closure of a tailings storage facility or dam and the the risk assessment for all tailings storage facilities and associated dams must also be reviewed annually to ensure that the quantifiable performance objectives and operating controls are current and manage the facility risks QPOs and operating controls are included as part of the OMS 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>1-4 Mine Emergency Response Plan</p> <ul style="list-style-type: none"> The mine manager must ensure that the Mine Emergency Response Plan (MERP) adheres to applicable regulations, is maintained on a regular basis for currency, incorporates appropriate response measures to emergencies including those involving the TSF, and is written and distributed in such format as to serve as a procedural guide during an emergency or other event. 	<p>Changes made to the Health and Safety portion of the Code (Part 3.7.1):</p> <ul style="list-style-type: none"> The manager shall develop a Mine Emergency Response Plan (MERP), which shall be kept up to date and followed in the event of an emergency; this plan must be tested annually and filed with the Chief Inspector. The Mine Emergency Response Plan must outline the response procedures, contain all of the elements required in the “Mine Emergency Response Plan Guidelines for the Mining Industry” include the emergency preparedness and response plans regarding tailings storage facilities, and include affected communities and First Nations in the identification of potential hazards, emergency communications and responses 	<p>Completed, February 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
1-5 Risk Recognition and Communication <ul style="list-style-type: none"> All mine personnel have a role to play in recognizing and reporting risk conditions, especially those that could affect health, safety and environmental protection; and should be educated in the recognition of conditions and events that could impact TSF safety or contravene applicable permit conditions and regulations. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> The engineer of record shall immediately notify the manager in writing of any unresolved safety issue that compromises the integrity of a tailings storage facility The OMS sets out information on QPOs, and performance goals for the mine and TSF. Ensuring employees have been trained in the use of the manual and its operational controls will provide the means for them to determine who to notify and will provide the education to know when an event or conditions occur that could impact TSF safety or integrity. 	<p>Completed, July 2016</p>
2-1 Design Objectives <ul style="list-style-type: none"> Tailings storage and water management systems and structures should be designed for worker and public safety and the protection of the environment. TSF design should incorporate a comprehensive feasibility assessment that considers technical, environmental, social, and economic aspects of the mining project in sufficient detail to support the submitted design. 	<p>Changes made to the tailings portion of the code:</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> Environment Society Economics <p>Minimums have been outlined for Seismic and Flood Design Criteria, Design Slopes (2:1), Static Factor of Safety (1.5), Beach and Inundation Study and Failure Runout Assessments</p>	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
2-2 Independent Technical Review Board <ul style="list-style-type: none"> Mines with impoundments should each develop independent technical review boards (ITRB) to provide additional perspectives on site investigation, site selection, design, construction, maintenance, operations, surveillance, water management and closure. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines. 	<p>Completed, July 2016</p>
3-1 Professional Reliance <ul style="list-style-type: none"> The Chief Inspector recognizes the necessity of reliance on professional practice for the design, construction, operation and closure of mines and mine facilities. The Regulator does not design the mine or associated structures, and thus is reliant on the professional practice of the designer. Reliance on professional practice requires that the organizations overseeing the professionals or developing guidelines and standards for the professional community incorporate best available practices into their oversight. 	<p>Changes made to the tailings portion of the code:</p> <p>The Code outlines requirements for the designation and reporting responsibility for the mine to designate an Engineer of Record who is a professional engineer.</p> <p>The Engineer of Record has a duty to report any unresolved safety issue that compromises the integrity of the TSF.</p> <p>Additionally, the Code sets out requirements for professionals or designated responsibilities for the creation of water management and water balance plans.</p>	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
3-2 Integration of Standards <ul style="list-style-type: none"> The Regulator should consider and incorporate as appropriate guidelines from these external associations as applicable and consistent with MEM objectives. 	<p>Changes made to the tailings portion of the code:</p> <p>Sections added specifying:</p> <p><u>10.1.8</u> Seismic and Flood Design Criteria, <u>10.1.9</u> Design Slopes <u>10.1.10</u> Minimum Factor of Safety <u>10.1.11</u> Breach and Inundation Study and Failure Runout Assessments</p> <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits 	<p>Completed, July 2016</p>
4-1 Review of the Code <ul style="list-style-type: none"> MEM should undertake a comprehensive review of the Code to ensure that the lessons learned and recommendations from this report are fully considered and appropriately incorporated; and that all relevant standards and guidelines from external bodies (such as MAC, CDA, and APEGBC) are fully considered in the review as appropriate. 	<p>The Minister of Energy and Mines appointed a Code Review Committee, pursuant to section 34 of the Mines Act in June 2015.</p>	<p>Completed, February 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>4-2 Life of Mine Planning for Permitting</p> <ul style="list-style-type: none"> Short-term, incremental Mines Act permit amendment applications can obscure life-of-mine conditions and long-term risks. The Regulator should ensure a perspective that spans the life of the mine be considered for Mines Act permit applications, while acknowledging that the nature of mining frequently requires changes to the life-of-mine plan. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> A mine plan must be included in the Mines Act permitting application that includes an inventory of areas disturbed to date, and projected over the next 5 years and over the projected life of the mine Mine, environmental protection, reclamation and closure plans shall be prepared in consideration of the HSRC Guidance Document, by qualified professionals or persons who in the opinion of the chief inspector are qualified to perform the work. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>4-3 Investigation, Compliance and Enforcement Review</p> <ul style="list-style-type: none"> The Regulator must enhance its investigative capacity, as well as its ability to exercise its existing compliance and enforcement authority under the Mines Act and Code. A supported director-equivalent position specific to investigation, compliance and enforcement should be established to evaluate and oversee these roles. This oversight should extend to applying recommended standards to the Regulator's compliance and enforcement function. A full range of regulatory tools, such as incentives, administrative penalties, outside agency collaboration and other best practices should be considered. 	<p>Deputy Chief Inspector of Mines position in place.</p> <p>The legislation increased penalties available for court prosecutions under the act from \$100,000 and/or up to one year imprisonment to \$1 million and/or up to three years imprisonment</p> <p>Regulation for administrative penalties now in effect to enable penalties for non-compliance (February 2017)</p> <p>Deputy Minister Compliance and Enforcement board created to establish compliance and enforcement oversight.</p> <p>Budget lift for MEM for mines permitting and oversight.</p>	<p>Completed, February 2017</p>
<p>4-4 Geotechnical Oversight</p> <ul style="list-style-type: none"> The Regulator has a responsibility to oversee the decisions of the EoR. The Regulator must maintain sufficient technical capacity to conduct appropriate oversight of the professional opinions on which it relies. A Regulatory Dam Safety Manager dedicated to the coordinated regulatory oversight of tailings dams in the Province could be responsible for ongoing policy development, technical review, and inspection capacity as it relates to tailings impoundments. 	<p>The position of Dam Safety Manager within MEM has been created and filled. Dam Safety Manager to start April 1, 2017</p>	<p>Completed February, 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
4-5 Organizational Review of Inspectorate <ul style="list-style-type: none"> There exists an ongoing need to adequately support the increased tempo of review, monitoring and inspection that would be placed on MEM's inspectorate. It is recommended that a comprehensive internal review of operational and business practices be conducted. 	Organizational effectiveness strategy under review.	Underway
5-1 Internal Records Management <ul style="list-style-type: none"> A formal MEM management system of documentation for all mines from development to post-closure should be established. The system will assist the Chief Inspector in integrating regulatory oversight capabilities; assist with investigation, project tasking, formal documentation and indexing; and enhance the ability of MEM to meet the expectations for transparency and appropriate disclosure within the limits of privacy considerations. 	Records management systems under review.	Underway
6-1 Alignment of Regulatory Objectives <ul style="list-style-type: none"> Agency objectives (environmental protection, worker health and safety, facilities integrity) overlap but are not always integrated. MOE and MEM interests, disciplines and standards should be reviewed for alignment opportunities to support timely and effective program outcomes while optimally fulfilling the mandates of both agencies. 	EAO, MEM and MOE board established to oversee compliance and enforcement oversight. Mining Compliance and Enforcement Strategic plan released. Optimization of resources to effectively coordinate activities for major mines, and protect the environment, human health and public safety.	Underway

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
6-2 Permitting Process Alignment <ul style="list-style-type: none"> Separate permitting processes for MEM and MOE should be reviewed for opportunities to integrate and align these processes as appropriate to avoid duplication and increase efficiencies. 	<p>Integration between Ministry of Energy and Mines and Ministry of Environment is a key priority and the Major Mines Permitting Office was created in 2015.</p> <p>Permitting process is being led by the Major Mines Permitting Office which is accountable to a cross-sector project board. MMPO is working to ensure continuous improvement and process alignment.</p>	Completed 2015
7-1 Collaborative Education <ul style="list-style-type: none"> MEM, the industry, professional organizations, and educational institutions should continue to seek new collaborative opportunities to foster education (including formal academic, onsite or online employee-focused, public-facing, and professional continuing education). 	<p>Ongoing educational programs being supported by Mining Association of BC, BCIT, Community College School of Exploration and Mining, UBC, Northwest Community College and others.</p> <p>Early proponent education program under development to ensure understanding of regulatory requirements and encourage best practices</p>	Underway

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>7-2 Research and Development</p> <ul style="list-style-type: none"> Current technologies in tailings processing, dewatering, and discharge water treatment have not achieved a sufficient level of technical and economic feasibility in many projects. Both government and industry should support research and development efforts to improve these technologies for practical application. 	<p>Changes made to the tailings portion of the code:</p> <p>Government is now requiring an assessment of BAT/BAP under the new EAO requirements.</p> <p>Government participated in various initiatives such as the Mine Environment Neutral Drainage (MEND) Committee who commissioned a study on Tailings Management Technologies which was completed in 2016.</p> <p>Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications</p> <p>Environmental Assessment Office requires new mine projects to assess BAT for tailings management</p>	<p>Completed, July 2016</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
Part 1: Recommendations for Government	
<p>Recommendation 1.0 – Overall Recommendation</p> <p>We recommend that the Government of British Columbia create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment.</p> <p>Given that the Ministry of Energy and Mines is at high risk of regulatory capture, primarily because MEM's mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.</p>	<p>Response:</p> <p>It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure. Many provincial governments across Canada have agencies and ministries with the role of promoting and regulating an industry. In the absence of evidence by the Auditor General that this has compromised the integrity of the ministry or its staff, Government does not support the need for a reorganization of the ministries; however we are prepared to further discuss this with the OAG. Government will establish a Mining C&E Board that will address the need for greater integration between the ministries, as well as with the Environmental Assessment Office.</p>
Part 2: Recommendations for Ministry of Energy and Mines and Ministry of Environment	
<p>Recommendation 1.1 – Strategic Planning</p> <p>We recommend that government develop a strategic plan that would detail the activities of an integrated and coordinated regulatory approach, and the necessary capacity, tools, training and expertise required to achieve its goals and objectives.</p>	<p>Response:</p> <p>A Mining C&E Board will be established to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. The Board will develop compliance and enforcement plans to map out proactive annual activities based on a risk-based approach. The board will also be responsible for furthering longer term strategic improvements in other areas such as: enhancing training; developing policies, procedures and tools; conducting evaluations; and expanding public reporting. MEM will appoint a new Deputy Chief Inspector of Mines for compliance and enforcement to oversee and implement improved C&E.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.2 – Permit Language</p> <p>We recommend that government ensure both historical and current permit requirements are written with enforceable language.</p>	<p>Response:</p> <p>The ministries agree that permits must be written with measureable and enforceable requirements. Both ministries will develop policy to ensure enforceable and measurable requirements are used in all new and amended permits.</p>
<p>Recommendation 1.9 – Incentives</p> <p>We recommend that government create effective incentives to promote environmentally responsible behavior by industry.</p>	<p>Response:</p> <p>The ministries agree that it is useful to consider incentives as part of the compliance and enforcement regime governing mines and will continue to consider additional opportunities to recognize and reward good environmental performers. Furthermore, it is expected that expanded public reporting of compliance and enforcement activities will serve as a very effective incentive for promoting environmentally responsible behaviour.</p>
<p>Recommendation 1.10 – Risk-Based Approach</p> <p>We recommend that government develop a risk-based approach to compliance verification activities, where frequency of inspections are based on risks such as industry's non-compliance record, industry's financial state, and industry's activities (e.g., expansion), as well as risks related to seasonal variations.</p>	<p>Response:</p> <p>Compliance verification activities conducted by the ministries are founded on a risk-based approach; however, the ministries commit to review policies in this regard. The annual compliance and enforcement planning that will take place at the Mining C&E Board, established under recommendation 1.1, will also be risk-based to optimize the capacity and effectiveness of the ministries' collective compliance and enforcement resources.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.12 – Qualified Professionals</p> <p>We recommend that government establish policies and procedures for the use and oversight of qualified professionals (QP) across the natural resources sector. These policies and procedures should have the following:</p> <ul style="list-style-type: none"> • guidance for staff that outlines the specific nature and amount of oversight expected of a QP's work • guidance for staff as to expected timeframe for review and response to QP reports • updated guidance for staff for recognizing and responding to misconduct by a QP • controls in place to ensure that there is no undue influence on the QPs by industry • controls in place to ensure that recommendations by QPs are adhered to 	<p>Response:</p> <p>MEM's efforts are guided by the Mines Act and the Health, Safety and Reclamation Code for Mines in British Columbia. In particular, the Code Review currently underway is considering specific matters such as the need for a qualified individual designated as a mine dam safety manager to oversee all work associated with a tailings storage facility and will clarify the roles and responsibilities of the Engineer of Record at a mine. The Mining C&E Board, established under recommendation 1.1, will consider how MoE and MEM can strengthen the use and oversight of qualified professionals in the mining sector specifically. The Ministry of Forests, Lands and Natural Resource Operations has established a Qualified Persons in the Natural Resource Sector Framework. This framework guides the development and implementation of Qualified Persons policies and procedures specifically for the mining sector. The framework is based on the three essential components of guidance, competency and accountability and ensures the interests of government, resource users, qualified persons and other stakeholders are recognized and addressed.</p>
<p>Recommendation 1.14 – Policies, Procedures and Tools</p> <p>We recommend that government develop policies, procedures and enforcement tools for responding to non-compliances when industry does not meet government's specified timeline.</p>	<p>Response:</p> <p>The ministries agree on the importance of clear policies, procedures and tools to aid in their compliance and enforcement activities. The ministries will review these in light of the recommendations. The establishment of the Mining C&E Board, under recommendation 1.1, will serve to further inter-ministry collaboration and sharing of best practices. Government will also introduce amendments to the Mines Act to provide for Administrative Monetary Penalties in the spring 2016 legislative session.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.15 – Evaluation and Adjustment</p> <p>We recommend government regularly evaluate the effectiveness of its compliance promotion, compliance verification, and enforcement activities and tools, and make changes as needed to ensure continuous improvement.</p>	<p>Response:</p> <p>Annual compliance and enforcement planning and reporting will provide a means to evaluate the effectiveness of the program, to ensure ongoing improved targeting of areas of concern and recognition of strong performers. The ministries will address this recommendation through the establishment of a Mining C&E Board under recommendation 1.1.</p>
<p>Recommendation 1.16 – Public Reporting</p> <p>We recommend that government report publicly the:</p> <ul style="list-style-type: none"> • results and trends of all mining compliance and enforcement activities • effectiveness of compliance and enforcement activities in reducing risks and protecting the environment • estimated liability and the security held for each mine. 	<p>Response:</p> <p>The ministries support public reporting and have been making progress in this area. The Ministry of Environment has been reporting its enforcement actions for many years through published reports and an online searchable database. It reports all of its enforcement actions including orders, administrative sanctions, administrative monetary penalties, violation tickets and court prosecutions. The ministry will work with Ministry of Energy and Mines to explore including their enforcement actions in the reporting. In 2012, the Ministry of Environment published all of its permits for industrial and municipal facilities that discharge waste into the environment, including mines. This dataset provides the opportunity for citizens to access province-wide data on those facilities, including information on fees, locations and discharges. The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015. The ministry will continue to publish further documents for all major mines in British Columbia. The ministries will report on trends and effectiveness of C&E in the mining sector.</p>
Part 3: Recommendations for Ministry of Energy and Mines	
<p>Recommendation 1.3 – Security – Adequate Coverage</p> <p>We recommend that government safeguard taxpayers by ensuring the reclamation liability estimate is accurate and that the security held by government is sufficient to cover potential costs.</p>	<p>Response:</p> <p>As seen in the 2014 Chief Inspector's Annual Report, "In the past few years, the value of security deposits has increased to reflect more closely the true costs of reclamation. The total value of securities held by the Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014."</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.4 – Security – Catastrophic Events We recommend that government review its security mechanisms to ensure taxpayers are safeguarded from the costs of an environmental disaster.</p>	<p>Response: Environmental disasters, like the one seen as a result of the Mount Polley tailing facility breach, can result in damage both on and off a mine site. It is the responsibility of the mine operator to ensure sufficient environmental liability insurance is held to meet the risk of such disasters. The Environmental Management Act contains authority for spill response actions and cost recovery to require persons in possession or control of any polluting substance to prepare contingency plans and to implement those plans at their expense in the event of a spill. The Act also provides for the recovery of costs should action to respond to a spill be declared by the Minister. This Act is being amended to proactively require potential polluters to pay into a spill preparedness and response organization. These amendments are due for introduction to the Legislature this year.</p>
<p>Recommendation 1.8 – Reclamation Guidance We recommend that government develop clear and comprehensive reclamation guidance for industry.</p>	<p>Response: Internal work has begun on developing additional guidance materials on a range of reclamation aspects, including erosion and sediment control plans, closure management manuals, reclamation security, etc.</p>
<p>Recommendation 1.11 – Systematic Compliance Verification We recommend that government systematically monitor and record compliance with high-risk mine permit requirements.</p>	<p>Response: As with Recommendation 1.10 above, a risk-based approach to compliance and enforcement workforce planning will uncover poor performers for closer scrutiny.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.13 – Mine Design</p> <p>We recommend that government adopt appropriate standards, review mine designs to ensure that they meet these standards, and ensure that mines, as constructed, reflect the approved design and standards.</p>	<p>Response:</p> <p>This recommendation is presented at the conclusion of the Audit Report section on the Mount Polley TSF breach. There had been nine design stages over the life of the TSF at Mount Polley Mine. All stages, including the design stage in place at the time of the breach had been prepared by the design engineer; a qualified professional. MEM reviewed and authorized permit amendments for each stage of the TSF. Each stage of construction was certified by the Engineer of Record in the as-built reports. The failure of the TSF was not an enforcement issue. Through legislation like the Engineers and Geoscientists Act, government has created technical bodies to formalize accountability and protect the public interest. As appropriate in their role, in response to the Expert Panel findings on Mount Polley the Association of Professional Engineers and Geoscientists BC is developing professional practice guidelines for dam site characterization assessments. Government is also undertaking a review of the Mining Code with labour, First Nations and industry representatives to determine how best to implement the expert panel findings.</p>
Part 4: Recommendations for Ministry of Environment	
<p>Recommendation 1.5 – Environmental Management Act Waste Discharge Fees</p> <p>We recommend that government review its fees under the <i>Environmental Management Act</i> and ensure that the fees are effective in reducing pollution at mine sites.</p>	<p>Response:</p> <p>The Ministry of Environment is committed to reviewing the fee structure for waste discharges under the Environmental Management Act. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.</p>
<p>Recommendation 1.6 – Cost Recovery</p> <p>We recommend that government adopt a cost recovery model for permitting and compliance verification activities that is consistent across all ministries in the natural resources sector.</p>	<p>Response:</p> <p>The Ministry of Environment recognizes that other natural resource sector ministries, including the Environmental Assessment Office, have begun imposing fees on industry for permitting and compliance verification activities. The ministry will be examining the imposition of fees for these activities. Effective April 1, 2015 permit fees were introduced under the Mines Act and the existing inspection fees were raised. This enabled a budget increase of approx. \$9.3M to the Ministry of Energy and Mines in Budget 2016.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations

