Ministry of Energy and Mines

Estimates 2013/2014

Ministry Overview

Overview and Descriptions of Divisions

The Ministry of Energy and Mines (Ministry) is the key provincial ministry responsible for British Columbia's energy and mining sectors which are comprised of public and private interests that explore for, develop and use electricity, clean or renewable energy (biomass, biogas, geothermal, hydro, solar, ocean, wind or any other prescribed alternative energy resource), coal, minerals, and renewable and low carbon fuels. Through teamwork and positive working relationships with its clients, the Ministry facilitates B.C.'s thriving, safe, environmentally responsible and competitive energy and mining sectors to create jobs and economic growth in communities. In developing energy and mining sector policies, legislation and guidelines, the Ministry consults with other ministries and levels of government, energy and mining companies, First Nations, communities, environmental and industry organizations, and the public.

Working with its stakeholders, the Ministry develops policies, programs and legislation to maintain B.C.'s mining sector competitiveness and encourage investment in mineral exploration and mining in the province. The Ministry develops and delivers geoscience databases and surveys, and provides funding to other organizations to collect and publish geoscience information. The Ministry is responsible for permitting and inspecting major mining projects – including health and safety - and providing assistance and advice to promote and support continued development of B.C.'s mineral exploration and mining sector.

The Ministry develops and oversees British Columbia's policies with regard to electrical power generation, transmission and distribution. The Ministry is responsible for initiatives that promote new energy technologies, energy efficiency and conservation, and alternative energy resources. The *Clean Energy Act* builds upon B.C.'s unique wealth of clean, renewable energy resources and sets the foundation for significant investments in clean, renewable energy across the province while keeping electricity rates affordable for British Columbians. Through the Innovative Clean Energy Fund, the Ministry is helping to advance new technologies that respond to British Columbia's environmental challenges and its energy and economic priorities.

The Ministry is responsible for three Crown Corporations: the British Columbia Hydro and Power Authority (BC Hydro), Columbia Power Corporation and the Columbia Basin Trust.

The Ministry is responsible for administering all or parts of 19 statutes pertaining to the energy and mining sectors, and has policy responsibilities under the *Utilities Commission Act*.

Corporate Services for the Natural Resource Sector (CSNR)

Since November 2010, one integrated entity has provided corporate services for the natural resource sector (NRS) ministries. Corporate Services for the Natural Resource Sector, is led by three Assistant Deputy Ministers (ADM)/Executive Financial Officers (EFO). Each ADM has specific business area accountabilities for the natural resource sector in the areas of finance, strategic human resources, information management and clients services. In addition, each ADM has EFO responsibility for one or more ministries in the sector.

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

- 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 assets and facilities where possible;
- Synergies in central agency requirements (e.g. sector Transformation Plan);
- Providing strategic high level financial overviews to improve and support sector based decisions.

Corporate Initiatives Branch (CIB)

The Corporate Initiatives Branch develops policies and programs on matters that transect the Ministry's divisions, other ministries and other levels of government and provides a unified, corporate approach with respect to: corporate planning and reporting; strategic policy; cross-ministry and intergovernmental relations; development of legislation and regulations; internal and external communications; and correspondence. CIB is a shared service with the Ministry of Natural Gas Development.

Electricity and Alternative Energy Division

The Electricity and Alternative Energy Division develops and implements legislation, policies and programs to support all forms of electrical power generation and transmission, alternative energy sources such as bioenergy and biofuels, energy efficiency measures and programs, and leading edge and evolving technologies. 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 via policies and programs. In addition, the Division develops policies that will encourage the use of new, alternative

and low carbon energy sources and emerging efficiency technologies. The Division is responsible for regulating the efficiency of manufactured building components and equipment, renewable fuels and the carbon intensity of transportation fuels, developing and implementing provincial policy with respect to BC Hydro, Columbia Power Corporation and other electricity utilities, and for ensuring that British Columbia's energy interests in inter-jurisdictional relations are met (e.g., the Columbia River Treaty Review).

One of British Columbia's competitive advantages is its historical investment in large hydroelectric dams and reservoirs. This investment ensures ratepayers continue to receive the benefits of competitively-priced electricity from these heritage assets. The Division endeavours to maintain this competitive advantage in the context of legal requirements and public expectations for reducing greenhouse gas emissions and often more expensive production from unconventional energy sources.

The Division is responsible for two key programs: the LiveSmart BC: Efficiency Incentive Program with residential and small business streams that provide incentives to improve the energy efficiency performance of buildings; and the Innovative Clean Energy Fund, which supports the development of new sources of clean energy and associated technologies that can support and diversify local economies and livelihoods in communities across B.C.

With support provided by the Ministry of Natural Gas Development and the Oil and Gas Commission, the Division is responsible for the environmentally responsible management of the province's geothermal resources, including the development of royalty and regulatory policy, and the administration and regulation of tenure.

Mines and Mineral Resources Division

The Mines and Mineral Resources Division protects the public interest in mineral and coal development in British Columbia and administers the *Mines Act*, the *Mineral Tenure Act* and the *Coal Act.* The Division is responsible for regulating the mineral, coal, industrial mineral and aggregate sectors. The Division undertakes financial and economic analysis to identify measures to enhance exploration and mining investment in British Columbia.

The Division's British Columbia Geological Survey (BCGS) surveys the province, develops and delivers various geoscience databases, and acts as the custodian of provincial geoscience data. The BCGS works with industry and other organizations to collect and publish baseline geoscience information, and mineral potential assessments and economic information to guide government decisions on land use and First Nations negotiations. The Division works with industry and other organizations to collect and publish baseline geosciences information.