Recommendation 1.7 – Decision Making – Use of section 137 of the *Environmental Management Act*

We recommend that government publically disclose its rationale for granting a permit under section 137 of the *Environmental Management Act*. Specifically, information should include how factors such as economic, environmental, and social attributes were considered in the determination of public interest.

Response:

As provided for in Section 137 of the Environmental Management Act, Cabinet may consider factors that are in the public interest and beyond those that a ministry director may consider. Discussions underlying the approval of an OIC are a matter of Cabinet confidentiality. However, the results of Cabinet decisions, when they are issued in the form of OICs, are published on the BC Laws website.

BC MINING

COMPLIANCE AND ENFORCEMENT

STRATEGIC PLAN

Ministry of Energy and Mines
Ministry of Environment
Environmental Assessment Office



I. INTRODUCTION

This Mining Compliance & Enforcement Strategic Plan outlines government's vision for mining oversight in the province of British Columbia as follows:

"Achieving enhanced protection of the environment, human health and public safety through an integrated risk-based approach to mining oversight."

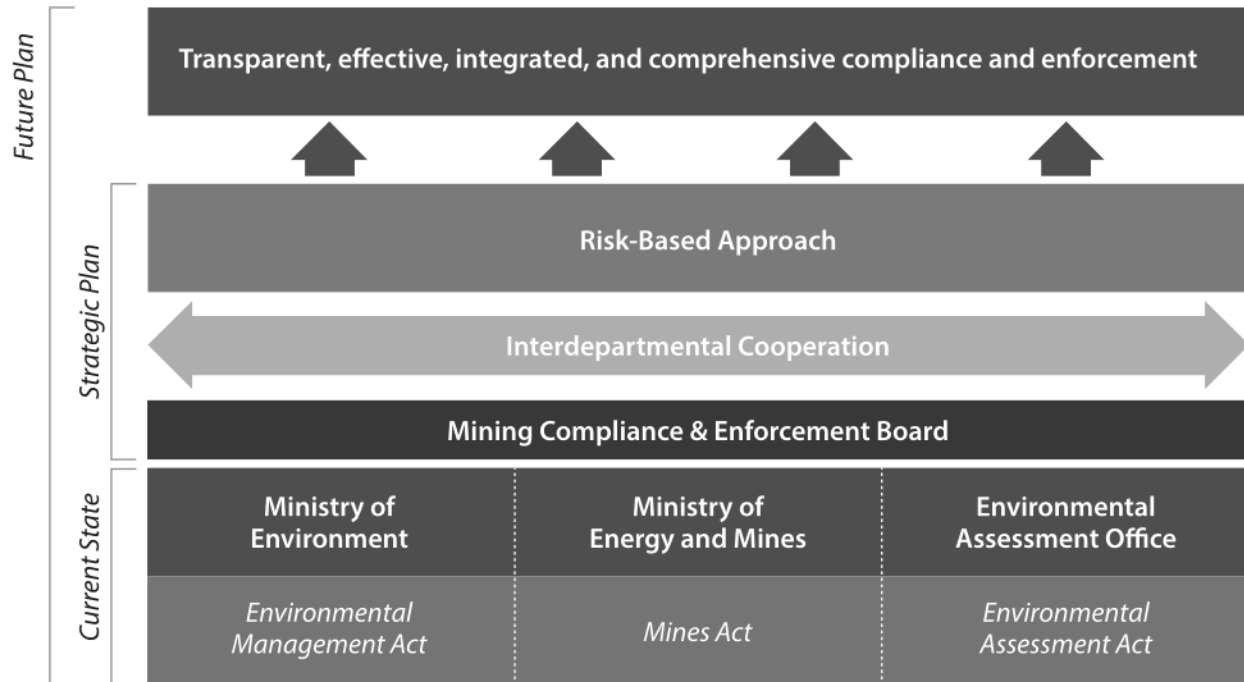
In spring 2016, government established the Deputy Minister Mining Compliance and Enforcement Board (the Board) to help achieve this vision by strengthening the effectiveness of mining oversight across government. The Board comprises the Deputy Minister of Energy and Mines (MEM), the Deputy Minister of Environment (MOE) and the Associate Deputy Minister of the Environmental Assessment Office (EAO).

This plan is informed by the recommendations following investigations into the Mount Polley tailings facility breach and the Office of the Auditor General report on mining compliance and enforcement, and formalizes the integration and coordination of the three agencies' mining compliance and enforcement efforts under the direction of the Board. It also sets out five strategic objectives based on principles of comprehensive compliance and enforcement (C&E), transparency, and engagement with First Nations, communities and industry.

STRATEGIC PLAN OBJECTIVES

- 1** *Integrate a risk-based approach and coordinate resources across the sector*
- 2** *Increase public confidence in how government manages mining across the province*
- 3** *Strengthen linkages between mining C&E and Aboriginal groups*
- 4** *Promote compliance with regulatory requirements*
- 5** *Enhance policy, tools and training to support a comprehensive C&E program*

PROGRESSION TOWARDS MINING COMPLIANCE AND ENFORCEMENT INTEGRATION

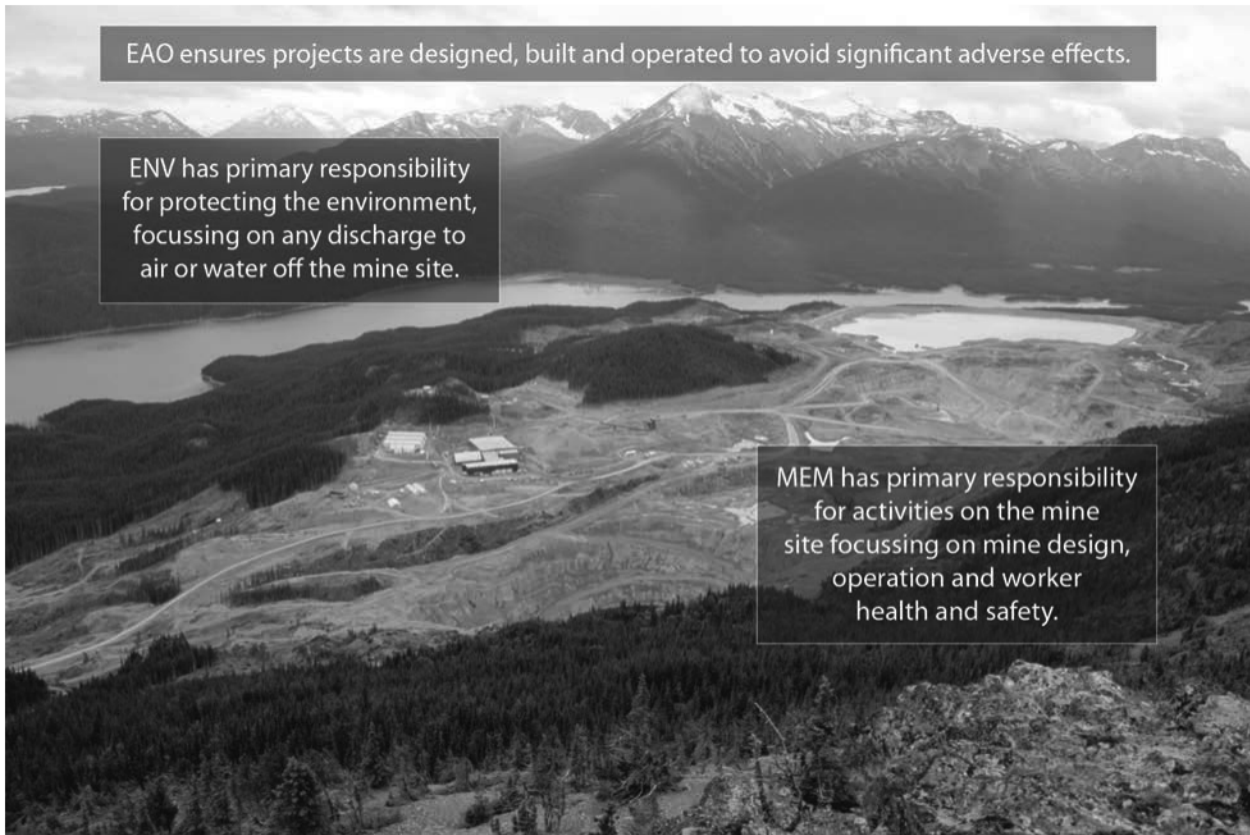


II. REGULATORY OVERSIGHT

It is important to consider B.C.'s regulatory environment when developing a strategic plan for mining oversight, since there are a number of agencies involved. B.C.'s mining sector is governed by a regulatory framework that covers the time from which a mining project is proposed to well into mine closure, including ongoing management of the mine and protection of the surrounding environment. The Environmental Assessment Office, the Ministry of the Environment, and the Ministry of Energy and Mines work together through all stages to ensure mine projects meet all requirements of this regulatory framework.

Additionally, a variety of regulatory partners, including the Ministry of Forests Lands and Natural Resource Operations as well as First Nations, federal and local governments have input into aspects of oversight of mines.

This starts at the authorization stage as proposed projects undergo thorough review to ensure they meet B.C.'s high regulatory standards and potential adverse effects are avoided or mitigated before a project is developed. The ministries and agencies then work together to ensure approved project designs and authorization conditions are adhered to throughout the life of the mine.



III. 2017-2019 STRATEGIES AND KEY ACTIONS

VISION

Enhanced protection of the environment, human health and public safety through an integrated risk-based approach to mining oversight.

PRINCIPLES

- Ensure open, transparent and timely access to mine information
- Engage First Nations, communities and industry in relation to mining compliance and enforcement activities
- Effective and robust C&E program

STRATEGIC OBJECTIVES

1 *Integrate a risk-based approach and coordinate resources across the sector*

STRATEGIES:

- Guide all mining C&E strategic and operational activities based on common risk management framework
- Effectively coordinate on-the-ground activities for major mines
- Optimize human and financial resources to most effectively protect the environment, human health and public safety

KEY ACTIONS:

- Develop and implement a risk framework and risk registers
- Establish and implement a C&E Coordination Committee for Major Mines
- Produce an annual work plan highlighting operational objectives, targets and key milestones

2 *Increase confidence in how government manages mining across the province*

STRATEGIES:

- Ensure mining C&E activities are transparent and open to the public
- Formalize risk management approach to potential mine reclamation liabilities
- Explore use of a dedicated investigative unit

KEY ACTIONS:

- Develop a website where the public can easily access information on major mines in British Columbia
- Update reclamation assurance policy considering best practices in BC and other jurisdictions
- Report out annually on progress in implementing the mining C&E strategic plan through the annual planning and reporting cycle

3 *Strengthen linkages between mining C&E and First Nations*

STRATEGIES:

- Increase opportunities for First Nations to engage during mining authorizations
- Increase opportunities for First Nations to participate in compliance oversight of mines in B.C.

KEY ACTIONS:

- Expand use of collaboration plans with First Nations during environmental assessments and permitting processes
- Develop and offer opportunities for First Nations to participate in compliance oversight of mines

4 *Promote compliance with regulatory requirements*

STRATEGIES:

- Ensure conditions of authorizations are clear, enforceable and complementary
- Work with industry to determine needs for targeted compliance education and encourage best practices
- Increase compliance through education and awareness

KEY ACTIONS:

- Establish common principles for drafting enforceable conditions
- Conduct outreach to determine focus for mining guidance and education needs
- Develop and implement a proponent early education program

5 *Enhance policy, tools and training to support a comprehensive C&E program*

STRATEGIES:







- Provide inspectors with additional C&E tools to address non-compliance
- Explore opportunities where new technologies may be used to strengthen industry compliance
- Strengthen training for mining inspectors

KEY ACTIONS:

- Develop and implement Administrative Monetary Penalties under the Mines Act as an additional enforcement tool for responding to non-compliance
- Develop and pilot use of new information management technology for proponent compliance reporting
- Formalize and implement a cross-agency mining inspector training program

VI. IMPLEMENTATION

Implementation of the strategic plan is laid out in the table below, highlighting key periods of focus over the next three years. Progress will be reported annually, and the plan adjusted as required.

OBJECTIVE	STRATEGY	YEAR 1 - 2017	YEAR 2 - 2018	YEAR 3 - 2019
<i>Integrate a risk-based approach and coordinate resources across the sector</i>	Risk management guides all mining C&E strategic and operational activities			
	Effective coordination of on-the-ground activities for major mines			
	Optimize human and financial resources to most effectively protect the environment, human health and public safety			
<i>Increase confidence in how government manages mining across the province</i>	Mining C&E activities are transparent and open to the public			
	Formalize risk management approach to potential mine reclamation liabilities			
	Explore use of independent investigative services			

Strengthen linkages between mining C&E and First Nations	Increase opportunities for First Nations to engage during mining authorizations			
	Increase opportunities for First Nations to participate in compliance oversight of mines in B.C.			
Promote compliance with regulatory requirements	Increase compliance through education and awareness			
	Ensure permits are clear and enforceable			
	Work with industry to determine needs for targeted compliance education			
Enhance policy, tools, and training to support a comprehensive C&E program	Expand the C&E toolkit to address a diversity of non-compliances			
	Explore opportunities to strengthen organizational infrastructure through new innovative tools			
	Equip inspectors with cross-agency knowledge and awareness			

**MINISTRY OF ENERGY AND MINES,
MINISTRY OF ENVIRONMENT AND ENVIRONMENTAL ASSESSMENT OFFICE**

ISSUE: Mining Audit and Compliance and Enforcement Strategy

KEY MESSAGES:

- The recommendations of the Auditor General's report with regard to oversight by the Ministry of Energy and Mines (MEM) and the Ministry of Environment (ENV) of the mining sector were accepted.
- In response to the recommendations a Deputy Minister Mining Compliance and Enforcement (C&E) Board was established with membership from MEM, ENV as well as the Environmental Assessment Office (EAO) to oversee C&E planning across mineral exploration, environmental protection and development.
- The BC Mining C&E Strategic Plan outlines government's vision for integrated oversight of the sector by MEM, ENV and EAO.
- The Strategic Plan was released in February 2017 along with a number of measures including a new integrated BC Mine Information website, changes to the Health, Safety and Reclamation Code for Mines in BC, the addition of administrative monetary penalties under the Mines Act, and an independent report by Ernst and Young on reclamation securities.
- With Budget 2017, there is a budget increase of \$18 million over three years for mines permitting and oversight and an additional \$9 million for Environmental Management Act authorizations and C&E activities.

BACKGROUND:

- The Auditor General examined the Ministry of Energy and Mines and Ministry of Environment's compliance and enforcement programs and found they were inadequate to protect the Province from significant environmental risks.
- The Audit on Compliance and Enforcement of the Mining Sector was released in May 2016. The overall recommendation of the audit was to establish an integrated and independent C&E unit outside of MEM. In response, a Mining C&E Board was established and accepted the 16 sub-recommendations.
- The Mount Polley tailings facility breach in 2014 increased scrutiny of the mining sector. In addition to the Independent Expert Engineering Investigation and Review Panel Report (January 2015) and the Chief Inspector of Mines Investigation Report (December 2015) into Mount Polley, the Auditor General report criticized the oversight of mines.
- The audit also discussed at length degradation of water quality in the Elk Valley. Specifically, the Ministry of Environment was criticized for not addressing selenium level increases in the Elk Valley over a twenty year span and the lack of disclosure by Cabinet when it approved the Line Creek expansion permit.

- Significant progress has been made on the combined 43 recommendations from the Expert Panel, Chief Inspector of Mines and Auditor General reports.
- Changes have been made on how mining is done in BC including new policies, additional resources and funding to improve permitting processes and strengthen compliance and enforcement. Actions include:
 - A new C&E Board and a new Strategic Plan for compliance and enforcement of mining in B.C. that outlines government's three-year vision for mining oversight in the province.
 - Completion of Health and Safety portion of mining code (Code) review – updates to the Code based on the unanimous recommendations from the Code Review Committee chaired by the Chief Inspector of Mines which includes an equal number of representatives from First Nations, mine labour unions and industry.
 - Major changes to the management and oversight of Tailings Storage Facilities.
 - Administrative Monetary Penalties (AMP) regulations brought into force – regulations and related penalties for non-compliance with the *Mines Act* and Code.
 - Completion of a cross-jurisdictional review of reclamation securities and release of Ernst and Young reclamation securities report.
 - Launched the BC Mine Information website that provides greater transparency around mining operations in BC: <http://mines.nrs.gov.bc.ca/>.

NEXT STEPS IN THE AUDITOR FOLLOW UP PROCESS

- It is expected that Public Accounts Committee (PAC) will request an updated action plan in the summer of 2017 and a subsequent report out to the Committee in fall 2017. This will involve MEM and ENV providing a status update approximately one year after the initial plan was tabled immediately following release of the Audit.
- The Ministries will provide a self-assessment for each recommendation: 'Fully or substantially implemented', 'Partially implemented', 'Alternative action taken' or 'No action taken'.

ATTACHMENTS:

1. Recommendations from the Auditor General's Report on Mining
2. Recommendations from the Expert Panel Report and the Chief Inspector of Mines Investigation into Mount Polley
3. Mining C&E Board Terms of Reference
4. Mining C&E Strategic Plan

**MINISTRY OF ENERGY AND MINES,
MINISTRY OF ENVIRONMENT AND ENVIRONMENTAL ASSESSMENT OFFICE**

ISSUE: Mining Audit and Compliance and Enforcement Strategy

KEY MESSAGES:

- Government is committed to ensuring BC remains a leader in mining regulation with a robust and transparent compliance and enforcement (C&E) program.
- Government accepted the recommendations of the Auditor General's report on oversight by the Ministry of Energy and Mines (MEM) and the Ministry of Environment (ENV) of the mining sector.
- In response, government established a Deputy Minister Mining Compliance and Enforcement (C&E) Board with membership from MEM, ENV, as well as the Environmental Assessment Office (EAO), to oversee C&E planning across mineral exploration, environmental protection and development.
- The BC Mining C&E Strategic Plan outlines government's vision for integrated oversight of the sector by MEM, ENV and EAO.
- The Strategic Plan was released in February 2017 along with a number of measures, including a new integrated BC Mine Information website, changes to the Health, Safety and Reclamation Code for Mines in BC, the addition of administrative monetary penalties under the *Mines Act*, and an independent report by Ernst and Young on reclamation securities.
- With Budget 2017, Government has demonstrated its commitment to enhancing mining C&E with a budget increase of \$18 million over three years for mines permitting and oversight, and an additional \$9 million for *Environmental Management Act* authorizations and C&E activities.

BACKGROUND:

- The Auditor General examined the Ministry of Energy and Mines and Ministry of Environment's compliance and enforcement programs and found they were inadequate to protect the Province from significant environmental risks.
- The Audit on Compliance and Enforcement of the Mining Sector was released in May 2016. The overall recommendation of the audit was to establish an integrated and independent C&E unit outside of MEM. In response, government committed to establish the Mining C&E Board and accepted the 16 sub-recommendations.
- The Mount Polley tailings facility breach in 2014 increased scrutiny of the mining sector. In addition to the Independent Expert Engineering Investigation and Review Panel Report (January 2015) and the Chief Inspector of Mines Investigation Report (December 2015) into Mount Polley, the Auditor General

report re-fueled criticisms of the Government's oversight of mines using Mount Polley as a case study.

- The audit also discussed at length degradation of water quality in the Elk Valley. Specifically, the Ministry of Environment was criticized for not addressing selenium level increases in the Elk Valley over a twenty year span and the lack of disclosure by Cabinet when it approved the Line Creek expansion permit.
- Government has made significant progress on the combined 43 recommendations from the Expert Panel, Chief Inspector of Mines and Auditor General reports.
- Government has made changes to how mining is done in BC, including new policies, additional resources and funding, to improve permitting processes and strengthen compliance and enforcement. Actions include:
 - A new C&E Board and a new Strategic Plan for compliance and enforcement of mining in B.C. that outlines government's three-year vision for mining oversight in the province.
 - Completion of Health and Safety portion of mining code (Code) review – updates to the Code based on the unanimous recommendations from the Code Review Committee chaired by the Chief Inspector of Mines which includes an equal number of representatives from First Nations, mine labour unions and industry.
 - Major changes to the management and oversight of Tailings Storage Facilities.
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NEXT STEPS IN THE AUDITOR FOLLOW UP PROCESS

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ATTACHMENTS:

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Contact: Nathaniel Amann-Blake 45A
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 Date: May 2, 2017

Page 2 of 2

Mining Compliance and Enforcement Board

Terms of Reference

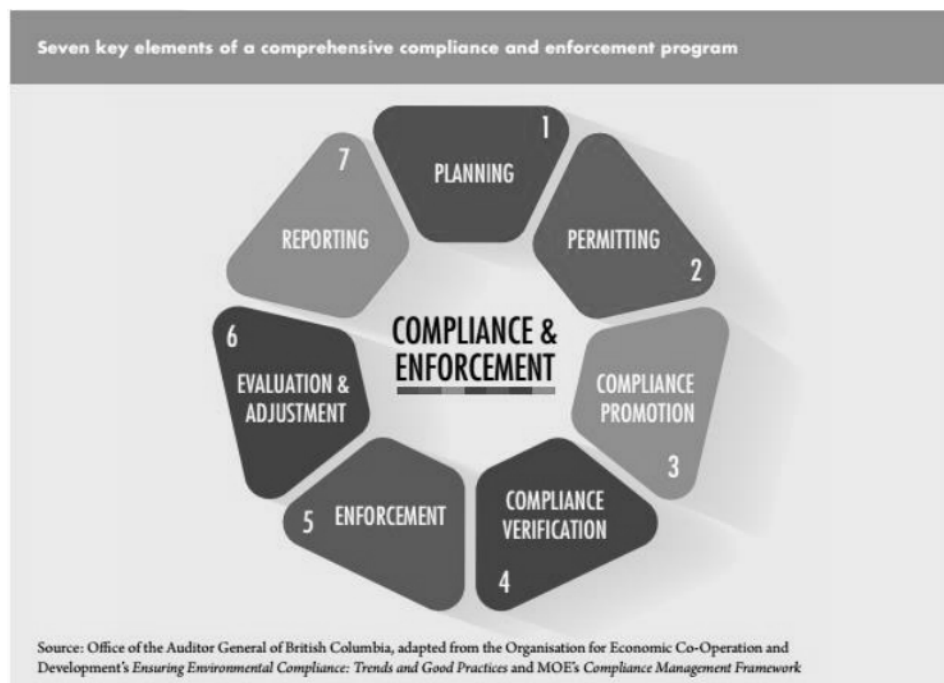
Purpose

The Mining Compliance and Enforcement Board (the Board) oversees compliance and enforcement planning across British Columbia in all aspects of mineral exploration and development with a key focus on environmental protection. This includes:

- Overseeing strategic improvements that enhance compliance and enforcement effectiveness through integration and coordination of planning, training, policies, procedures, tools, evaluation and public reporting for mines in British Columbia.
- Mapping out proactive annual activities that:
 - support continuous learning, evaluation and improvement,
 - are centered on a risk-based approach, and
 - are informed by key developments in other jurisdictions to ensure BC is a leader in the regulatory oversight of mining.

Scope

- The Board will provide focus, direction and accountability to ensure necessary improvements are made. The goal will be to regularize the changes and integrate into normal operations within 2 years or at the direction of the Board.
- The Board provides guidance and oversight to all compliance and enforcement activity for mines in British Columbia (including but not limited to the *Mines Act*, the *Environmental Management Act* and the *Environmental Assessment Act*).
- The Board ensures that mining compliance and enforcement activities across the sector are measured against seven key elements:



Deliverables

Responding to all OAG recommendations:

- Reporting to Public Accounts Committee on implementation.

Strategic Plan for Mining Compliance and Enforcement:

- Rolling two year plan detailing the activities of an integrated and coordinated regulatory approach. Identifies the necessary capacity, tools, training and expertise required to achieve goals and objectives. This may include opportunities for First Nations and industry input.

Annual Operational Plan for Mining Compliance and Enforcement:

- Annual work plan highlighting operational objectives, deployment of resources, budget and key milestones.

Reporting:

- Ongoing tracking and public reporting of C&E activities and initiatives.

Membership

The Board is comprised of representatives from the:

- Ministry of Energy and Mines (Deputy Minister)
- Ministry of Environment (Deputy Minister)
- Environmental Assessment Office (Associate Deputy Minister)
- The Executive Lead C&E (Secretariat)

Chair

- Deputy Minister, Ministry of Energy and Mines

Meetings

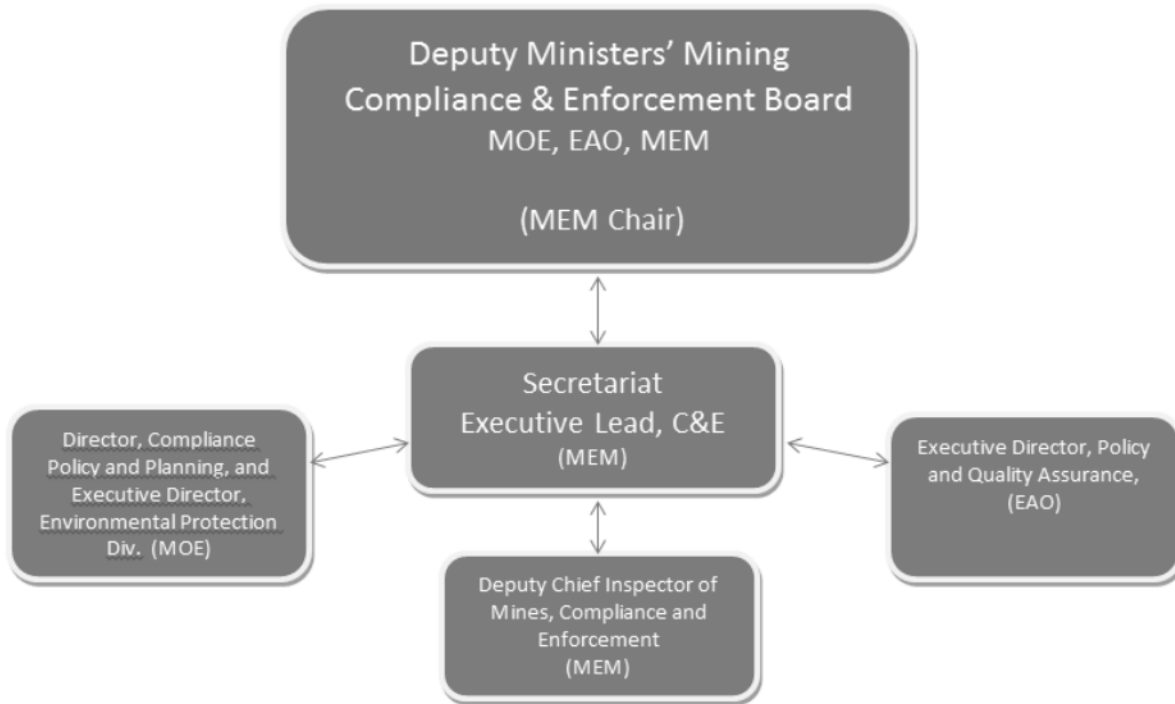
- The Mining C&E Board meets monthly or as needed.
- Standing agenda will include ministry reporting, priority concerns, 30-60-90 of C&E issues and items needing direction.
- There will be an annual cycle of planning and reporting with meetings:
 - February - *to approve strategic and operational plans*
 - October - *for an interim review*

Secretariat

- Where possible, agenda, and background documents will be provided by the Executive Lead to all Board members at least 48 hours prior to meeting.
- The Executive Lead C&E works with all the agencies to provide secretariat function for the Board. MOE Strategic Policy Branch and MOE Environmental Protection Division Regional Operations Branch, EAO Quality Assurance, and the Deputy Chief Inspector of Mines C&E are responsible for C&E within their respective agencies.

- Representatives supporting the secretariat will ensure ADM support and briefings where needed. The secretariat may also use an existing ADM committee (e.g. MMPO project Board or NRS ADMs) where cross agency information or direction is needed.

MINING COMPLIANCE AND ENFORCEMENT



Background

In May 2016, the Office of the Auditor General (OAG) released the report, An Audit of Compliance and Enforcement of the Mining Sector.

In the published OAG report, Government committed to establish a Mining Compliance and Enforcement Board to oversee an integrated and co-ordinated regulatory approach to mining in the province of B.C. The Board does not impact the existing powers or duties of any individual or agency engaged in the regulation of mining in BC, including any individuals charged with making statutory decisions under any applicable enactment.

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>1. Implement Best Available Technologies (BAT) using a phased approach.</p> <ul style="list-style-type: none"> • For existing tailings impoundments. Rely on best practices for the remaining active life. • For new tailings facilities (TSF). BAT should be actively encouraged for new tailings facilities at existing and proposed mines. • For closure. BAT principles should be applied to closure of active impoundments so that they are progressively removed from the inventory by attrition. 	<p>Changes made to the tailings portion of the Health, Safety and Reclamation Code for Mines in BC (Code):</p> <ul style="list-style-type: none"> • Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications • Environmental Assessment Office requires new mine projects to assess BAT for tailings management 	<p>Completed, July 2016</p>
<p>2. Improve corporate governance:</p> <ul style="list-style-type: none"> • Corporations proposing to operate a tailings storage facility (TSF) should be required to be a member of the Mining Association of Canada (MAC) or be obliged to commit to an equivalent program for tailings management, including the audit function. 	<p>Changes made to the tailings portion of the code:</p> <p>Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits</p> <ul style="list-style-type: none"> • The Mining Association of Canada (MAC) established independent expert task force to review its tailings management requirements under its Towards Sustainable Mining (TSM) program. Recommendations were released in December 2015 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>3. Expand corporate design commitments:</p> <ul style="list-style-type: none"> • Future permit applications for a new TSF should be based on a bankable feasibility that would have considered all technical, environmental, social and economic aspects of the project in sufficient detail to support an investment decision, which might have an accuracy of +/- 10-15%. More explicitly it should contain the following: <ul style="list-style-type: none"> • A detailed evaluation of all potential failure modes and a management scheme for all residual risk • Detailed cost/benefit analyses of BAT tailings and closure options so that economic effects can be understood, recognizing that the results of the cost/benefit analyses should not supersede BAT safety considerations • A detailed declaration of Quantitative Performance Objectives (QPOs). 	<p>Changes made to the tailings portion of the code:</p> <p>New permit application requirements for alternatives assessment of BAT, declaration of QPOs, and proposed program for prediction, identification and management of physical, chemical, and other risks associated with tailings storage facilities and dams.</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> • Environment • Society • Economics 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
<p>4. Enhance validation of safety and regulation of all phases of a TSF:</p> <ul style="list-style-type: none"> • Increase utilization of Independent Tailings Review Boards. • Utilize the concept of Quantitative Performance Objectives (QPOs) to improve regulator evaluation of ongoing facilities. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> • All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. • The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines. • Mines must submit an annual report to the Chief Inspector of Mines that include details on the activities of the mine's independent tailings review board including: <ul style="list-style-type: none"> • a summary of the reviews conducted that year; • whether the work reviewed that year by the ITRB meets the Board's expectations of reasonably good practice; • any conditions that compromise Tailings Storage Facility integrity or occurrences of non-compliance with recommendations from the engineer of record; and, • a signed acknowledgement by the members of the Independent Tailings Review Board, confirming that the report is a true and accurate representation of their reviews. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Expert Panel	Implementation	Status
5. Strengthen current regulatory operations: <ul style="list-style-type: none"> Utilize the recent inspections of TSFs in the province to ascertain whether they may be at risk due to the following potential failure modes and take appropriate actions <ul style="list-style-type: none"> Filter adequacy Water balance adequacy Undrained shear failure of silt and clay foundations 	<p>Final submissions received June 30, 2015. More information available here: http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/dam-safety-inspections-2014</p>	<p>Completed, June 2015</p>
6. Improve professional practice: <ul style="list-style-type: none"> Encourage the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) to develop guidelines that would lead to improved site characterization for tailings dams with respect to the geological, geomorphological, hydrogeological and possibly seismotectonic characteristics. 	<p>APEGBC professional practice guidelines for dam site characterization assessments</p> <p>https://www.apeg.bc.ca/getmedia/34e1bb3f-cd39-450d-800e-614ac3850bc5/APEG_2016_Site-Characterization-for-Dam-Foundations_WEB_2.pdf.aspx</p>	<p>Completed, August 2016</p>
7. Improve dam safety guidelines: <ul style="list-style-type: none"> Recognizing the limitations of the current Canadian Dam Association (CDA) guidelines incorporated as a statutory requirement, develop improved guidelines that are tailored to the conditions encountered with TSFs in British Columbia and that emphasize protecting public safety. 	<p>Changes made to the tailings portion of the code:</p> <p>The mining code now includes design standards for TSFs that are tailored to the conditions encountered in British Columbia and that emphasize protecting the public and environment including:</p> <ul style="list-style-type: none"> TSF design requirements for the steepness of downstream slopes. A minimum static factor of safety. New seismic and flood design criteria. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
1-1 Mine Dam Safety Manager <ul style="list-style-type: none"> Any mine with tailings storage facilities (TSFs) should have a qualified individual designated as a mine dam safety manager responsible for oversight of planning, design, operation, construction 	Changes made to the tailings portion of the code: <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall designate a TSF Qualified Person for safe management of the Tailings Storage Facility 	Completed, July 2016
1-2 Water Balance Management <ul style="list-style-type: none"> Water management and water balance issues for mining projects must be designed by a qualified professional. These issues require the integration of relevant mine departments. 	Changes made to the tailings portion of the code: <ul style="list-style-type: none"> Impoundments, tailings storage facilities and water management facilities and dams shall be designed by a Professional Engineer Tailings storage facilities must have a water balance and water management plan for the permitted life of mine that is prepared by a qualified person Water balance and water management plans shall be reconciled annually and updated as required, after the commencement of operations 	Completed, July 2016