The Division's Mineral Titles Branch 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 is responsible for ensuring the health and safety of workers, the public and the environment through mine permitting, inspections, audits and enforcement activities. Division staff provides expertise in all aspects of mine development: mineral exploration; mine planning and operations; environmental mitigation and management; emergency preparedness; electrical and mechanical engineering; occupational health and safety; and reclamation.

Ministry Accomplishments

Electricity and Alternative Energy

- The $900 million Smart Meters and Infrastructure program is nearing completion, due December 31, 2013. It will improve reliability, outage detection and reduce electricity theft, while delivering net benefits to ratepayers.
- The $700 million Ruskin Dam and Powerhouse upgrade is underway and is expected to be completed by 2018. The 80-year-old facility is in need of a major upgrade.
- The installation of two additional turbines in existing turbine bays at the Mica Generating Station is underway. The $700 million project will provide 1,000 MW of capacity. The target in-service date for the 5th turbine is October 2014; the 6th turbine the following year.
- Supported energy utilities with the implementation of cost effective demand side management measures via the Demand Side Measures Regulation.
- In 2012/13, five new clean power projects began providing electricity under Electricity Purchase Agreements with BC Hydro.
- Participated in and supported long-term clean energy planning initiatives at the regional and provincial level, including the Western Renewable Energy Zones initiative and BC Hydro's Integrated Resource Plan.
- The LiveSmart BC: Efficiency Incentive program provided homeowners partial cost recovery of a baseline energy efficiency evaluation of their home and incentives for energy efficiency upgrades. In 2012/13 the program provided incentives to more than 16,500 homeowners. This will result in a reduction of greenhouse gas emissions of more than 39,000 tonnes annually.
- In June 2011, amendments to the *Clean Energy Act* (Act) were enacted to give the Minister of Energy, Mines and Natural Gas (Minister) the authority to require major utilities to offer a transferable on-bill financing program to eligible customers, and to set program parameters for the financing offer.

- On July 26, 2012, the Minister signed a regulation under the Act to require BC Hydro and FortisBC to implement residential financing pilots in the City of Colwood (electrically-heated homes) and the Regional District of Okanagan-Similkameen (gas and electric-heated homes) respectively, beginning November 1, 2012.
- The LiveSmart BC: Small Business program provided small businesses with free energy assessments, support in accessing utility incentive programs, and help completing energy efficient upgrades through its free Business Energy Advisor service. The program also topped up utility incentive programs province-wide, and offered free lighting upgrades to very small businesses in FortisBC electric territory. In 2012/13 the program served more than 5,200 small businesses, resulting in approximately 80 gigawatt hours in energy savings.
- In May 2012, the *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act* was amended, followed in November 2012 by amendments to the Renewable and Low Carbon Fuel Requirements Regulation, which will take effect July 1, 2013. The amendments separate transportation fuels into two classes, gasoline and diesel, and level the playing field for fuel suppliers. They are based on recommendations from consultation with more than 39 fuel suppliers. The amendments also introduce the ability for suppliers to enter into agreements to earn credit for actions which accelerate the adoption of low carbon transportation fuels.
- Worked with the Climate Action Secretariat (Ministry of Environment), other government ministries and agencies, Crown corporations, the public, electricity producers and utilities across B.C. to implement a coordinated approach to energy conservation and efficiency measures and support the deployment of alternative energy options to meet the province's energy needs.
- Continued supporting energy efficiency in homes and buildings by monitoring on-bill financing pilots for British Columbians to inform the evolution of the successful LiveSmart BC: Energy Efficiency Program.
- Continued ensuring the procurement of clean and renewable electricity accounts for at least 93 per cent of total generation, excluding power required for liquefied natural gas export projects.
- Continued implementing the BC Bioenergy Strategy to take advantage of B.C.'s abundant sources of Mountain Pine Beetle timber, wood wastes and agricultural residues.
- Through the Innovative Clean Energy Fund, continued supporting projects that solve real, everyday energy and environmental issues and create economic benefits for all British Columbians.
- Continued to reduce the carbon intensity of the energy used by British Columbians by implementing a low carbon fuel requirement and increasing the supply of clean electricity for transportation.
- Continued supporting the Remote Community Energy Network (BC Hydro, Aboriginal Affairs and Northern Development Canada, the First Nations Technology

Council and the Ministry) including energy education and training, community energy planning, utility service provision, clean energy development, energy efficiency and energy monitoring.

- Along with BC Hydro, continued the implementation of recommendations from the June 2011 Panel Review of BC Hydro.
- Continued the Columbia River Treaty 2014 Review process to evaluate future scenarios, including possible continuation, amendment or termination of the Treaty.

Mines and Mineral Resources

- B.C.'s mining sector is a key economic driver: the value of commodities produced by B.C. mines was approximately $8.3 billion in 2012, and at an estimated $680 million, exploration spending in B.C. hit record levels.
- The BC Jobs Plan committed to the opening of eight new mines and the expansion of nine existing mines by 2015. Significant progress has been made with one new mine in operation, five more under construction or permitted, and six mine expansions permitted since the BC Jobs Plan was released.
- On May 16, 2012, the Province released British Columbia's Mineral Exploration and Mining Strategy, which supports Canada Starts Here: The BC Jobs Plan. The strategy outlines specific goals and actions to capitalize on the unique opportunities associated with strong global demand for mined products. The strategy's targets and commitments include the following:
    - Create eight new mines and expand nine existing ones by 2015.
    - Increase mineral exploration to ensure future mining activity.
    - Ensure mine development improves the social and economic well-being of First Nations and respects cultural values.
- The New Afton mine near Kamloops opened in September 2012 and employs over 400 people, including more than 100 who were part of a training program coordinated by the British Columbia Aboriginal Mine Training Association. New Afton is expected to yield an average of 85,000 ounces of gold, 214,000 ounces of silver and 75 million pounds of copper annually over its 12-year life.
- At the Mount Milligan mine site northwest of Prince George, 1,000 jobs were created at the peak of construction in the summer of 2012. Once it is fully operational, Mount Milligan, which is being developed at an estimated capital cost of $1.5 billion, will provide 350 full-time jobs over its 22-year expected life.
- The $500 million Red Chris mine, currently under construction in northwest B.C., will employ about 450 people at the peak of construction and 300 people full time during operations over an expected 28-year life.