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>1-3 TSF Operations, Maintenance and Surveillance Manual</p> <ul style="list-style-type: none"> The mine manager should ensure the Operation, Maintenance and Surveillance manual (OMS) required by the Code for all impoundments adheres to applicable CDA and MAC guidelines. Additional guidance for the OMS should include incorporation of an annual risk assessment/risk management plan and relevant findings of an independent technical review board. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> An Operations, Maintenance and Surveillance (OMS) manual shall be prepared by one or more qualified person and submitted to the chief inspector prior to operation of the facilities The OMS manual must be reviewed annually and revised regularly during operations, decommissioning and closure of a tailings storage facility or dam and the the risk assessment for all tailings storage facilities and associated dams must also be reviewed annually to ensure that the quantifiable performance objectives and operating controls are current and manage the facility risks QPOs and operating controls are included as part of the OMS 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>1-4 Mine Emergency Response Plan</p> <ul style="list-style-type: none"> The mine manager must ensure that the Mine Emergency Response Plan (MERP) adheres to applicable regulations, is maintained on a regular basis for currency, incorporates appropriate response measures to emergencies including those involving the TSF, and is written and distributed in such format as to serve as a procedural guide during an emergency or other event. 	<p>Changes made to the Health and Safety portion of the Code (Part 3.7.1):</p> <ul style="list-style-type: none"> The manager shall develop a Mine Emergency Response Plan (MERP), which shall be kept up to date and followed in the event of an emergency; this plan must be tested annually and filed with the Chief Inspector. The Mine Emergency Response Plan must outline the response procedures, contain all of the elements required in the “Mine Emergency Response Plan Guidelines for the Mining Industry” include the emergency preparedness and response plans regarding tailings storage facilities, and include affected communities and First Nations in the identification of potential hazards, emergency communications and responses 	<p>Completed, February 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
1-5 Risk Recognition and Communication <ul style="list-style-type: none"> All mine personnel have a role to play in recognizing and reporting risk conditions, especially those that could affect health, safety and environmental protection; and should be educated in the recognition of conditions and events that could impact TSF safety or contravene applicable permit conditions and regulations. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> The engineer of record shall immediately notify the manager in writing of any unresolved safety issue that compromises the integrity of a tailings storage facility The OMS sets out information on QPOs, and performance goals for the mine and TSF. Ensuring employees have been trained in the use of the manual and its operational controls will provide the means for them to determine who to notify and will provide the education to know when an event or conditions occur that could impact TSF safety or integrity. 	<p>Completed, July 2016</p>
2-1 Design Objectives <ul style="list-style-type: none"> Tailings storage and water management systems and structures should be designed for worker and public safety and the protection of the environment. TSF design should incorporate a comprehensive feasibility assessment that considers technical, environmental, social, and economic aspects of the mining project in sufficient detail to support the submitted design. 	<p>Changes made to the tailings portion of the code:</p> <p>The alternatives assessment for TSFs will consider BAT and will provide a comparative analysis of options considering the following sustainability factors:</p> <ul style="list-style-type: none"> Environment Society Economics <p>Minimums have been outlined for Seismic and Flood Design Criteria, Design Slopes (2:1), Static Factor of Safety (1.5), Beach and Inundation Study and Failure Runout Assessments</p>	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
2-2 Independent Technical Review Board <ul style="list-style-type: none"> Mines with impoundments should each develop independent technical review boards (ITRB) to provide additional perspectives on site investigation, site selection, design, construction, maintenance, operations, surveillance, water management and closure. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> All existing mines in British Columbia with TSFs must establish an Independent Tailings Review Board by Dec. 31, 2016. The Terms of Reference and the proposed membership of the Independent Tailings Review Boards must be approved by the Chief Inspector of Mines. 	<p>Completed, July 2016</p>
3-1 Professional Reliance <ul style="list-style-type: none"> The Chief Inspector recognizes the necessity of reliance on professional practice for the design, construction, operation and closure of mines and mine facilities. The Regulator does not design the mine or associated structures, and thus is reliant on the professional practice of the designer. Reliance on professional practice requires that the organizations overseeing the professionals or developing guidelines and standards for the professional community incorporate best available practices into their oversight. 	<p>Changes made to the tailings portion of the code:</p> <p>The Code outlines requirements for the designation and reporting responsibility for the mine to designate an Engineer of Record who is a professional engineer.</p> <p>The Engineer of Record has a duty to report any unresolved safety issue that compromises the integrity of the TSF.</p> <p>Additionally, the Code sets out requirements for professionals or designated responsibilities for the creation of water management and water balance plans.</p>	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
3-2 Integration of Standards <ul style="list-style-type: none"> The Regulator should consider and incorporate as appropriate guidelines from these external associations as applicable and consistent with MEM objectives. 	<p>Changes made to the tailings portion of the code:</p> <p>Sections added specifying:</p> <p><u>10.1.8</u> Seismic and Flood Design Criteria, <u>10.1.9</u> Design Slopes <u>10.1.10</u> Minimum Factor of Safety <u>10.1.11</u> Breach and Inundation Study and Failure Runout Assessments</p> <ul style="list-style-type: none"> Mines with one or more tailings storage facilities shall develop and maintain a Tailings Management System that includes regular system audits 	<p>Completed, July 2016</p>
4-1 Review of the Code <ul style="list-style-type: none"> MEM should undertake a comprehensive review of the Code to ensure that the lessons learned and recommendations from this report are fully considered and appropriately incorporated; and that all relevant standards and guidelines from external bodies (such as MAC, CDA, and APEGBC) are fully considered in the review as appropriate. 	<p>The Minister of Energy and Mines appointed a Code Review Committee, pursuant to section 34 of the Mines Act in June 2015.</p>	<p>Completed, February 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>4-2 Life of Mine Planning for Permitting</p> <ul style="list-style-type: none"> Short-term, incremental Mines Act permit amendment applications can obscure life-of-mine conditions and long-term risks. The Regulator should ensure a perspective that spans the life of the mine be considered for Mines Act permit applications, while acknowledging that the nature of mining frequently requires changes to the life-of-mine plan. 	<p>Changes made to the tailings portion of the code:</p> <ul style="list-style-type: none"> A mine plan must be included in the Mines Act permitting application that includes an inventory of areas disturbed to date, and projected over the next 5 years and over the projected life of the mine Mine, environmental protection, reclamation and closure plans shall be prepared in consideration of the HSRC Guidance Document, by qualified professionals or persons who in the opinion of the chief inspector are qualified to perform the work. 	<p>Completed, July 2016</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>4-3 Investigation, Compliance and Enforcement Review</p> <ul style="list-style-type: none"> The Regulator must enhance its investigative capacity, as well as its ability to exercise its existing compliance and enforcement authority under the Mines Act and Code. A supported director-equivalent position specific to investigation, compliance and enforcement should be established to evaluate and oversee these roles. This oversight should extend to applying recommended standards to the Regulator's compliance and enforcement function. A full range of regulatory tools, such as incentives, administrative penalties, outside agency collaboration and other best practices should be considered. 	<p>Deputy Chief Inspector of Mines position in place.</p> <p>The legislation increased penalties available for court prosecutions under the act from \$100,000 and/or up to one year imprisonment to \$1 million and/or up to three years imprisonment</p> <p>Regulation for administrative penalties now in effect to enable penalties for non-compliance (February 2017)</p> <p>Deputy Minister Compliance and Enforcement board created to establish compliance and enforcement oversight.</p> <p>Budget lift for MEM for mines permitting and oversight.</p>	<p>Completed, February 2017</p>
<p>4-4 Geotechnical Oversight</p> <ul style="list-style-type: none"> The Regulator has a responsibility to oversee the decisions of the EoR. The Regulator must maintain sufficient technical capacity to conduct appropriate oversight of the professional opinions on which it relies. A Regulatory Dam Safety Manager dedicated to the coordinated regulatory oversight of tailings dams in the Province could be responsible for ongoing policy development, technical review, and inspection capacity as it relates to tailings impoundments. 	<p>The position of Dam Safety Manager within MEM has been created and filled. Dam Safety Manager to start April 1, 2017</p>	<p>Completed February, 2017</p>

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
4-5 Organizational Review of Inspectorate <ul style="list-style-type: none"> There exists an ongoing need to adequately support the increased tempo of review, monitoring and inspection that would be placed on MEM's inspectorate. It is recommended that a comprehensive internal review of operational and business practices be conducted. 	Organizational effectiveness strategy under review.	Underway
5-1 Internal Records Management <ul style="list-style-type: none"> A formal MEM management system of documentation for all mines from development to post-closure should be established. The system will assist the Chief Inspector in integrating regulatory oversight capabilities; assist with investigation, project tasking, formal documentation and indexing; and enhance the ability of MEM to meet the expectations for transparency and appropriate disclosure within the limits of privacy considerations. 	Records management systems under review.	Underway
6-1 Alignment of Regulatory Objectives <ul style="list-style-type: none"> Agency objectives (environmental protection, worker health and safety, facilities integrity) overlap but are not always integrated. MOE and MEM interests, disciplines and standards should be reviewed for alignment opportunities to support timely and effective program outcomes while optimally fulfilling the mandates of both agencies. 	<p>EAO, MEM and MOE board established to oversee compliance and enforcement oversight.</p> <p>Mining Compliance and Enforcement Strategic plan released. Optimization of resources to effectively coordinate activities for major mines, and protect the environment, human health and public safety.</p>	Underway

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
6-2 Permitting Process Alignment <ul style="list-style-type: none"> Separate permitting processes for MEM and MOE should be reviewed for opportunities to integrate and align these processes as appropriate to avoid duplication and increase efficiencies. 	<p>Integration between Ministry of Energy and Mines and Ministry of Environment is a key priority and the Major Mines Permitting Office was created in 2015.</p> <p>Permitting process is being led by the Major Mines Permitting Office which is accountable to a cross-sector project board. MMPO is working to ensure continuous improvement and process alignment.</p>	Completed 2015
7-1 Collaborative Education <ul style="list-style-type: none"> MEM, the industry, professional organizations, and educational institutions should continue to seek new collaborative opportunities to foster education (including formal academic, onsite or online employee-focused, public-facing, and professional continuing education). 	<p>Ongoing educational programs being supported by Mining Association of BC, BCIT, Community College School of Exploration and Mining, UBC, Northwest Community College and others.</p> <p>Early proponent education program under development to ensure understanding of regulatory requirements and encourage best practices</p>	Underway

**Update on Implementation of Recommendations
from the Expert Panel Report and the Chief Inspector of Mines Investigation Report**

Recommendation by Investigation Report from Chief Inspector of Mines	Implementation	
<p>7-2 Research and Development</p> <ul style="list-style-type: none"> Current technologies in tailings processing, dewatering, and discharge water treatment have not achieved a sufficient level of technical and economic feasibility in many projects. Both government and industry should support research and development efforts to improve these technologies for practical application. 	<p>Changes made to the tailings portion of the code:</p> <p>Government is now requiring an assessment of BAT/BAP under the new EAO requirements.</p> <p>Government participated in various initiatives such as the Mine Environment Neutral Drainage (MEND) Committee who commissioned a study on Tailings Management Technologies which was completed in 2016.</p> <p>Added a definition of Best Available Technology and the requirement of an alternatives assessment that considers BAT in future Mines Permit applications</p> <p>Environmental Assessment Office requires new mine projects to assess BAT for tailings management</p>	<p>Completed, July 2016</p>



OAG Audit of Compliance and Enforcement of the Mining Sector

Issue:

- Mining Audit and Compliance and Enforcement Strategy

Key Messages:

- The recommendations of the Auditor General's report with regard to oversight by the Ministry of Energy and Mines (MEM) and the Ministry of Environment (ENV) of the mining sector were accepted.
- In response to the recommendations a Deputy Minister Mining Compliance and Enforcement (C&E) Board was established with membership from MEM, ENV as well as the Environmental Assessment Office (EAO) to oversee C&E planning across mineral exploration, environmental protection and development.
- The BC Mining C&E Strategic Plan outlines government's vision for integrated oversight of the sector by MEM, ENV and EAO.
- The Strategic Plan was released in February 2017 along with a number of measures including a new integrated BC Mine Information website, changes to the Health, Safety and Reclamation Code for Mines in BC, the addition of administrative monetary penalties under the Mines Act, and an independent report by Ernst and Young on reclamation securities.
- With Budget 2017, there is a budget increase of \$18 million over three years for mines permitting and oversight and an additional \$9 million for Environmental Management Act authorizations and C&E activities.

Background:

- The Auditor General examined the Ministry of Energy and Mines and Ministry of Environment's compliance and enforcement programs and found they were inadequate to protect the Province from significant environmental risks.
- The Audit on Compliance and Enforcement of the Mining Sector was released in May 2016. The overall recommendation of the audit was to establish an integrated and independent C&E unit outside of MEM. In response, a Mining C&E Board was established and accepted the 16 sub-recommendations.
- The Mount Polley tailings facility breach in 2014 increased scrutiny of the mining sector. In addition to the Independent Expert Engineering Investigation and Review Panel Report (January 2015) and the Chief Inspector of Mines Investigation Report (December 2015) into Mount Polley, the Auditor General report criticized the oversight of mines.
- The audit also discussed at length degradation of water quality in the Elk Valley. Specifically, the Ministry of Environment was criticized for not addressing selenium level increases in the Elk Valley over a twenty year span and the lack of disclosure by Cabinet when it approved the Line Creek expansion permit.



- Significant progress has been made on the combined 43 recommendations from the Expert Panel, Chief Inspector of Mines and Auditor General reports.
- Changes have been made on how mining is done in BC including new policies, additional resources and funding to improve permitting processes and strengthen compliance and enforcement. Actions include:
 - A new C&E Board and a new Strategic Plan for compliance and enforcement of mining in B.C. that outlines government's three-year vision for mining oversight in the province.
 - Completion of Health and Safety portion of mining code (Code) review – updates to the Code based on the unanimous recommendations from the Code Review Committee chaired by the Chief Inspector of Mines which includes an equal number of representatives from First Nations, mine labour unions and industry.
 - Major changes to the management and oversight of Tailings Storage Facilities.
 - Administrative Monetary Penalties (AMP) regulations brought into force – regulations and related penalties for non-compliance with the *Mines Act* and Code.
 - Completion of a cross-jurisdictional review of reclamation securities and release of Ernst and Young reclamation securities report.
 - Launched the BC Mine Information website that provides greater transparency around mining operations in BC: <http://mines.nrs.gov.bc.ca/>.

Next steps in the Auditor follow up process:

- It is expected that Public Accounts Committee (PAC) will request an updated action plan in the summer of 2017 and a subsequent report out to the Committee in fall 2017. This will involve MEM and ENV providing a status update approximately one year after the initial plan was tabled immediately following release of the Audit.
- The Ministries will provide a self-assessment for each recommendation: 'Fully or substantially implemented', 'Partially implemented', 'Alternative action taken' or 'No action taken'.

Attachments

1. Recommendations from the Auditor General's Report on Mining
2. Recommendations from the Expert Panel Report and the Chief Inspector of Mines Investigation into Mount Polley
3. Mining C&E Board Terms of Reference
4. Mining C&E Strategic Plan

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
Part 1: Recommendations for Government	
<p>Recommendation 1.0 – Overall Recommendation</p> <p>We recommend that the Government of British Columbia create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment.</p> <p>Given that the Ministry of Energy and Mines is at high risk of regulatory capture, primarily because MEM's mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.</p>	<p>Response:</p> <p>It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure. Many provincial governments across Canada have agencies and ministries with the role of promoting and regulating an industry. In the absence of evidence by the Auditor General that this has compromised the integrity of the ministry or its staff, Government does not support the need for a reorganization of the ministries; however we are prepared to further discuss this with the OAG. Government will establish a Mining C&E Board that will address the need for greater integration between the ministries, as well as with the Environmental Assessment Office.</p>
Part 2: Recommendations for Ministry of Energy and Mines and Ministry of Environment	
<p>Recommendation 1.1 – Strategic Planning</p> <p>We recommend that government develop a strategic plan that would detail the activities of an integrated and coordinated regulatory approach, and the necessary capacity, tools, training and expertise required to achieve its goals and objectives.</p>	<p>Response:</p> <p>A Mining C&E Board will be established to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. The Board will develop compliance and enforcement plans to map out proactive annual activities based on a risk-based approach. The board will also be responsible for furthering longer term strategic improvements in other areas such as: enhancing training; developing policies, procedures and tools; conducting evaluations; and expanding public reporting. MEM will appoint a new Deputy Chief Inspector of Mines for compliance and enforcement to oversee and implement improved C&E.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.2 – Permit Language</p> <p>We recommend that government ensure both historical and current permit requirements are written with enforceable language.</p>	<p>Response:</p> <p>The ministries agree that permits must be written with measureable and enforceable requirements. Both ministries will develop policy to ensure enforceable and measurable requirements are used in all new and amended permits.</p>
<p>Recommendation 1.9 – Incentives</p> <p>We recommend that government create effective incentives to promote environmentally responsible behavior by industry.</p>	<p>Response:</p> <p>The ministries agree that it is useful to consider incentives as part of the compliance and enforcement regime governing mines and will continue to consider additional opportunities to recognize and reward good environmental performers. Furthermore, it is expected that expanded public reporting of compliance and enforcement activities will serve as a very effective incentive for promoting environmentally responsible behaviour.</p>
<p>Recommendation 1.10 – Risk-Based Approach</p> <p>We recommend that government develop a risk-based approach to compliance verification activities, where frequency of inspections are based on risks such as industry's non-compliance record, industry's financial state, and industry's activities (e.g., expansion), as well as risks related to seasonal variations.</p>	<p>Response:</p> <p>Compliance verification activities conducted by the ministries are founded on a risk-based approach; however, the ministries commit to review policies in this regard. The annual compliance and enforcement planning that will take place at the Mining C&E Board, established under recommendation 1.1, will also be risk-based to optimize the capacity and effectiveness of the ministries' collective compliance and enforcement resources.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.12 – Qualified Professionals</p> <p>We recommend that government establish policies and procedures for the use and oversight of qualified professionals (QP) across the natural resources sector. These policies and procedures should have the following:</p> <ul style="list-style-type: none"> • guidance for staff that outlines the specific nature and amount of oversight expected of a QP's work • guidance for staff as to expected timeframe for review and response to QP reports • updated guidance for staff for recognizing and responding to misconduct by a QP • controls in place to ensure that there is no undue influence on the QPs by industry • controls in place to ensure that recommendations by QPs are adhered to 	<p>Response:</p> <p>MEM's efforts are guided by the Mines Act and the Health, Safety and Reclamation Code for Mines in British Columbia. In particular, the Code Review currently underway is considering specific matters such as the need for a qualified individual designated as a mine dam safety manager to oversee all work associated with a tailings storage facility and will clarify the roles and responsibilities of the Engineer of Record at a mine. The Mining C&E Board, established under recommendation 1.1, will consider how MoE and MEM can strengthen the use and oversight of qualified professionals in the mining sector specifically. The Ministry of Forests, Lands and Natural Resource Operations has established a Qualified Persons in the Natural Resource Sector Framework. This framework guides the development and implementation of Qualified Persons policies and procedures specifically for the mining sector. The framework is based on the three essential components of guidance, competency and accountability and ensures the interests of government, resource users, qualified persons and other stakeholders are recognized and addressed.</p>
<p>Recommendation 1.14 – Policies, Procedures and Tools</p> <p>We recommend that government develop policies, procedures and enforcement tools for responding to non-compliances when industry does not meet government's specified timeline.</p>	<p>Response:</p> <p>The ministries agree on the importance of clear policies, procedures and tools to aid in their compliance and enforcement activities. The ministries will review these in light of the recommendations. The establishment of the Mining C&E Board, under recommendation 1.1, will serve to further inter-ministry collaboration and sharing of best practices. Government will also introduce amendments to the Mines Act to provide for Administrative Monetary Penalties in the spring 2016 legislative session.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.15 – Evaluation and Adjustment</p> <p>We recommend government regularly evaluate the effectiveness of its compliance promotion, compliance verification, and enforcement activities and tools, and make changes as needed to ensure continuous improvement.</p>	<p>Response:</p> <p>Annual compliance and enforcement planning and reporting will provide a means to evaluate the effectiveness of the program, to ensure ongoing improved targeting of areas of concern and recognition of strong performers. The ministries will address this recommendation through the establishment of a Mining C&E Board under recommendation 1.1.</p>
<p>Recommendation 1.16 – Public Reporting</p> <p>We recommend that government report publicly the:</p> <ul style="list-style-type: none"> • results and trends of all mining compliance and enforcement activities • effectiveness of compliance and enforcement activities in reducing risks and protecting the environment • estimated liability and the security held for each mine. 	<p>Response:</p> <p>The ministries support public reporting and have been making progress in this area. The Ministry of Environment has been reporting its enforcement actions for many years through published reports and an online searchable database. It reports all of its enforcement actions including orders, administrative sanctions, administrative monetary penalties, violation tickets and court prosecutions. The ministry will work with Ministry of Energy and Mines to explore including their enforcement actions in the reporting. In 2012, the Ministry of Environment published all of its permits for industrial and municipal facilities that discharge waste into the environment, including mines. This dataset provides the opportunity for citizens to access province-wide data on those facilities, including information on fees, locations and discharges. The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015. The ministry will continue to publish further documents for all major mines in British Columbia. The ministries will report on trends and effectiveness of C&E in the mining sector.</p>
Part 3: Recommendations for Ministry of Energy and Mines	
<p>Recommendation 1.3 – Security – Adequate Coverage</p> <p>We recommend that government safeguard taxpayers by ensuring the reclamation liability estimate is accurate and that the security held by government is sufficient to cover potential costs.</p>	<p>Response:</p> <p>As seen in the 2014 Chief Inspector's Annual Report, "In the past few years, the value of security deposits has increased to reflect more closely the true costs of reclamation. The total value of securities held by the Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014."</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.4 – Security – Catastrophic Events We recommend that government review its security mechanisms to ensure taxpayers are safeguarded from the costs of an environmental disaster.</p>	<p>Response: Environmental disasters, like the one seen as a result of the Mount Polley tailing facility breach, can result in damage both on and off a mine site. It is the responsibility of the mine operator to ensure sufficient environmental liability insurance is held to meet the risk of such disasters. The Environmental Management Act contains authority for spill response actions and cost recovery to require persons in possession or control of any polluting substance to prepare contingency plans and to implement those plans at their expense in the event of a spill. The Act also provides for the recovery of costs should action to respond to a spill be declared by the Minister. This Act is being amended to proactively require potential polluters to pay into a spill preparedness and response organization. These amendments are due for introduction to the Legislature this year.</p>
<p>Recommendation 1.8 – Reclamation Guidance We recommend that government develop clear and comprehensive reclamation guidance for industry.</p>	<p>Response: Internal work has begun on developing additional guidance materials on a range of reclamation aspects, including erosion and sediment control plans, closure management manuals, reclamation security, etc.</p>
<p>Recommendation 1.11 – Systematic Compliance Verification We recommend that government systematically monitor and record compliance with high-risk mine permit requirements.</p>	<p>Response: As with Recommendation 1.10 above, a risk-based approach to compliance and enforcement workforce planning will uncover poor performers for closer scrutiny.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations	
<p>Recommendation 1.13 – Mine Design</p> <p>We recommend that government adopt appropriate standards, review mine designs to ensure that they meet these standards, and ensure that mines, as constructed, reflect the approved design and standards.</p>	<p>Response:</p> <p>This recommendation is presented at the conclusion of the Audit Report section on the Mount Polley TSF breach. There had been nine design stages over the life of the TSF at Mount Polley Mine. All stages, including the design stage in place at the time of the breach had been prepared by the design engineer; a qualified professional. MEM reviewed and authorized permit amendments for each stage of the TSF. Each stage of construction was certified by the Engineer of Record in the as-built reports. The failure of the TSF was not an enforcement issue. Through legislation like the Engineers and Geoscientists Act, government has created technical bodies to formalize accountability and protect the public interest. As appropriate in their role, in response to the Expert Panel findings on Mount Polley the Association of Professional Engineers and Geoscientists BC is developing professional practice guidelines for dam site characterization assessments. Government is also undertaking a review of the Mining Code with labour, First Nations and industry representatives to determine how best to implement the expert panel findings.</p>
Part 4: Recommendations for Ministry of Environment	
<p>Recommendation 1.5 – Environmental Management Act Waste Discharge Fees</p> <p>We recommend that government review its fees under the <i>Environmental Management Act</i> and ensure that the fees are effective in reducing pollution at mine sites.</p>	<p>Response:</p> <p>The Ministry of Environment is committed to reviewing the fee structure for waste discharges under the Environmental Management Act. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.</p>
<p>Recommendation 1.6 – Cost Recovery</p> <p>We recommend that government adopt a cost recovery model for permitting and compliance verification activities that is consistent across all ministries in the natural resources sector.</p>	<p>Response:</p> <p>The Ministry of Environment recognizes that other natural resource sector ministries, including the Environmental Assessment Office, have begun imposing fees on industry for permitting and compliance verification activities. The ministry will be examining the imposition of fees for these activities. Effective April 1, 2015 permit fees were introduced under the Mines Act and the existing inspection fees were raised. This enabled a budget increase of approx. \$9.3M to the Ministry of Energy and Mines in Budget 2016.</p>

Recommendations from the Auditor General's Report on Mining

Auditor General Recommendations

Recommendation 1.7 – Decision Making – Use of section 137 of the *Environmental Management Act*

We recommend that government publically disclose its rationale for granting a permit under section 137 of the *Environmental Management Act*. Specifically, information should include how factors such as economic, environmental, and social attributes were considered in the determination of public interest.

Response:

As provided for in Section 137 of the Environmental Management Act, Cabinet may consider factors that are in the public interest and beyond those that a ministry director may consider. Discussions underlying the approval of an OIC are a matter of Cabinet confidentiality. However, the results of Cabinet decisions, when they are issued in the form of OICs, are published on the BC Laws website.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Mineral and Coal Tenure in B.C.

KEY MESSAGES:

- The Mineral Titles Branch of the Ministry of Energy and Mines (MEM) maintains the provincial registry of mineral, placer and coal rights on Crown and private land.
- Mineral tenure and coal tenure are governed by two separate statutes with different requirements.
- Mineral Titles Online is the ‘free entry’ online staking system that allows the holder of a free miner certificate to acquire mineral and placer claims on Crown and private land.
- The issuance of a coal licence from an application is a statutory decision and requires prior consultation on First Nations interests.

BACKGROUND:

- Mineral and placer titles are issued under the *Mineral Tenure Act*.
- The term ‘free entry’ means that the acquisition of mineral and placer claims are ‘staked online’ on provincial land that is not alienated (such as parks and Federal Indian Reserves) without prior consultation with First Nations or other interests.
- As of December 31, 2016, the mineral titles registry comprised over 38,000 active mineral and placer tenures covering approximately 8.3 million hectares of Crown and private land.
- The mineral rights acquired with a mineral or placer claim allow minimal use of the surface such as hand work and prospecting that does not involve mechanical disturbance.
- Formal notification to a landowner is required prior to accessing a claim area that is located on private land. If a land owner and claim holder are not able to agree on terms of access to a claim, they may ask the Chief Gold Commissioner to mediate, and failing that may appeal to the Surface Rights Board.
- If a claim holder wishes to conduct exploration or mining activity that involves mechanized disturbance, a permit under the *Mines Act* is required. As the issuance of a *Mines Act* permit is a statutory decision, the Crown has a duty to consult with First Nations to meet the requirements of the *Constitution Act*.
- Coal licences and leases are issued under the *Coal Act*.

- There are 1,129 coal licences and 24 coal leases in B.C. These coal tenures cover about 680,000 hectares of Crown and private land.
- The acquisition of coal tenure is not based on a 'free entry' system. An application for a coal licence is made to the Chief Gold Commissioner under the authority of the *Coal Act*.
- The Chief Gold Commissioner must consult with First Nations prior to issuing a Coal licence under the *Coal Act*.
- Any physical exploration and development work conducted on a coal licence area also requires a permit under the *Mines Act*. First Nations are consulted prior to a decision to issue a *Mines Act* permit.
- If a claim holder or coal licence holder wishes to develop a producing mine, they must convert the claim/licence area to a lease. This applies to both mineral and coal tenures, and the issuance of a lease is a statutory decision and requires consultation with First Nations.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: South East Wildlife Corridor

KEY MESSAGES:

- The BC Government recognizes the exceptional wilderness experience and the great richness and diversity of fish and wildlife in the south east of the province.
- The purpose of the South East Wildlife Corridor is to establish a wildlife and wildlife habitat management regime in the Elk-Flathead-Wigwam corridor to protect and enhance wildlife populations and their key habitats, and, in so doing, provide a balance to ongoing natural resource development in the region.
- The BC Government intends to pursue the South East Wildlife Corridor initiative in a balanced and measured way, taking the time to do it right.
- Important work on the Cumulative Effects Management Framework led by the Ministry of Forest, Lands and Natural Resource Operations needs to be completed first to contribute to important management objectives prior to the broader South East Wildlife Corridor being formally launched.
- The Ktunaxa Nation needs time to develop their vision for the area. The Province will also continue to engage with the Ktunaxa Nation to discuss a collaborative decision-making process.
- At the right time, when the initiative is ready to be formally launched, all stakeholders will be informed and have the ability to participate in a fair, transparent and equitable way.

BACKGROUND:

- The purpose of the South East Wildlife Corridor (Elk-Flathead Wildlife Enhancement Initiative) (the Project) is to establish a wildlife and wildlife habitat management regime in the Elk-Flathead-Wigwam corridor to protect and enhance wildlife populations and their key habitats, and, in so doing, provide a balance to ongoing natural resource development in the region.
- In addition to having abundant coal and forest resources, the Elk Valley is exceptionally rich in fish and wildlife. Among the highest grizzly bear densities in the BC Interior, provincially significant Bighorn sheep, Mountain Goat, wolverine, robust populations of Elk, Westslope Cutthroat trout all support sustainable use by First Nations, residents and visitors.
- The Province recognizes the conservation values in the area and the importance of maintaining functioning habitat and a connected landscape. The pressures on this landscape are increasing with existing, approved, and proposed mine expansions and industrial forest activity.

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Estimate Note: 48

Page 1 of 2

- The establishment of a wildlife management area and connectivity corridor will help achieve stewardship objectives and increase the acceptability of expanded sustainable resource development in the Elk Valley.
- The Ktunaxa Nation Council has pressed the Province on properly managing for conservation values in the Elk Valley. They will be an important partner in crafting environmental mitigation options associated with industrial development in the Project area.
- The Ktunaxa have indicated that they will need to sufficient time to reflect on and discuss Ktunaxa values on the landscape with their communities in preparation for a collaborative process with the Province.
- Teck and Canfor approached government in June 2015 indicating their support for the Project and their willingness to contribute in a meaningful way at the appropriate juncture.
- Other stakeholder groups have also approached government supporting the need to maintain the wilderness experience for future generations, and have expressed a desire to participate in any future process. These groups include recreational and commercial hunting and fishing organizations as well as environmental organizations.
- The Ministry of Forest, Lands and Natural Resource Operations is developing a pilot Cumulative Effects Management Framework in the Elk Valley which includes participation from government ministries, Ktunaxa Nation, industry and environmental stakeholders. The outcome of this framework will be critical in laying out the groundwork for much of the South East Wildlife Corridor Project work. The pilot is expected to be completed sometime in fall-winter 2016.
- It is expected that the background Project work for fiscal 2016/17 will be done in- house and no specific additional funding has been identified at this time.
- Once the background work is completed, a formal stakeholder and public engagement process will be developed in collaboration with the Ktunaxa Nation, which will include a comprehensive communication plan.

**MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION**

ISSUE: Compensation: Uranium and Thorium Exploration Ban

KEY MESSAGES:

- In 2008, the Government announced a ban on uranium and thorium exploration and that ban remains in effect.
- As a result of these actions, there have been requests for compensation from affected tenure holders, including some legal challenges.
- It would be inappropriate to comment on any of the legal cases that are presently before the courts.

BACKGROUND:

- The *Mineral Tenure Act* requires that holders of mineral tenures expropriated for the creation of parks after January 1999 be fairly compensated, thereby creating more certainty for mining investors. The compensation process is laid out in the Mining Rights Compensation Regulation.
- The Province currently has no regulation providing for compensation to holders of tenures in other circumstances.

Uranium and Thorium Exploration and Development Ban

- In April 2008, the Government announced it would not support uranium exploration and, pursuant to a regulation of the Chief Gold Commissioner, stopped including the right to explore for uranium and thorium in mineral claims issued after that date.
- In March 2009, through an Order in Council under the *Environment and Land Use Act*, Cabinet banned the Chief Inspector of Mines from issuing any permits to explore for uranium and thorium.
- As a result of these actions, there have been requests for compensation from a few tenure holders, including some legal challenges.