- In 2012, the province exported a total of $9.1 billion worth of coal and metallic mineral products. While this is slightly down from 2011, it represents 29 per cent of all B.C. exports.
- More than 30,000 people are employed in mineral exploration, mining and related sectors, and, of these, more than 12,500 are directly employed at producing mines.
- In March 2013, the B.C. Environmental Assessment Office and the Canadian Environmental Assessment Agency signed a Memorandum of Understanding (MOU) to implement substitution in B.C. B.C. is the first province in Canada to pursue the substitution provisions enabled by the *Canadian Environmental Assessment Act* 2012, and this MOU will serve as a model for other jurisdictions in Canada. Substitution means that where both federal and provincial EAs are required, a single EA process is conducted (B.C.'s), but two decisions are made (Canada and B.C.).
- To date, the federal Minister of the Environment has approved EA substitution for four coal mining projects in B.C.: Carbon Creek; Sukunka; Echo Hill; and Arctos Anthracite. As a result of substitution, B.C.'s findings and conclusions will be used to support both the federal and provincial governments in making their respective EA decisions.
- MEM continues to work with the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) towards an average 60-day turnaround time for processing Notice of Work permit applications for mineral and coal exploration activities.
- MEM also continues to work with FLNRO to ensure co-ordinated authorizations for major mines.
- Based on survey results, PricewaterhouseCoopers estimated that payments to governments by B.C.'s mining industry totalled $504 million in 2012.
- British Columbia was the first province to share direct revenue generated from new mines and expansions with First Nations. Revenue sharing agreements have been signed for new mines and mine expansions including: New Afton, Mt. Milligan, Mount Polley, Copper Mountain, Highland Valley Copper and Elk Valley Coal projects.
- New positions have been created in the busiest regions of the province to assist with processing exploration permit applications.
- MEM continues to support the mine rescue competitions and the annual Mine Safety Awards.
- MEM also continues to support the British Columbia Technical and Research Committee on Mine Reclamation's annual Mine Reclamation Awards to recognize outstanding achievements in mine reclamation in this province.

Legislation

BC Hydro Public Power Legacy and Heritage Contract Act (brought into force November 2003)

The *B.C. Hydro Public Power Legacy and Heritage Contract Act* protects public ownership of BC Hydro's generation, transmission and distribution assets. It is also the enabling legislation that allows for a Heritage Contract to be established between BC Hydro generation and distribution lines of business, which will ensure BC Hydro ratepayers continue to benefit from the low cost heritage assets.

Clean Energy Act (brought into force June 2010)

The *Clean Energy Act* sets out British Columbia's energy objectives intended to guide both BC Hydro's resource planning and the British Columbia Utilities Commission's key regulatory decisions. The Act exempts certain strategic investments from British Columbia Utilities Commission review, gives Cabinet decision making authority over BC Hydro resource plans, creates a framework for BC Hydro to pursue electricity exports while protecting ratepayers, and reintegrates the British Columbia Transmission Corporation into BC Hydro. It is also enabling legislation that allows for a feed-in tariff, restrictions on future large hydro development, and utility greenhouse gas emission reduction programs.

Coal Act (new Coal Act brought into force April 2004)

The *Coal Act* governs the management of Crown coal rights including tenure issuance and administration. The Act defines the rights of exploration and production on Crown coal tenure.

Energy Efficiency Act (brought into force May 1991)

The *Energy Efficiency Act* regulates the manufacturing and sale of energy devices and establishes prescribed energy standards which energy devices must meet.

Fort Nelson Indian Reserve Minerals Revenue Sharing Act (brought into force October 1980, as it relates to minerals and coal)

The *Fort Nelson Indian Reserve Minerals Revenue Sharing Act* gives force and effect to a revenue sharing agreement with Canada over minerals, including coal, petroleum and natural gas, taken from the Fort Nelson Indian Reserve. Under the agreement, the Province collects revenues arising from exploration and development of the resources. The Province shares these revenues 50/50 with Canada, on behalf of the Fort Nelson First Nation. In 2003, Canada, the Province and the Fort Nelson First Nation approved an amendment to the revenue sharing formula under the Act which was brought into

force through Orders in Council (BC OIC 609/2003) passed by both the provincial and federal Cabinets. MEM is responsible for the policy for this Act, the Ministry of Finance is responsible for the collection and sharing of revenues.

Geothermal Resources Act (brought into force June 1982)

The *Geothermal Resources Act* vests geothermal resources in the Crown and governs the management of the resources. The Act defines geothermal resources, provides for awarding and administration of geothermal tenures, provides for a royalty mechanism and sets the regulatory framework for exploration and production of the resources.

Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirement) Act (brought into force January 2009)

The *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirement) Act* enables the inclusion of renewable content in, and the reduction in the carbon intensity of, transportation fuels.