Boss Power Uranium Claims

- Boss Power Corporation owned 100% of the shares of Blizzard Uranium Corp. Blizzard Uranium Corp was the recorded holder of a number of mineral claims in the Okanagan near Kelowna. As a result of the uranium exploration ban, Boss Power took legal action against the Province.
- In October 2011, the Province agreed to a \$30 million settlement with Boss Power on condition that Boss Power surrender the Blizzard mineral claims.
- An agreement was reached in May 2014, and Boss Power/Blizzard Uranium surrendered all of the mineral claims in exchange for the final settlement amount.

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MEM Mines and Mineral Resources Division – 2017 Priorities

Top Ten:

Issue	Activities	Time Lines	Lead/Support
Report back to public accounts on OAG recommendations	<ul style="list-style-type: none"> Report back on government's (MEM and MoE) implementation of OAG recommendations 	Fall 2017	Nate/Tania
First Nations Engagement	<ul style="list-style-type: none"> Engagement with MARR on revenue sharing and reconciliation approaches Determine how to engage First Nations on C&E and monitoring over life of mine Examine approaches to free entry in other jurisdictions Developing BN assessing options regarding mineral tenure on IR 	Ongoing	Peter R/Amy/Peter C
		Ongoing	Nate/Peter C
		Summer 2017	Mark M/Chris
		Fall 2017	Mark M/Peter W
Compliance and Enforcement Policy	<ul style="list-style-type: none"> Implement Administrative Penalty program Determine and implement effective structure for Prosecutorial Investigations Develop escalating enforcement policy Develop compliance tracking system Develop and deliver core mines inspector training curriculum Publish common C/E operational plan with EAO and MoE Develop reclamation security policy 	Ongoing	Nate/Tania
		Fall 2017	
		Ongoing	
		Ongoing Summer 2017	
		Direction summer 2017	
Stakeholder Engagement	<ul style="list-style-type: none"> Work with industry (AME/MABC) to address issues related to competitiveness, fluctuating commodity prices and clarify engagement framework Develop workplan to address priority issues 	Ongoing	Peter/Chris
		Summer 2017	Peter W
Taseko NoW	<ul style="list-style-type: none"> New Prosperity submitted their NoW application for New Prosperity; the Province is 	Mid-June for decision	Jule/Kate P

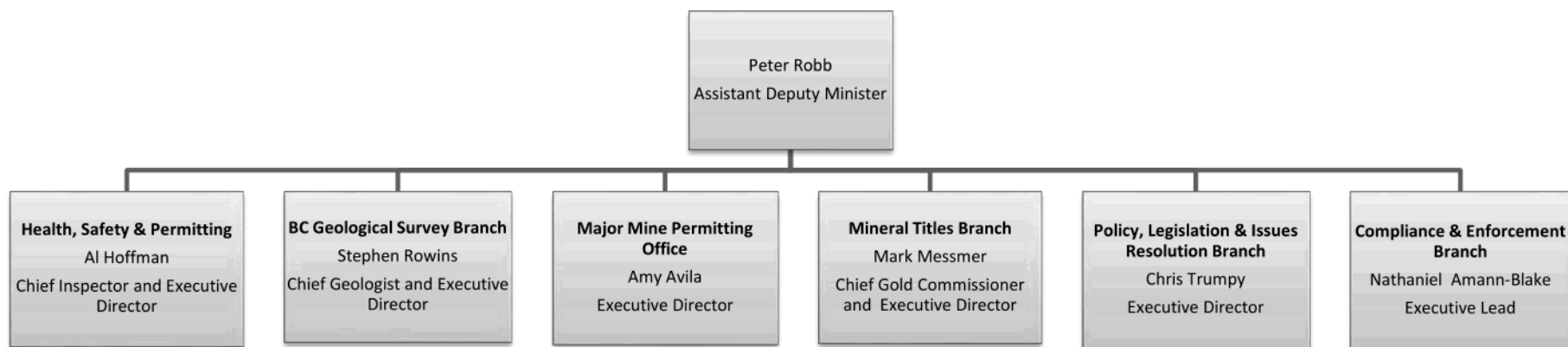
Issue	Activities	Time Lines	Lead/Support
	<p>considering the application and has consulted with the Tsilhqot'in National Government (TNG).</p> <ul style="list-style-type: none"> The TNG have stated they will pursue court action to stop work by Taseko if the Notice of Work is approved by the SDM. Taseko has indicated they will pursue court action to overturn a negative decision by the SDM. 		
Work with the Government of Alaska to implement Memorandum of Understanding on Mining	<ul style="list-style-type: none"> Implementing Statement of Cooperation including finalizing joint water monitoring plan and reciprocal procedures To ensure success of MOU, Province continuing efforts to address legacy mining issues at Tulsequah Chief 	Ongoing	Kathy E
Placer Strategy	<ul style="list-style-type: none"> Ongoing development of strategy to address issues related to placer mining Fee Issue Paper on revenue options related to placer mining 	<p>Summer 2017</p> <p>Fall 2017</p>	Chris/Peter W
South Island Aggregates	<ul style="list-style-type: none"> South Island Aggregates' Ministry of Environment (MOE) permit to store contaminated soil has been revoked. MOE has received a draft closure plan to close the contaminated soil landfill. Once the closure plan is accepted in final by MOE, the MEM permit will be amended to reflect the closure plan. 	Summer 2017	Julie/Dave C
Major Mine Permitting	<ul style="list-style-type: none"> Continue to work with the mining sector to develop process improvements, coordinate with the EAO and other agencies to enhance alignment throughout the regulatory continuum, and establish innovative agreements with First Nations for the regulation of major mines. 	Ongoing	Amy
Ajax	<ul style="list-style-type: none"> MEM working with EAO, MARR, FLNR to implement Ajax 		Amy

Issue	Activities	Time Lines	Lead/Support
	<p>Government-to-Government (G2G) Agreement</p> <ul style="list-style-type: none"> The SSN claimed title to their traditional territory, including the Ajax project area, and held a separate but coordinated assessment process that resulted in the SSN issuing a “No” decision for the Ajax project. The coordinated Provincial and Federal Environmental Assessment process is scheduled to be referred to decision makers in Fall 2017; the EA found serious impacts to fishing, gathering, and cultural and spiritual use. 	Fall 2017	
Implement Organization Effectiveness Review	<ul style="list-style-type: none"> Implement recommendations from OER Continue to fill key vacancies (in progress of hiring 40 new staff) and implementing new TB funding Explore opportunities for improvements to health and safety branch 	<p>Ongoing</p> <p>Ongoing</p>	<p>Executive</p> <p>Al/Julie</p> <p>Al</p>
Major Mine Transformation Initiative	<ul style="list-style-type: none"> Clarify governance and seek funding on alignment between NRPP, NRS Imperatives and Transparency Initiative 	Fall 2017	Peter/Nate/Amy

Other Issues:

Issue	Activities	Time Lines	Lead/Support
Use of Autonomous Vehicles	<ul style="list-style-type: none"> Assessment of existing regulatory framework for UAVs including jurisdictional analysis 	July 2017	Al/Peter W/
Caribou Protection Activities	<ul style="list-style-type: none"> Ongoing engagement with Federal government and industry on caribou protection initiatives 	Ongoing	
Code Review	<ul style="list-style-type: none"> Stakeholders have requested an ongoing Code Review which will require a decision by an incoming Minister 	Fall 2017	

MINES AND MINERAL RESOURCES DIVISION ORG CHART APRIL 2017



Ministry of Energy and Mines
Transition 2017/18

Mines and Mineral Resources

Exploration

Exploration in B.C.....	1
British Columbia Geological Survey	2
Geoscience BC	3
Mining Exploration Tax Incentive Programs	4

Mine Development Projects

Mine Development Projects in B.C.	5
Ajax Copper-Gold Project.....	6
The Klappan and Tahltan	7
Blackwater Project.....	8
Brucejack Gold Mine Project	9
BURNCO Aggregate Project	10
Giscome Quarry and Lime Plant	11
Groundhog Anthracite Coal Project.....	12
Kemess Underground	13
CertainTeed Gypsum - Kootenay West	14
Meadows Quarry (Sheridan Hill)	15
Morrison Copper-Gold Project.....	16
Murray River Coal Mine Project.....	17

Ministry of Energy and Mines Transition 2017/18

Sukunka Project	18
Sumas Mountain	19
New Prosperity Notice of Work.....	20

Operating Mines

Operating Coal Mines in B.C.	21
Operating Metal Mines in B.C.....	22
Map – Operating Mines & Selected Major Exploration Projects in B.C .	23
Health and Safety at B.C. Mines	24
Mineral Tax Revenue Forecast	25
Revenue Sharing with First Nations	26
Financial Securities for Mines.....	27
Red Chris Copper-Gold Project.....	28
Southeast B.C. Coal Mines	29
South Island Aggregates	30

Closed Care and Maintenance Mines

Banks Island Gold (Yellow Giant)	31
Tulsequah Chief Mine	32
Conuma Coal Resources Ltd Projects.....	33

Ministry of Energy and Mines

Transition 2017/18

Mount Polley

Mount Polley (FN/LOU)	34
Mount Polley Investigations & Response – incl. 35A, 35B, 35C	35
Code Review.....	36

Policy

B.C. Mineral Exploration and Mining Industry Snapshot.....	37
Funding for Mine Permitting and Fees.....	38
Dominion Coal Blocks – incl. 39A.....	39
Fraser Institute Annual Survey of Mining Companies	40
Major Mines Permitting Office	41
Regional Coal Agreements with Treaty 8 FNs.....	42
FN Dialogue on Mining.....	43
Temporary Relief and Competitiveness.....	44
C & E Strategy – incl. 45-1, 45-2	45
OAG Audit of C & E in the Mining Sector	45A
Southeast Wildlife Corridor.....	46

Tenures

Mineral and Coal Tenure in B.C.	47
Compensation: Uranium and Thorium Exploration Ban.....	48

Ministry of Energy and Mines
Transition 2017/18

Division Priorities:

Division Priorities..... 49

Organizational Chart:

Organizational Chart 50

Ministry of Energy and Mines
Transition 2017/18

Budget and Ministry Key Documents (Prepared by CSNR/GCPE)

Budget Highlights.....	1
Resource Summary	2
Capital Expenditures Summary.....	3
Ministry FTE Information	4
Ministry Revenue Information	5

MINISTRY OF ENERGY AND MINES

2017 Budget Highlights

Fiscal 2017/18 Changes

MEM's 2017/18 budget is \$74.258M. This represents a \$45.971M, or 162.5% net increase from the previous year. This includes one year funding of \$40M for Clean Energy Vehicle initiatives. Net of this one year funding, the budget is \$34.258M which represents a \$5.971M, or 21.1% increase over 2016/17.

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\$000	2016/17		Restated		2017/18	\$ Change	% Change
	Estimates	Change	2016/17				
Vote 20 - Ministry Operations	25,912	76	25,988		71,959	45,971	176.9%
Innovative Clean Energy Fund Special Account	2,299	-	2,299		2,299	-	-
Total	28,211	76	28,287		74,258	45,971	162.5%

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Resource Summary

Core Business Area	2016/17 Restated Estimates ¹	2017/18 Estimates	2018/19 Plan	2019/20 Plan
Operating Expenses (\$000)				
Mines and Mineral Resources	16,939	21,630	22,479	22,369
Electricity and Alternative Energy ²	2,967	42,998	3,033	3,033
Executive and Support Services	6,082	7,331	7,498	7,485
Innovative Clean Energy Fund	2,299	2,299	2,303	2,303
Total	28,287	74,258	35,313	35,190
Ministry Capital Expenditures (Consolidated Revenue Fund) (\$000)				
Executive and Support Services	755	409	409	409
Total	755	409	409	409

¹For comparative purposes, amounts shown for 2016/17 have been restated to be consistent with the presentation of the 2017/18 Estimates.

² One year \$40M funding for Clean Energy Vehicles programs in 2017/18

*Further information on program funding and vote recoveries is available in the [Estimates and Supplement to the Estimates.](#)"

MINISTRY OF ENERGY AND MINES

CAPITAL BUDGET - 2016/17 to 2019/20

\$000s

	2016/17 Restated	Change	2017/18 Estimates	Change	2018/19 Plan	Change	2019/20 Plan
Ministry Operations							
Furniture & Equipment	1	-	1	-	1	-	1
Specialized Equipment	45	-	45	-	45	-	45
Information Technology	-	-	-	-	-	-	-
Vehicles	709	(346)	363	-	363	-	363
MINISTRY CAPITAL	755	(346)	409	-	409	-	409

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NATURAL RESOURCE SECTOR TRANSITION NOTE

Date: April 26, 2017

ISSUE: NATURAL RESOURCE SECTOR STRATEGIC OVERSIGHT

BACKGROUND:

The six ministries which comprise the Natural Resource Sector (NRS) have a relatively advanced degree of integration, which has developed progressively since 2005.

Regarding strategic planning and oversight, the current model comprises:

- Sector-wide governance, through groups such as the NR Board and NRS ADMs committee;
- Initiative oversight at the NR Board level for key priorities such as the Natural Resource Permitting Project;
- Ministry-level Service Plans, outlining targets and priorities for each component ministry of the NR Sector;

The Natural Resource Board is currently engaged in a process to further evolve integration across the sector, through the provision of:

- A harmonised strategic plan, which encompasses all strategic-level initiatives across all ministries of the sector;
- A prioritisation of strategic initiatives, so requisite resources can be more effectively apportioned;
- Clear accountabilities for cross-ministry sectoral strategic initiatives;
- Ongoing environmental scanning, to ensure emerging opportunities and new directives are accommodated, and existing strategic initiatives re-prioritised accordingly;
- Oversight of strategic initiatives to validate that all sector-wide resources are being optimally utilised, support the provision of appropriate remedial intervention in a timely manner, and ensure that re-prioritisation is conducted as needed;
- Support for sector ministries to create their composite service plans, with clear linkages to the overarching NR Sector Strategy, and to evolve their ministry-level strategic planning and oversight to advance the overall maturity level throughout the sector.

SUMMARY:

- A harmonised approach to strategic planning for the NR Sector has been committed to by the NR Board with the goal of approval by the end of FY 2017/18.
- This approach will deliver a holistic strategic plan, identify priorities and provide oversight of strategic initiatives.,.
- This approach will realise many benefits for the sector, represents a natural evolution of the Sector's integrated approach, and will lead to increased maturity in strategic planning, initiative prioritisation, and oversight, for all constituent ministries of the NR Sector.
- In addition to direct benefits from harmonised strategic planning and oversight, the strategic approach will support the Sector's transformation agenda, through the provision of an aspirational desired end-state.

DECISION REQUIRED: N/A

NATURAL RESOURCE SECTOR TRANSITION NOTE

Date: April 3, 2017

ISSUE: NATURAL RESOURCE SECTOR INTEGRATION AND TRANSFORMATION

BACKGROUND:

Natural Resource Sector (NRS) ministries have been progressively integrating land management activities and pursuing a transformation approach in support of government priorities since 2005.

- The drivers for a more integrated sector have been:
 - Improving efficiency for review of major projects, such as mines where authorizations are needed from multiple ministries;
 - The ability to coordinate negotiations and consultations with First Nations where provincial interests cannot be met by siloed approaches by a single ministry;
 - Improved efficiency of major technology projects or client services that arise through the economies of scale from a sector perspective; and
 - The ability to address issues like cumulative effects on the land base that must be coordinated across several ministries in order to meet the public interest.
 - Budget pressures across government compelling shared services, integration of common functions and stronger coordination of business
- Early steps involved the establishment of the Integrated Land Management Bureau and an associated Board of Natural Resource Deputy Ministers in 2005 to consolidate permitting and provide better client service in the sector.
- In 2005, FrontCounter BC (FCBC) was established to pilot the first integrated client-facing service counter in Kamloops for natural resource clients and the public. Expanding to 29 communities by 2011, FCBC is the client-facing natural resource services provider for most NRS permitting today.
- In response to increasing budget pressures across government, increasing land and resource-use pressures and economic drivers like the BC Jobs plan, government initiated the Resource Management Coordination Project in 2008 to begin a virtual integration of common services and functions across the natural resource ministries.
- Having optimized the opportunities of virtual integration, 2010/11 saw a structural re-organization of parts of the NRS ministries to form Forests, Lands and Natural Resource Operations (FLNR).
- Under the Environment and Land Use Cabinet Committee (ELUC), and the supporting Natural Resources Board of Deputy Ministers (NRB), FLNR became the ministry responsible for integration of natural resource sector decision making and overall land and resource management coordination.
- The structural re-organization aligned the NRS and in 2013 to align administrative systems, policy, and the 'one land manager' approach to major projects and land and resource management were further coordinated by setting up the Natural Resource Transformation Secretariat (NRTS) to deliver the Natural Resource Permitting Project (NRPP).