Hydro and Power Authority Act (brought into force March 1964)

The *Hydro and Power Authority Act* establishes BC Hydro as a Crown Corporation. The Act lays out BC Hydro's powers and its mandate.

Hydro Power Measures Act (brought into force March 1964)

The *Hydro Power Measures Act* is the legislation related to the acquisition of British Columbia Electric Company Ltd. in the early 1960's. BC Electric was amalgamated with the British Columbia Power Commission in 1965 to create British Columbia Hydro and Power Authority (BC Hydro).

Indian Reserve Mineral Resource Act (brought into force July 1943)

The *Indian Reserve Mineral Resource Act* gives force and effect to a revenue sharing agreement signed in 1943 with Canada over minerals, excluding coal, oil and natural gas and specified surface materials, taken from Indian Reserves. Under the agreement, the Province is to collect all revenue, which is then, shared 50/50 with Canada. For the agreement to apply, the mineral rights in a reserve must first be surrendered by the First Nation to Canada pursuant to the *Indian Act*. [Note-provisions of the *Fort Nelson Indian Reserve Minerals Revenue Sharing Act* are linked to this Act.]

Mineral Land Tax Act (brought into force June 1973)

The *Mineral Land Tax Act* provides for the imposition of a property tax on freehold subsurface mineral (including coal, petroleum and natural gas) ownership. MEM is responsible for establishing the policy for this Act, while the Ministry of Finance is the collector of the tax.

Mineral Tax Act (brought into force January 1990)

The *Mineral Tax Act* provides for a tax on the production of minerals (as defined in the *Mineral Tenure Act* and coal) taken from any mine, whether freehold or leased rights, based on the net profit of the mine. MEM is responsible for establishing the policy for this Act, while the Ministry of Finance is the collector of the tax.

Mineral Tenure Act (brought into force August 1988)

The *Mineral Tenure Act* governs the management of Crown mineral rights, excluding rights to coal, petroleum and natural gas. The Act defines who may explore for and produce Crown minerals, sets the framework for the provision of mineral tenure and provides for administration of tenures. The Act provides definition to the area of the province available for the acquisition of subsurface mineral rights, and allows for the creation of reserves in order to limit or prohibit the acquisition of subsurface rights

Mines Act (brought into force July 1990)

The *Mines Act* is the primary regulatory mechanism for mining (minerals and coal) in British Columbia. The Act provides for appointment and powers of inspectors, sets requirements for obtaining a permit, establishes advisory committees, provides the mechanism for developing the Health, Safety and Reclamation Code, sets offence penalties for noncompliance with orders, establishes mine managers' responsibilities, establishes a mine reclamation fund for each mine and provides the ability to develop regulations.

Mining Right of Way Act (brought into force September 1989)

The *Mining Right of Way Act* provides for the ability of a holder of a recorded claim to gain access over private and Crown land for purposes of constructing, maintaining, and operating facilities (defined to be linear corridors) necessary for the exploration development and operation of mines. The Act sets some limits on what can be taken and used, provides for application of the *Expropriation Act* if consent of the private land holder is not obtained and provides direction for multi-user use of access roads.

Ministry of Energy and Mines Act
(brought into force November 1983, except as it relates to petroleum resources)

The Ministry of Energy and Mines Act defines the duties, powers and functions of the Minister in relation to energy, mineral and petroleum resources that are assigned to the Minister and that are not assigned to another Minister, ministry, branch or agency of the government. The Act enables the Minister to approve the funding of infrastructure development to facilitate exploration and development of energy, mineral and petroleum resources.

Power for Jobs Development Act **(brought into force December 1997)**

The *Power for Jobs Development Act* allows the Province to facilitate the establishment of new businesses or the expansion of existing businesses in British Columbia, or support businesses under the Job Protection Commission (since eliminated), by providing 'development power rates', where electricity costs are a critical factor in the businesses' viability. The Power for Jobs program was cancelled in 2001; however the Act was maintained to facilitate the management of pre-existing Power for Jobs contracts.

Special Accounts Appropriation and Control Act (Section 9.5)
(brought into effect in 2007)

The *Special Accounts Appropriation and Control Act* establishes the Innovative Clean Energy (ICE) Fund to encourage the development of new sources of clean energy and technologies that address Government's energy and environmental priorities, create jobs, and promote economic diversity to support local economies and livelihoods in communities across the Province.

West Kootenay Power and Light Company Act, 1897 (Private Act) **(brought into force May 1897)**

The *West Kootenay Power and Light Company Act, 1897*, was a Special Act of the Legislature to incorporate the West Kootenay Power and Light Company. (Special Acts were required to incorporate companies prior to the creation of the precursor to what is now the *Business Corporations Act*). Fortis Inc. acquired the West Kootenay Power and Light Company in 2004 and renamed the company FortisBC Inc.

Ministry of Energy and Mines
June 2013 Update - 2013/14 Estimates

Corporate Services for Energy and Mines

Financial Overview

Operating Expenditures

Ministry of Energy and Mines
Estimates 2013/14

Corporate Initiatives Branch[1]

Service Plan

Corporate Policy/Initiatives

IGR/Trade

[1] Notes common to MEM and MNGD.
A common note on the Dominion Coal Blocks will be in the Corporate section for MNGD's Estimates Binder but be located in the Mining Section in MEM's Estimates binder.

MINISTRY OF ENERGY AND MINES
2013 Budget Update Highlights

Fiscal 2013/14 Changes

MEMs Revised 2013/14 budget is **$24.249M. This represents a $25.133M, or 50.9%, net decrease** from the previous year. The net budget decrease is comprised of:

- s.13, s.17
- s.13, s.17

$000	2012/13	2013/14	$ Change	% Change
Vote 22 - Ministry Operations	34,435	19,219	(15,216)	(44.2%)
Innovative Clean Energy Fund Special Account	14,947	5,030	(9,917)	(66.3%)
Total	**49,382**	**24,249**	**(25,133)**	**(50.9%)**

MINISTRY OF ENERGY AND MINES
Resource Summary

Core Business Area	2012/13 Restated Estimates [1]	2013/14 Estimates	2014/15 Plan	2015/16 Plan
Operating Expenses ($000)				
Mines and Mineral Resources	11,171	11,056	11,056	11,056
Electricity and Alternative Energy	17,980	2,949	2,949	2,949
Executive and Support Services	5,284	5,214	5,210	5,208
Innovative Clean Energy Fund	14,947	5,030	2,300	2,300
Total	49,382	24,249	21,515	21,513
Ministry Capital Expenditures (Consolidated Revenue Fund) ($000)				
Executive and Support Services	228	284	233	233
Total	228	284	233	233
Other Financing Transactions ($000)				
Northwest Transmission Line Receipts	60,000	57,000	13,000	0
Northwest Transmission Line Disbursements	(60,000)	(57,000)	(13,000)	0
Total Net Cash Source (Requirements)	0	0	0	0

[1] Amounts have been restated, for comparative purposes only, to be consistent with Schedule A of the 2013/14 *Estimates*.

MINISTRY OF ENERGY AND MINES

The mission of the Ministry of Energy and Mines is to facilitate a positive climate for the economic, environmental, and socially responsible development of British Columbia's energy and mineral resources for the benefit of British Columbians and for effective service delivery in all areas of business.

MINISTRY SUMMARY

($000)

	Estimates 2012/13[1]	**Estimates 2013/14**
VOTED APPROPRIATION		
Vote 19 — Ministry Operations	34,435	**19,219**
STATUTORY APPROPRIATION		
Innovative Clean Energy Fund Special Account	14,947	**5,030**
OPERATING EXPENSES	49,382	**24,249**
CAPITAL EXPENDITURES [2]	228	**284**
LOANS, INVESTMENTS AND OTHER REQUIREMENTS [3]	—	**—**
REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES [4]	—	**—**

NOTES

[1] For comparative purposes, figures shown for the 2012/13 operating expenses; capital expenditures; loans, investments and other requirements; and revenue collected for, and transferred to, other entities are restated to be consistent with the presentation of *2013/14 Estimates*. Schedule A presents a detailed reconciliation of the restatement of operating expenses and capital expenditures.

[2] Details of capital expenditures are presented in Schedule C.

[3] Details of loans, investments and other requirements are presented in Schedule D.

[4] Details of revenue collected for, and transferred to, other entities are presented in Schedule E.

MINISTRY OF ENERGY AND MINES

CORE BUSINESS SUMMARY

($000)

OPERATING EXPENSES	2012/13 Net	2013/14 ESTIMATES Gross	External Recoveries	Net
Core Business				
Mines and Mineral Resources	11,171	**11,058**	**(2)**	**11,056**
Electricity and Alternative Energy	17,980	**2,951**	**(2)**	**2,949**
Executive and Support Services	5,284	**5,218**	**(4)**	**5,214**
Innovative Clean Energy Fund Special Account	14,947	**5,030**	**—**	**5,030**
TOTAL OPERATING EXPENSES	49,382	**24,257**	**(8)**	**24,249**

CAPITAL EXPENDITURES	Net	Disbursements	Receipts	Net
Core Business				
Executive and Support Services	228	**284**	**—**	**284**
TOTAL CAPITAL EXPENDITURES	228	**284**	**—**	**284**

REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES	Net	Disbursements	Receipts	Net
Core Business				
Electricity and Alternative Energy	—	**57,000**	**(57,000)**	**—**
TOTAL REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES	—	**57,000**	**(57,000)**	**—**

MINISTRY OF ENERGY AND MINES

VOTE DESCRIPTIONS

($000)

	Estimates 2012/13	**Estimates 2013/14**

VOTE 19 — MINISTRY OPERATIONS

This vote provides for ministry programs and operations described in the voted appropriations under the following three core businesses: Mines and Mineral Resources, Electricity and Alternative Energy, and Executive and Support Services.

MINES AND MINERAL RESOURCES

Voted Appropriation

Mines and Mineral Resources	11,171	**11,056**

Voted Appropriation Description: This sub-vote provides for the management and responsible development of the province's mineral and coal resources, including: developing and delivering geoscience databases and surveys; regulating mineral and coal exploration and mine development to ensure safe and environmentally responsible development, production, reclamation, and closure; developing and implementing policies and legislation to support mineral and coal exploration and development; providing secure mineral and coal tenure and registering, managing, and maintaining these rights; delivering timely permitting decisions; advising provincial government agencies on mineral and coal resources and their potential; promoting British Columbia's many mineral and coal opportunities; assisting mineral and coal exploration and mining companies; responding to queries from the public, First Nations, stakeholders, and local governments; and consulting the public, First Nations, and local governments on major policy and legislative initiatives. Costs may be recovered from ministries, Crown agencies, other levels of government, agencies and organizations, individuals, and from fees for supplies and services described within this sub-vote.