SUMMARY:

- The partnership between FCBC and NRTS has been key to the successful implementation of the NRS Online Services website.
- Continued support of sector integration and transformation - including the Natural Resource Permitting Project - will ensure that our natural resource sector, which generates close to \$3B in annual revenue to the province and over 156,000 jobs, remains a key driver of economic activity throughout the province.
- NRPP is a multi-year initiative aimed at reducing red tape, putting citizens and business first, improving services, streamlining processes, integrating government decision making and improving access to information.
- Charged with developing a single-sector operating model, NRPP supports NRS ministries to transform and streamline their business for more effective client service and achievement of government priorities.
- There is now one location for NRS clients to access services through the new NRS Online Services website that was launched in December 2016. Clients can explore for development opportunities by accessing the latest land information in one location through a new mapping tool and new electronic land activity reports. The application process is also simplified through access to e-guidance documents.
- NRPP is on track and on budget to deliver the \$57M Phase 1 commitments of the project by the end of Fiscal 17/18 s.13,s.17
- s.13,s.17

DECISION REQUIRED: N/A

NATURAL RESOURCE SECTOR TRANSITION NOTE

Date: March 29, 2017

ISSUE: s.12,s.16
priorities.

to meet provincial economic

BACKGROUND:

s.12,s.16

s.12,s.16 1) Non-Treaty Agreement Funding s.12,s.1 (NTAFE), 2) Strategic Forestry
s.12,s.16 (SFE) and 3) the First Nations Liquefied Natural Gas (LNG) Benefits s.12,s.16
s.12,s.16

MARR is responsible, on behalf of natural resource sector deputy ministers, for managing the
s.12,s.16

and managing all s.12,s.16 spending plans to support negotiations. The Natural
Resources Board (NRB) and Deputy Ministers' Working Group on First Nations and LNG
(DMWGFNLNG) have delegated authority to approve mandates and funding for negotiations
s.12,s.16

s.12,s.16

In June 2016, Treasury Board approved:
s.12,s.16

- Delegated authority to the DMWGFNLNG to approve individual LNG Agreements;
- Delegated authority to the NRB and DMWGFNLNG to move s.12,s.16
s.12,s.16
- A quarterly reporting process to the Deputy Secretary to Treasury Board.

s.12,s.16

s.12,s.16

	2016/17	2017/18	2018/19
s.12,s.16			
Total	141	139	60

SUMMARY:

s.12,s.16

Current signed and committed agreements within the spending plan already account for most of the approved contingency allocation, leaving little room for new government priority negotiations.

s.12,s.16

s.12,s.16

- MARR will continue to work with Treasury Board staff to identify flexible mandating options, while maintaining fiscal discipline. The sector is also seeing a significant increase in socio-cultural initiatives at numerous tables. These are often low risk and high return initiatives in negotiations; however, the FNFE streamlined approval criteria do not currently contemplate these initiatives

**NATURAL RESOURCE SECTOR
TRANSITION NOTE
ABORIGINAL LIAISON PROGRAM**

Date: May 26, 2017

ISSUE: STRENGTHEN NATURAL RESOURCE SECTOR RELATIONSHIPS WITH FIRST NATIONS THROUGH EXPANSION OF THE ABORIGINAL LIAISON PROGRAM

BACKGROUND:

Endorsed by the NR Board and the Executive Land Use Committee of Government in June 2016, the Natural Resource Sector Aboriginal Liaison Program (NRSALP, ALP or Program) provides a means by which First Nations can have meaningful engagement with all NR Sector activities throughout their full lifecycle.

Since its implementation a little over 2 years ago, the program has expanded to encompass the full NR Sector (now housed within FLNRO but NR Board direction is to maintain as full sector). The Program is well supported by operational staff from Ministries and Agencies across the NR Sector and interest in the Program is growing within First Nations communities across the province¹.

The Program provides opportunities for representatives of First Nations communities to be trained in the content and application of the Province's regulatory framework and to observe how that framework is applied to NRS projects within their Territories. The Program is currently directed towards compliance monitoring^{s.13}

The Program provides many benefits absent from traditional project based interactions including:

- Ensuring information on proposed activities is provided in a meaningful and respectful manner;
- Allowing First Nations involvement in review and assessment of information provided to them by proponents and/or government agencies;
- Ensuring First Nations understand proposed activities and their associated impacts and have the skills and training necessary to assess these activities during consultation;

s.13,s.16

- Ensuring First Nations understand how proposed activities are regulated by the province – for the full lifecycle of the activities;
- Ensuring that First Nations have the education and training necessary for dealing with emergencies or similar situations that may arise during operations; and
- Ensuring First Nations have access to information they need/desire throughout the activity lifecycle.

The ALP has received very positive reaction from Industry, all involved agencies and First Nation communities. It is a collaborative engagement that builds trust in BC Government programs with First Nation communities and provides a higher level of oversight of natural resource activities to the people of BC.

The Natural Resources Board recently approved FLNRO to lead the transition of the ALP to a longer term program with potential Province-wide application. FLNRO is working closely with OGC and other Natural Resource Sector agencies to develop a proposal for government consideration that will include options for a First Nations Liaison Program as a model for incorporation of all NRS First Nation monitoring initiatives under the full NRS whether in the ALP, ESI or other forms of agreement.

Current monitoring programs, agreements and arrangements are not consistent in principle, objective or cost structure.

s.16

SUMMARY:

FLNRO, in consultation with OGC and a Committee of ADM's established under the NRS ADM's is leading the development of a proposal for expansion of the ALP into other areas of the province. At the same time, the cross government team is looking at ways to bring all existing monitoring activities under a sector envelope. The framework will address consistency in principles, objectives and cost structure.

DECISION REQUIRED

s.13

Agency/Agencies Responsible: FLNRO

APPENDIX 1: Natural Resource Sector Monitoring Partnerships between BC and First Nations

Agreement/ Program	Description	Current Status	Funding Source/ Level	Pending Decisions
Aboriginal Liaison Program	North Area: Compliance monitoring with 7 First Nations groups. 10 FN monitors funded at about \$150k each/ year. Involves FLNRO, OGC, EAO and MEM, MOE.	Program started in 2014 and has been successful to date. Funding in place for 2017/2018 fiscal year.	OGC/ \$1.01M per year	Proposal to government for longer term program planned for fall 2017.
Environmental Stewardship Initiative (LNG)	North Area: Environmental value information collection and analysis. Includes value monitoring as a component. 35 First Nations and FLNRO, NGD, MARR participation.	Started in 2015. New funding commitment to March 31, 2019 (not yet communicated to participants)	NGD/ \$30M over 3 years	None.
Various Agreements	Collaboration and Reconciliation Agreements across the Province include monitoring components to varying degrees.	Various.	Various.	Various.

NATURAL RESOURCE SECTOR TRANSITION NOTE

Date: May 29, 2017

ISSUE: CUMULATIVE EFFECTS FRAMEWORK STATUS UPDATE

BACKGROUND:

Cumulative Effects are changes to environmental, social and economic values caused by the combined effects of past, present, and potential future activities and natural processes. To improve Government's management of cumulative effects, the Ministry of Forests, Lands and Natural Resource Operations and the Ministry of Environment led development of the *Cumulative Effects Framework* (CEF) beginning in 2010. After a period of design and "proof of concept" in several pilot areas, phased implementation of the CEF was approved by ELUC in December 2013.

When fully implemented, the CEF will include policy, procedures, decision support tools and governance structures to support periodic assessments of cumulative effects for a selected set of values and management responses in decision-making across the natural resource sector. Cumulative Effects Assessments are tools to support decision making in: natural resource authorizations, environmental assessments for major projects, First Nations Consultation and Impact Assessment, and other strategic, tactical and operational decisions.

The first phase of CEF implementation has focused on the following priority activities:

1. **Regional implementation:** Implementing cumulative effects assessment and management in selected areas where assessments were completed during the trial phase (Thompson-Okanagan and Cariboo regions), and evaluating effectiveness.
2. **Policy and Procedures:** Developing provincial policy and procedures for cumulative effects assessment and management.
3. **Value Assessments:** For five initial CEF values (aquatic ecosystems, forest biodiversity, old growth, grizzly bear and moose) – developing standard assessment protocols and models, assessing current condition in all regions, and publishing maps and data. Some regions have developed additional region-specific value assessments.
4. **Data systems and tools:** Confirming systems and tools for data access, visualization and reporting, in partnership with the Natural Resource Permitting Project (NRPP).

The current status of each of these activities, and key milestones achieved to date, are as follows:

1. **Regional implementation:** Early Cumulative Effects assessments in the Thompson-Okanagan and Cariboo regions continue to support resource management and decision-making, and inform policy development and

continuous improvement.

2. **Policy and Procedures:** In October 2016 the NR Board approved CEF Interim Policy, and announced this approval and next steps to NRS (Natural Resource Sector) staff in February 2017. s.13

3. **Value Assessments:** In January 2017 the NRS ADMs committee endorsed Interim Standard Assessment Protocols for the first three CEF values (aquatic ecosystems, old growth and grizzly bear). s.13

s.13 Steps for regional review and validation are underway, and will result in variable timelines for publishing value assessments for each region, substantively between June 2017 and Fall 2018.

Some regions have also identified additional regional values and/or have assessment work underway as part of the CEF, or through related initiatives such as the Ecosystem Stewardship Initiative.

4. **Data systems and tools:** data models have been designed and built to support publishing CE values data in the BC Data Warehouse and through NRPP's Natural Resource Sector Online Services.

NEXT STEPS:

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DECISION REQUIRED

- **30-60-90 day issue: Yes**
- **Decision required: No**

Agency/Agencies Responsible:
FLNRO – Resource Stewardship Division

NATURAL RESOURCE SECTOR TRANSITION NOTE

Date: April 3, 2017

ISSUE: FRONTCOUNTER BC'S ROLE IN SUPPORTING THE NATURAL RESOURCE SECTOR

BACKGROUND:

FrontCounter BC was created in 2005 as the single service provider for the Natural Resource Sector. FrontCounter BC provides services to both external clients and internal clients (Partner Agencies) through Service Level Agreements (SLA). FrontCounter BC offers multi-channel services including:

- in-person through 29 office locations throughout the province,
- online through www.frontcounterbc.gov.bc.ca / www.portal.nrs.gov.bc.ca (newly launched single portal for clients), and
- toll free phone at 1-877-855-3222

There are approximately 200 FrontCounter BC staff across the province available to assist natural resource clients and partner agencies. The FrontCounter BC program is administered through a Provincial Team who provides the resources, tools and processes required to deliver services.

Service Level Agreements between FrontCounter BC and the Partner Agencies outline the services that FrontCounter BC provides on behalf of the Partner. FrontCounter BC currently has Service Level Agreements with Forests, Lands and Natural Resource Operations, Ministry of Energy and Mines, Ministry of Environment, Ministry of Agriculture, Ministry of Transportation and Infrastructure and Service BC. Services are defined as 'tiers' and include:

- supporting clients with accessing information about and understanding how to apply for natural resource related authorizations and permits,
- conducting initial application processing work to ensure applications are complete and conducting a status of the application area,
- initiating stake holder referrals and first nations consultation

All FrontCounter BC offices have a public Community Access Terminal for clients to access online information and services and all offices are capable of processing all forms of payment (including the toll free Contact Centre).

Since 2005 FrontCounter BC has been expanding its role in supporting natural resource clients and Partner Agencies by increasing the scope of authorizations handled and increasing the level of services provided. FrontCounter BC leads streamlining efforts through continuous improvement of processes and shifting services from paper to electronic channels. These efforts result in more efficient processing times and improved client service. FrontCounter BC measures client service and collects feedback from clients through various methods including comment cards, online surveys and a monthly Client Satisfaction survey.

NEXT STEPS:

- FrontCounter BC continues to expand the scope of services provided to Partner Agencies to support consistent services for natural resource clients.
- FrontCounter BC continues to improve client service offered through each of the service channels.
- FrontCounter BC works closely with the Natural Resource Transformation Secretariat (NRTS) to enhance online services for clients.

DECISION REQUIRED – N/A

Agency/Agencies Responsible: Ministry of Forests Lands and Natural Resource Operations

Partners:

- Ministry of Energy and Mines
- Ministry of Environment
- Ministry of Agriculture

NATURAL RESOURCE SECTOR TRANSITION NOTE

Date: March 29, 2017

ISSUE: FEDERAL *SPECIES AT RISK ACT* AND CARIBOU RECOVERY IN BRITISH COLUMBIA

BACKGROUND:

Canada's *Species at Risk Act* (SARA, or the *Act*), 2002

Under SARA, recovery strategies must be prepared for all species designated as threatened or endangered species. The designation follows from a recommendation by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and approval by the Minister of Environment and Climate Change Canada (ECCC). Recovery strategies must identify critical habitat without consideration of the social and economic implications of protection. If the ECCC minister forms an opinion that critical habitat is not “effectively protected” for provincially managed species and habitat on provincial lands, the minister must recommend to Governor in Council (GIC) that an order be made against destruction of critical habitat on provincial lands.

In 2016, ECCC released a draft *Critical Habitat Protection Assessment* (CHPA) policy under SARA to guide the process for assessment of laws and measures to protect critical habitat identified on non-federal lands to inform the ECCC Minister's opinion.

Provinces and territories (PTs) are challenged to protect the critical habitat of SAR in the same manner and to the same degree as required by SARA. The *Act* does not allow consideration of social and economic values when making recommendations to GIC to protect critical habitat, yet PTs must consider those factors when making significant land-use decisions. The *Act* does not adequately recognize other significant recovery investments that may be required for effective recovery of some species at risk (e.g., predator management; disease management).

BC's position is that federal decisions need to better reflect P/T jurisdictional accountabilities and that reforms to SARA or SARA related policies are required to increase flexibility and ensure socio-economic factors are considered prior to making legal decisions to protect critical habitat.

Southern Mountain Caribou (SMC)

Caribou populations are in decline across Canada. In October 2016, the Minister of ECCC made a decision to confirm a *Canadian Environmental Assessment Act* (CEAA) finding of ‘significant adverse cumulative effects’ for the Murray River Coal Mine Project on the use of lands and resources for traditional purposes by Aboriginal Peoples with respect to SMC. To avoid being in a situation where a project approval under CEAA might contradict ECCC's obligation under SARA, ECCC announced an assessment process (CHPA) for SMC.

To support ECCC's assessment, BC agreed to collaborate on a joint Protection Study (the Study) on SMC to review current and past provincial measures to protect and recover caribou. The first phase of the Study, focussing on the Central Mountain herds, was published in February, 2017.

The Study identified critical habitat protection gaps against targets outlined in the federal Recovery Strategy for SMC. This information will inform the federal CHPA and additional protection and recovery measures in BC.

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s.13,s.17

Boreal Caribou are also listed as threatened under SARA. BC is updating its 2013 Boreal Caribou Implementation Plan (BCIP) to include enhanced recovery actions based on what was learned in the CHPA process for SMC, along with new science and information, and to ensure the plan is in closer alignment with SARA requirements.

To address gaps in caribou protection for all herds, BC announced \$27 million over three years to support recovery efforts across BC. BC needs to work with Canada under a renewed BC/Canada SAR agreement to address jurisdictional issues and to better align SAR management.

SUMMARY

- SARA contains regulatory provisions designed to compel PTs to effectively protect the critical habitat of SAR. If BC does not effectively protect critical habitat, Canada may issue a Protection Order.
- The CHPA process is creating uncertainty for natural resource development.
- BC has a long history of taking action toward the protection and recovery of caribou, with significant social, environmental and economic trade-offs.
- Revisions are underway to BC's implementation plans to protect and recover caribou and to better align with the Federal Recovery Strategy requirements under SARA; consultations are underway with First Nations, industry and the public.

DECISIONS REQUIRED

- **30 day issue:** (none)
- **60 day issue:**
s.12,s.16
— Public review and comment on the revised BCIP
- **90 day issue:**
— Updates to BCIP and PNCP
- **Decision required:** No

Agencies Responsible:

- FLNRO – Resource Stewardship Division
- Ministry of Environment

Page 16 to/à Page 17

Withheld pursuant to/removed as

s.12;s.13



March 2017

CORPORATE SERVICES for the NATURAL RESOURCE SECTOR

Core Business/Program Area Description/Critical Business Processes:

Formed in 2010, Corporate Services for the Natural Resources (CSNR) is an integrated, sector-focused corporate services organization within the FLNRO which has accountability to provide services to the six ministries that make up the Natural Resource Sector (NRS).

- Ministry of Aboriginal Relations & Reconciliation
- Ministry of Agriculture
- Ministry of Energy and Mines
- Ministry of Natural Gas Development
- Ministry of Environment – including Environmental Assessment Office
- Ministry of Forests, Lands and Natural Resource Operations

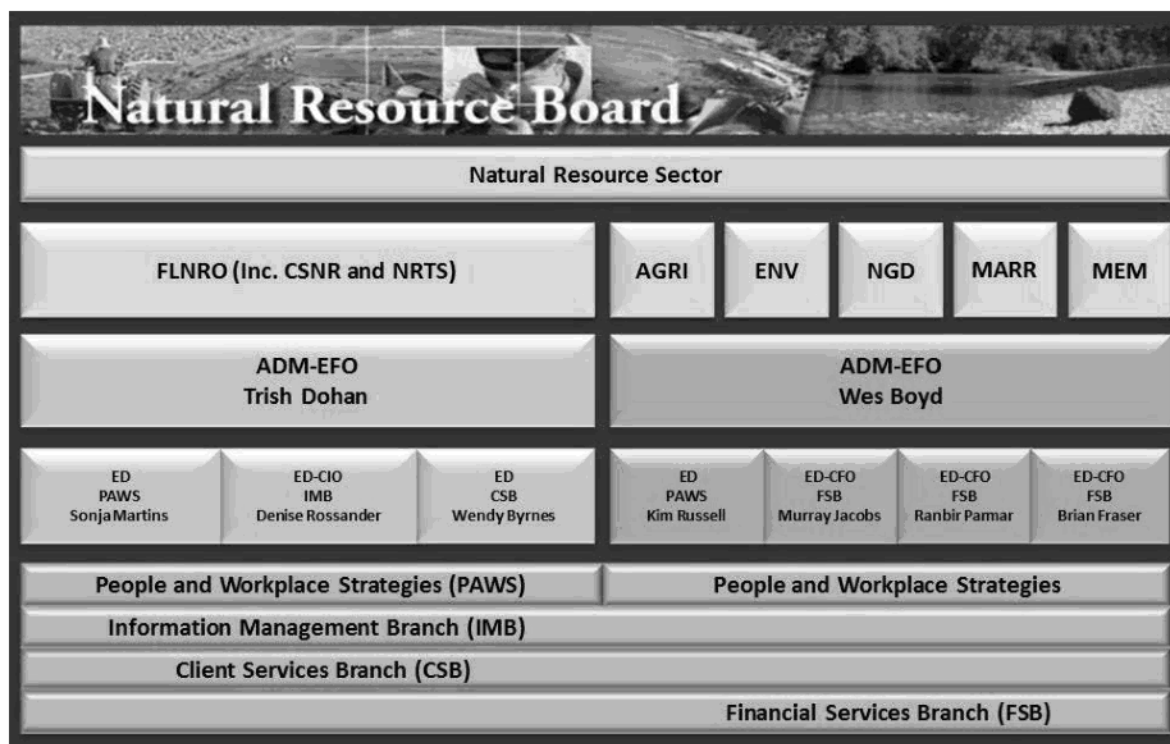
CSNR is led by two assistant deputy ministers (ADMs), each ADM has specific business area accountabilities for the natural resource sector in the service areas of **finance, strategic human resources, client services, and information management**. In addition, each ADM has Executive Financial Officer (EFO) responsibility for one or more ministries.