ELECTRICITY AND ALTERNATIVE ENERGY

Voted Appropriation

Electricity and Alternative Energy	17,980	**2,949**

Voted Appropriation Description: This sub-vote provides for development of legislation, policies, and programs to support all forms of electrical power generation, transmission, and marketing; regional electricity trading and electric system reliability and coordination including the Columbia River Treaty; province-wide energy conservation and efficiency measures and programs; alternative energy development; the advancement of leading edge energy technologies; and the management of geothermal resources. This sub-vote also provides for regulation of renewable fuels and the carbon intensity of transportation fuels; provision of policy advice or direction to electrical utilities and the regulator, British Columbia Utilities Commission; fostering private sector and community investment in new electricity and alternative energy resources; and strategic policy development for clean renewable power producers. Costs may be recovered from ministries, Crown agencies, other levels of government, and parties external to government for supplies and services described within this sub-vote.

EXECUTIVE AND SUPPORT SERVICES

Voted Appropriations

Minister's Office	538	**529**
Corporate Services	4,746	**4,685**
	5,284	**5,214**

Voted Appropriations Description: This sub-vote provides for the office of the Minister of Energy and Mines and the Minister Responsible for Core Review including salaries, benefits, allowances, and operating expenses for the minister and the minister's staff; executive support including the deputy minister's office; and provides for co-ordination of legislation and the management and delivery of programs that report information to the public on the state of energy and mines. This sub-vote also provides for corporate services and corporate business innovation including strategic planning, business review and planning, cross-ministry and corporate policy development, intergovernmental relations, legislation, internal communications, correspondence, records management, economic and regulatory impact analysis, and information and privacy; and for core review. This sub-vote also provides for executive direction to the ministry; finance, administrative, strategic human resources, and information management services and systems; revenue collection; trust fund management for ministry operations, programs, and clients; and the salary and expenses of the Parliamentary Secretary for Core Review. Costs may be recovered from ministries, other entities within government, other levels of government, organizations, and individuals for services described within this sub-vote.

VOTE 19 — MINISTRY OPERATIONS	34,435	**19,219**

MINISTRY OF ENERGY AND MINES

VOTE DESCRIPTIONS

($000)

	Estimates 2012/13	**Estimates 2013/14**

STATUTORY — SPECIAL ACCOUNTS

This statutory appropriation provides for programs and operations of the following special account: Innovative Clean Energy Fund.

INNOVATIVE CLEAN ENERGY FUND

Statutory Appropriation		
Innovative Clean Energy Fund special account	14,947	**5,030**

Statutory Appropriation Description: This statutory appropriation provides for the Innovative Clean Energy Fund special account which is governed under the *Special Accounts Appropriation and Control Act.*

MINISTRY GROUP ACCOUNT CLASSIFICATION SUMMARY

GROUP ACCOUNT CLASSIFICATION		
Salaries and Benefits	14,741	**14,738**
Operating Costs	3,813	**3,495**
Government Transfers	29,441	**4,730**
Other Expenses	1,404	**1,298**
Internal Recoveries	(5)	**(4)**
External Recoveries	(12)	**(8)**
TOTAL OPERATING EXPENSES	49,382	**24,249**

MINISTRY OF ENERGY AND MINES

SPECIAL ACCOUNT[1]

($000)

	Estimates 2012/13	**Estimates 2013/14**
INNOVATIVE CLEAN ENERGY FUND SPECIAL ACCOUNT		
This account was created by the *Finance Statutes (Innovative Clean Energy Fund) Amendment Act* in 2007 and is continued under the *Special Accounts Appropriation and Control Act*. The purpose of the account is to support the expanded use of clean energy, promote energy efficiency and conservation, and accelerate the commercialization of clean energy technologies through projects and programs that address provincial energy and environmental priorities. Revenues credited to the account originally came from a levy applied to all final purchases of specified 'energy products' in British Columbia under section 68.01 of the *Social Services Tax Act* prior to August 1, 2010. The levy was re-introduced on April 1, 2013 under the *Provincial Sales Tax Act*; however, under the revised definition of 'energy products', electricity is now excluded. Program expenses are recovered from the Special Account. Expenses are limited to those permitted within the scope of the Act and include administration of the account.		
SPENDING AUTHORITY AVAILABLE AT THE BEGINNING OF THE FISCAL YEAR [2]	33,868	**23,004**
OPERATING TRANSACTIONS		
Revenue	—	7,000
Expense	(14,947)	(5,030)
Net Revenue (Expense)	(14,947)	**1,970**
Difference Between 2012/13 Estimates and Projected Actual Net Revenue (Expense)	4,083	
FINANCING TRANSACTIONS		
Receipts	—	—
Disbursements	—	—
Capital Expenditures	—	—
Net Cash Source (Requirement)	—	—
PROJECTED SPENDING AUTHORITY AVAILABLE AT THE END OF THE FISCAL YEAR [2]	23,004	**24,974**

NOTES

[1] A Special Account is an account in the General Fund where the authorization to spend money from the account is located in an Act other than the *Supply Act*.

[2] The Projected Spending Authority Available represents the cash and temporary investments projected to be available at the end of the fiscal year. The Spending Authority Available at the beginning of the fiscal year 2012/13 is based on the *2011/12 Public Accounts*.

MINISTRY OF ENERGY AND MINES

REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES BY CORE BUSINESS

($000)

	Estimates 2012/13	**Estimates 2013/14**
ELECTRICITY AND ALTERNATIVE ENERGY		
NORTHWEST TRANSMISSION LINE — Disbursements are provided by the province to BC Hydro for the Northwest Transmission Line under a federal-provincial cost sharing agreement. Federal funding is received by the Ministry of Energy and Mines on BC Hydro's behalf. Administration costs are funded through the ministry's voted appropriations.		
Disbursements	60,000	**57,000**
Receipts	(60,000)	**(57,000)**
Net Cash Requirement (Source)	—	**—**

MINISTRY OF ENERGY AND MINES
($000)

VOTE 19 Ministry Operations

Description	Total 2012/13 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
Mines and Mineral Resources	**11,171**	**7,267**	**—**	**1,744**	**—**	**9,011**	**—**	**527**	**—**	**473**	**106**	**168**	**—**	**—**	**64**
Electricity and Alternative Energy	**17,980**	**2,123**	**—**	**509**	**—**	**2,632**	**—**	**95**	**—**	**113**	**47**	**57**	**—**	**—**	**—**
Executive and Support Services	**5,284**	**2,205**	**20**	**548**	**52**	**2,825**	**23**	**135**	**427**	**65**	**323**	**106**	**—**	**—**	**—**
Minister's Office	538	291	—	89	52	432	—	47	—	—	9	15	—	—	—
Corporate Services	4,746	1,914	20	459	—	2,393	23	88	427	65	314	91	—	—	—
Total	**34,435**	**11,595**	**20**	**2,801**	**52**	**14,468**	**23**	**757**	**427**	**651**	**476**	**331**	**—**	**—**	**64**

Special Account(s)

Description	Total 2012/13 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
Innovative Clean Energy Fund special account	**14,947**	**218**	**—**	**52**	**—**	**270**	**—**	**5**	**—**	**20**	**—**	**5**	**—**	**—**	**—**
Total	**14,947**	**218**	**—**	**52**	**—**	**270**	**—**	**5**	**—**	**20**	**—**	**5**	**—**	**—**	**—**

70	72	73	75	Total Operating Costs	77	79	80	Total Govt Transfers	81	83	85	Total Other Expenses	86	88	Total Internal Recoveries	89	90	Total External Recoveries	Total 2013/14 Operating Expenses
299	—	374	—	2,011	—	—	—	—	—	—	37	37	—	(1)	(1)	(1)	(1)	(2)	11,056
—	—	8	—	320	—	—	—	—	—	—	—	—	—	(1)	(1)	(1)	(1)	(2)	2,949
—	—	49	6	1,134	—	—	—	—	—	—	1,261	1,261	—	(2)	(2)	(2)	(2)	(4)	5,214
—	—	—	—	71	—	—	—	—	—	—	29	29	—	(1)	(1)	(1)	(1)	(2)	529
—	—	49	6	1,063	—	—	—	—	—	—	1,232	1,232	—	(1)	(1)	(1)	(1)	(2)	4,685
299	**—**	**431**	**6**	**3,465**	**—**	**—**	**—**	**—**	**—**	**—**	**1,298**	**1,298**	**—**	**(4)**	**(4)**	**(4)**	**(4)**	**(8)**	**19,219**

70	72	73	75	Total Operating Costs	77	79	80	Total Govt Transfers	81	83	85	Total Other Expenses	86	88	Total Internal Recoveries	89	90	Total External Recoveries	Total 2013/14 Operating Expenses
—	—	—	—	30	—	—	4,730	4,730	—	—	—	—	—	—	—	—	—	—	5,030
—	**—**	**—**	**—**	**30**	**—**	**—**	**4,730**	**4,730**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**5,030**

MINISTRY OF ENERGY AND MINES
OPERATING BUDGET - 2012/13 to 2015/16

By Core Business

$000s

	2012/13 Restated	Change	2013/14 Estimates
Ministry Operations			
Mines and Mineral Resources	11,171	(115)	**11,056**
Electricity and Alternative Energy	17,980	(15,031)	**2,949**
Executive and Support Services	5,284	(70)	**5,214**
Sub-Total	**34,435**	**(15,216)**	**19,219**
Innovative Clean Energy Fund	**14,947**	**(9,917)**	**5,030**
TOTAL MINISTRY	**49,382**	**(25,133)**	**24,249**

s.13, s.17

s.13, s.17

MINISTRY OF ENERGY AND MINES

OPERATING BUDGET - 2012/13 to 2013/14

by Group Account Classification (GAC)

($000s)

Group Account Classification All Votes and Special Accounts	2012/13 Restated	2013/14 Estimates	Increase (Decrease)	% Change
Salaries and benefits	14,741	14,738	(3)	(0.0%)
Operating costs	3,813	3,495	(318)	(8.3%)
Government transfers	29,441	4,730	(24,711)	(83.9%)
Other expenses	1,404	1,298	(106)	(7.5%)
Recoveries	(17)	(12)	5	(29.4%)
Total Operating Budget	**49,382**	**24,249**	**(25,133)**	**(50.9%)**
	A	B	B-C	

s.13, s.17

MINISTRY ENERGY & MINES

OPERATING BUDGET - 2012/13 to 2013/14

by Group Account Classification (GAC)

($000s)

Vote / Special Accounts	Group Account Classification	2012/13	2013/14	Increase (Decrease)	% Change
Ministry Operations	Salaries and Benefits	14,342	**14,468**	126	0.9%
	Operating Costs	3,706	**3,465**	(241)	(6.5%)
	Government Transfers	15,000	**-**	(15,000)	(100.0%)
	Other Expenses	1,404	**1,298**	(106)	(7.5%)
	Internal Recoveries	(5)	**(4)**	1	(20.0%)
	External Recoveries	(12)	**(8)**	4	(33.3%)
		34,435	**19,219**	(15,216)	(44.2%)
Innovative Clean Energy (ICE) Fund	Salaries and Benefits	399	**270**	(129)	(32.3%)
	Operating Costs	107	**30**	(77)	(72.0%)
	Government Transfers	14,441	**4,730**	(9,711)	(67.2%)
		14,947	**5,030**	(9,917)	(66.3%)
MINISTRY TOTAL		**49,382**	**24,249**	**(25,133)**	(50.9%)