The corporate services model was designed to be flexible. By using a sector based approach, to share best practises, standardize business processes, and consolidate resources, significant efficiencies have been achieved. Benefits have included:

- Enhancing integration and coordination across the sector;
- Streamlining processes and providing consistent services across the sector;
- Establishing a single accountability for corporate services functions;
- Optimizing use of NRS facilities and assets where possible;
- Synergies in central agency requirements (e.g., sector Workforce Plans, sector Technology and Transformation Plan, NRS Integrated Strategic Plan);
- Providing strategic high level financial overviews to improve and support sector based decisions.

Assistant Deputy Minister / Executive Financial Officer Responsibilities:

Trish Dohan	EFO for Forests, Lands and Natural Resource Operations (FLNRO) Responsible for Client Services Branch, Information Management Branch, and People and Workplace Strategies supporting FLNRO.
Wes Boyd	EFO for Aboriginal Relations and Reconciliation (MARR), Agriculture (AGRI), Energy and Mines (MEM), Natural Gas Development (NGD), and Environment (including Environmental Assessment Office (EAO)) Responsible for Financial Services Branch and People and Workplace Strategies supporting MARR, AGRI, MEM, NGD, and ENV.



Budget: CSNR supports the Natural Resource Sector and each ministry contributes towards the cost:

	Budget	% Budget
MARR	1,672,000	4%
AGRI	2,898,000	7%
EMNG	1,232,000	3%
NGD	252,000	1%
ENV	9,535,000	22%
FLNRO	26,876,000	63%
2016/17 CSNR Total	42,465,000	100%

Full Time Equivalents (FTEs): 496*

*Includes regular and auxiliary positions – FTE numbers as of December 31, 2016.

Related Legislation:

- *Financial Administration Act;*
- *Budget Transparency and Accountability Act;*
- *Balanced Budget and Ministerial Accountability Act;*
- *Financial Information Act;*
- *Supply Acts;*
- *Information Management Act;*
- *Public Service Act.*

Business Services:**Core Business/Program Area Description/Critical Business Processes:**

As a single entity organized to serve the entire sector. This corporate approach has paved the way for more integrated approaches that bring together our people, processes and technologies.

CSNR provides the following services to facilitate operational and strategic decision making across the six agencies.

Finance

- **Financial Planning and Reporting:** Financial planning, monitoring and reporting; budget development; financial and FTE forecasting; Treasury Board & Cabinet Submission support; and chart of accounts maintenance
- **Financial Operations:** Financial systems; expenditure operations including accounts payable, fixed assets and payroll; corporate card programs and accountable advances; input to proposed modification to government financial systems, and fiscal year end processes.
- **Financial Policy, Compliance and Procurement:** Financial policy advice, contract and procurement advice, signing authorities, financial compliance audits, bidder's lists and vendor complaints process.
- **Revenue:** Revenue and receivables management and administration; trust accounting; revenue forecasting and reporting; Fee/Fine Issue Paper support; and FrontCounter BC refund requests.

Information Management / Information Technology (IM/IT)

- **Executive Support:** Guidance, support and advice to Executive regarding their computer hardware, software and operational needs in cases where services are not provided by Shared Services BC (e.g. VIP).
- **Business Service Desk:** Central contact for line of business application issue calls and ordering goods and services from Shared Services BC (iStore ordering); first point of contact for cellular device issues and orders.
- **Telecommunications Services:** Provide province-wide 2-way radio communication enabling field staff to perform business functions in remote areas; maintenance of weather stations.
- **Web Infrastructure Services:** Develop, enhance, maintain and administer web infrastructure technologies; provide advice and facilitate the use of various web service offerings.
- **Strategic Planning Support:** Strategic planning to develop the appropriate transformation and technology plans, IM/IT application vision, and information system plans; assist ministry partners in determining IM/IT capital, and operating investments driven by their annual business plans and requirements.
- **Application Development and Maintenance:** Manage NRS IM/IT business solutions; lead all aspects of systems development and maintenance; coordinate of all aspects of IM/IT

procurement, and contract management within the scope of the Core Policy and Procedure Manual (CPPM).

Facilities, Fleet and Assets

- Facilities Management: Provide building and property management, space planning and accommodation management; manage and coordinate facilities projects and tenant improvements of ministry-owned and corporate properties.
- Fleet Management: Coordinate vehicle locations to meet business priorities; annual vehicle and equipment insurance renewals; accidents and loss reporting and documentation; provide policy and procedures; provide analysis and reports (fleet utilization, fuel consumption, maintenance); manage fleet budgets; and procurement of replacement and emergency vehicle equipment.
- Asset Management: Promote compliance with CPPM; develop local sharing agreements for assets; contribute to the development of capital plans for NRS operating and heavy duty equipment purchases; review storage of assets; and support the development of operational equipment asset inventories across the province.

Security and Safety Services

- People, Assets, IM/IT and Facilities: Proactively identify and offset security risks and exposures; ensure incidents are reported; provide a coordinated response to central authority directives and requests; and raise security awareness across the sector. IM/IT security services include the coordination of information privacy incidents, Privacy Impact Assessment (PIA) reviews, and Security Threat Risk Analysis (STRA) reviews.
- Business Continuity Planning & Emergency Support: Promote compliance with legislation and CPPM by providing support to plan, respond, and restore sector priority business functions; timely first alert notification and effective ongoing communication; site specific information on essential services, staff and resource requirements; and raising business continuity and emergency management awareness through orientations and exercises.

Strategic Human Resource Services

- Workforce Planning: identify people-focused priorities and implement strategies to meet ministry and/or sector business goals. Examples include workforce plans, succession plans, and recruitment and retention strategies. This also includes workforce analysis and reporting services, such as WES analysis and other HR metrics or workforce reports.
- Organization Effectiveness: provide tailored support, advice and recommendations to enhance employee engagement and improve business results. Examples include organizational advice, staffing strategies, team building, leadership development, change management, recognition, and management compensation.
- HR Programs & Initiatives: increase awareness and support ministry implementation of public service and natural resource sector human resources initiatives. Examples include performance management, recognition, health and well-being, diversity and inclusiveness, guidelines and tool-kits, and liaising with central agencies such as the Public Service Agency.

Records Support and Leadership

- Records Management Leadership: Provide guidance and advice on records-related issues; liaise with central agencies as appropriate to ensure NRS records needs are met, and support records systems development for the sector.
- Freedom of Information and Protection of Privacy Support: Liaise with central agencies; promote compliance with FOIPPA; assist ministry partners with managing legislated timelines;

provide sector-wide advice on routine release strategies, and provide and promote FOI awareness and orientation.

- Litigation Documents Discovery Leadership: Provide advice, guidance, and orientations related to litigation document discovery requirements; coordinate case-specific litigation document discovery activities, and work in partnership with Ministry of Justice legal teams.

Page 1 to/à Page 3

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LIST OF 30/60/90 DAY ISSUES

June 2017

(30 Day = Month of end of July; 60 Day = Month of August; 90 Day = Month of September)

1. ELECTRICITY AND ALTERNATIVE ENERGY DIVISION

30 Day s.13

- BC Hydro anticipates moving forward with **Site C procurement** contracts for the Cache Creek Bridge and related Highway 29 realignment. Both these projects are required in order to keep to the schedule and avoid costly delays.
- **Energy Efficiency Standards** Regulation. s.12
s.12

s.12

- Teck sale of its interest in the **Waneta Generating Station**. Teck has sold its 66 percent interest in Waneta to Fortis Inc., subject to a BC Hydro right of first offer (ROFO). BC Hydro and the Province have until the end of July to determine whether to exercise the ROFO. Supply of power to Teck's smelter in Trail, and potential impacts to the fiscal plan and the 10-Year Rates Plan are key considerations.
- **Residential Inclining Block (RIB) Rates** Report. Following BCUC's RIB report, a letter was sent to both BC Hydro and FortisBC recommending targeted Demand Side Management for electric space and water heating. The BCUC has requested that the letter be made public.

s.13

- **BC Hydro's Integrated Resource Plan** - Confirmation on whether to proceed as scheduled on the IRP, especially for stakeholder engagement starting Fall 2017.
- **10 Year Rates Plan** - BCUC is expected to make a decision in late summer 2017 on BC Hydro's Revenue Requirements Application for fiscal 2017 to 2019, based on the 10 Year Rates Plan caps.s.13

s.13

60 Day

s.13

- BCUC is expected to release a report on an inquiry into **BC Hydro's adoption of SAP information technology** platform in response to a complaint by Mr. Adrian Dix.
- **Class exemption for re-sale of electricity** – the BCUC is seeking Ministerial approval to exempt arrangements under which landlords (other than public utilities) re-sell electricity or electricity services to long-term tenants from BCUC oversight under portions of the *Utilities Commission Act*. The BCUC has reviewed the matter and determined an exemption would be in the public interest.

s.13

- Approval of Canadian mandate, confirmation of BC decision, and engagement with the United States on the future of the **Columbia River Treaty**.

90 Day

- Announce **Community Energy Leadership Program** Round 3 successful communities, \$550 k to local government and First Nations renewable energy and energy efficiency projects.
- **B.C. Marine Energy Centre** Roadmap to Implementation. The Innovative Clean Energy Fund provided \$100,000 in funding to the University of Victoria's West Coast Wave Initiative (WCWI) to assist in the completion of an Implementation Plan and roadmap for the Centre. The WCWI undertook research and market analysis for the development of the roadmap that identifies and outlines the economic development opportunity for a Marine Energy Centre to foster the marine energy conversion technology sector in British Columbia.
- Strategic positioning for BC under the **Canadian Clean Fuel Standard (CFS)**. Environment and Climate Change Canada has identified the B.C. Renewable and Low Carbon Fuel Requirements as a possible template for the CFS. MEM is co-chairing the Federal/Provincial/Territorial Working Group on the CFS, as well as working directly with federal agencies to educate and advise them on the functioning of the BC low carbon fuels regime. The CFS is scheduled to take effect in 2020 and, as it develops, the impact on the BC low carbon fuels regime needs to be understood.
- NRCan will lead a fall seminar with interested stakeholders across the Western Provinces to provide information on the **Regional Electricity Cooperation and Strategic Infrastructure** Initiative (RECSI). This will be a follow-up seminar to one held in June 2017. British Columbia, along with Alberta, Saskatchewan and Manitoba are participating in the NRCan-led RECSI process to evaluate electricity infrastructure projects in the west for their ability to reduce greenhouse gas emissions given their associated costs.

s.21

2. MINES AND MINERAL RESOURCES DIVISION

30 Day

Major Mines

- Commencement of operations at the Brucejack Mine Project.
- Ongoing compliance and enforcement activities with respect to Silvertip.

Regional Permitting

- A Notice of Work (NoW) was received for Sumas Mountain. It is anticipated that significant opposition will be received by First Nations/nearby residents and municipalities, which will likely delay the ability to proceed to decision within the targeted 60 day turnaround time.
- South Island Aggregates - MOE has received a draft closure plan to close the contaminated soil landfill. Once the closure plan is accepted in final by MOE, the MEM permit will be amended to reflect the closure plan.
- Taseko submitted their NoW application for New Prosperity; the Province is considering the application and has undertaken deep consultation with the Tsilhqot'in National Government (TNG). A decision on the permit is anticipated in mid-June. The TNG have stated they will pursue court action to stop work by Taseko if the NoW is approved by the SDM. Taseko has indicated they will pursue court action to overturn a negative decision by the SDM.

Other

- Ongoing engagement with federal government on caribou protection initiatives in order to advance Murray River Underground Coal Mine to a decision.

60 Day

Major Mines

- Final closure plan for Coal Mountain to be reviewed. Final closure of the mine is scheduled for Q4 2017.

Other

- Report back to public accounts on OAG recommendations which will include a progress report with respect to how MEM has progressed in implementing the 18 recommendations from the OAG.
- Seek direction on approach to reclamation securities policy.
- Request for Proposal for an engineering firm to design a remediation and closure plan for Banks Island and Tulsequah to be developed. Both mines are in receivership and require reclamation work to be done. Treasury Board submissions for funding will be required.
- Scott et al versus Chief Gold Commissioner and Carmax – oral reasons for decision from BC Supreme Court.
- Consultation process, led by MARR, for Klappan Plan to be launched, may result in Coal Land Reserves.

90 Day

Major Mines

- Potential referral to Ministers for the Ajax Mine (EA process)

- Potential federal decision the Murray River Underground Coal Mine Project. Provincial permit review process is ongoing with recommendations expected in December 2017.

Other

- Potential amendments to the Mines Fee Regulation in order to ensure fee targets for MEM budget are met which support OAG recommendations.

SUPPLEMENTAL TRANSITION INFORMATION

LEGISLATIVE PRIORITIES

Electricity

s.12

Mining

• s.14

- Legislative counsel, who regularly draft regulations for the Chief Gold Commissioner (CGC) under Section 22 of the MTA and Section 21 of the *Coal Act*, have suggested that these sections be amended so that reserves can be established by CGC order, rather than by Order in Council regulation. This would allow reserves to be managed directly as parts of the mineral and coal titles registries, and would allow existing reserves to be cleaned up and amended much more easily to eliminate the increasing number of overlapping regulations. Section 22 of the MTA and Section 21 of the CA would also be amended to give greater clarity to circumstances where reserves overlap, the intended effects of such overlaps, and the intended effects of eliminating reserve overlaps.
- MTA Regulation and *Coal Act* Regulation amendments to properly define exploration work requirements. Presently, there is ambiguity in the definition of technical exploration and development work require to keep a mineral title or a coal licence in good standing from year to year.
- MTA Regulation amendments – The last amendment to the Regulation was in 2012 when the Province changed the fee structure for mineral titles. Since that time, the Mineral Titles Branch has maintained a list of a number of suggested changes to wording to make certain sections less ambiguous and correct a number of errors.
- Amendments to the Mining Rights Compensation Regulation (some housekeeping items) and a proposal to make this Regulation applicable to coal title expropriations (the *Coal Act* provides for the drafting of a regulation to address compensation for any coal title expropriations, but no such regulation presently exists), and to change from the current “final offer” arbitration to a more commonly accepted arbitration under the *Commercial Arbitration Act*.

- Amendments to the *Mines Act* to improve search and seizure authorities as well as changing the definition of a mine and updates to other sections that need strengthening.

MINISTRY BUSINESS PLAN

Attached as an appendix

ISSUES RAISED BY OFFICERS OF THE LEGISLATURE (Provincial Auditor, Merit Commissioner)

Electricity

The Office of the Auditor General is currently undertaking two performance audits and one examination related to the Electricity and Alternative Energy Division's responsibilities. The two performance audits are in the planning stage and relate to the use of rate Regulated Accounting at BC Hydro and the performance of the BC Utilities Commission. The examination related to BC Hydro's Site C Clean Energy Project is in the implementation phase and includes a review of the information and analysis provided to Government, progress and costs to date, and potential impacts going forward.

Mining

Government accepted the recommendations of the Auditor General's report on oversight of the mining sector, and established a Deputy Ministers Mining Compliance and Enforcement Board to oversee planning across BC in all aspects of mineral exploration and development. The BC Mining Compliance and Enforcement Strategic Plan outlines Government's vision for integrated oversight of the sector by the Ministry of Energy and Mines, the Ministry of Environment and the Environmental Assessment Office. The Strategic Plan was released in February 2017 along with a number of measures, including a new integrated BC Mine Information website, changes to the Health, Safety and Reclamation Code for Mines in BC, the addition of administrative monetary penalties under the *Mines Act*, and an independent report by Ernst & Young on reclamation securities.

COMPLETED BUT UNRELEASED REPORTS

Electricity

The Electricity and Alternative Energy Division currently has an unreleased report by MNP Consulting entitled, "The British Columbia Marine Energy Centre Implementation Roadmap for 2017-2019." The report was funded with \$100,000 from the Innovative Clean Energy Fund. The report covers the benefits and opportunities of leveraging BC's wave resources, significant marine industry cluster, leading wave technology testing facilities, and federal/provincial focus on innovation, to accelerate deployment of marine energy conversion technologies.

Mining

Nothing identified.