Vote / Special Accounts	Group Account Classification	2012/13	2013/14	Increase (Decrease)	% Change
Combined	Salaries and Benefits	14,741	**14,738**	(3)	(0.0%)
	Operating Costs	3,813	**3,495**	(318)	(8.3%)
	Government Transfers	29,441	**4,730**	(24,711)	(83.9%)
	Other Expenses	1,404	**1,298**	(106)	(7.5%)
	Internal Recoveries	(5)	**(4)**	1	(20.0%)
	External Recoveries	(12)	**(8)**	4	(33.3%)
Combined Totals		**49,382**	**24,249**	**(25,133)**	(50.9%)

s.13, s.17

MINISTRY OF ENERGY AND MINES
2012/13 to 2015/16
Operating Budget Changes by STOB

$000s

All Votes and Special Accounts		2012/13 Restated	Change	2013/14 Estimates
50	Base Salaries and Overtime	11,921	(108)	**11,813**
51	Supplementary Salary Costs	20	-	**20**
52	Employee Benefits	2,746	107	**2,853**
54	Legislative Salaries - Indemnities	54	(2)	**52**
Total Salaries & Benefits		**14,741**	**(3)**	**14,738**
55	Boards, Commissions, Courts Fees	23	-	**23**
57	Public Servant Travel Expenses	782	(20)	**762**
59	Centralized Management Services	436	(9)	**427**
60	Professional Services	850	(179)	**671**
63	Information Systems - Operating	482	(6)	**476**
65	Office and Business Expenses	440	(104)	**336**
67	Advertising	-	-	**-**
68	Statutory Advertising and Publications	-	-	**-**
69	Utilities Materials and Supplies	64	-	**64**
70	Operating Equip, Vehicles and Other	299	-	**299**
73	Amortization Expenses	431	-	**431**
75	Building Occupancy Charges	6	-	**6**
Total Operating Expenditures		**3,813**	**(318)**	**3,495**
77	Transfers - Grants	15,000	(15,000)	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	14,441	(9,711)	**4,730**
Total Grants and Transfers		**29,441**	**(24,711)**	**4,730**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	1,404	(106)	**1,298**
Total Misc. Expenditures		**1,404**	**(106)**	**1,298**
88	Recoveries - Internal	(5)	1	**(4)**
89/90	Recoveries - External	(12)	4	**(8)**
Total Recoveries		**(17)**	**5**	**(12)**
TOTAL		**49,382**	**(25,133)**	**24,249**
Percent Change				**(50.9%)**

s.13, s.17

s.13, s.17

s.13, s.17

ALL Votes Special Accts

MINISTRY OF ENERGY AND MINES
2012/13 to 2015/16

Operating Budget Changes by STOB

$000s

Ministry Operations - Vote 19		2012/13 Restated	Change	2013/14 Estimates
50	Base Salaries and Overtime	11,597	(2)	**11,595**
51	Supplementary Salary Costs	20	-	**20**
52	Employee Benefits	2,671	130	**2,801**
54	Legislative Salaries - Indemnities	54	(2)	**52**
Total Salaries & Benefits		**14,342**	**126**	**14,468**
55	Boards, Commissions, Courts Fees	23	-	**23**
57	Public Servant Travel Expenses	757	-	**757**
59	Centralized Management Services	436	(9)	**427**
60	Professional Services	775	(124)	**651**
63	Information Systems - Operating	482	(6)	**476**
65	Office and Business Expenses	433	(102)	**331**
69	Utilities Materials and Supplies	64	-	**64**
70	Operating Equip, Vehicles and Other	299	-	**299**
73	Amortization Expenses	431	-	**431**
75	Building Occupancy Charges	6	-	**6**
Total Operating Expenditures		**3,706**	**(241)**	**3,465**
77	Transfers - Grants	15,000	(15,000)	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	-	-	**-**
Total Grants and Transfers		**15,000**	**(15,000)**	**-**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	1,404	(106)	**1,298**
Total Misc. Expenditures		**1,404**	**(106)**	**1,298**
88	Recoveries - Internal	(5)	1	**(4)**
89/90	Recoveries - External	(12)	4	**(8)**
Total Recoveries		**(17)**	**5**	**(12)**
TOTAL MINISTRY OPERATIONS		**34,435**	**(15,216)**	**19,219**
Percent Change				**(44.2%)**

s.13, s.17

s.13, s.17

MINISTRY OF ENERGY AND MINES
2012/13 to 2015/16

Operating Budget Changes by STOB

$000s

Mines and Mineral Resources		2012/13 Restated	Change	2013/14 Estimates
50	Base Salaries and Overtime	7,234	33	7,267
51	Supplementary Salary Costs	-	-	-
52	Employee Benefits	1,664	80	1,744
54	Legislative Salaries - Indemnities	-	-	-
Total Salaries & Benefits		**8,898**	**113**	**9,011**
55	Boards, Commissions, Courts Fees	-	-	-
57	Public Servant Travel Expenses	527	-	527
59	Centralized Management Services	-	-	-
60	Professional Services	558	(85)	473
63	Information Systems - Operating	106	-	106
65	Office and Business Expenses	198	(30)	168
69	Utilities Materials and Supplies	64	-	64
70	Operating Equip, Vehicles and Other	299	-	299
73	Amortization Expenses	374	-	374
75	Building Occupancy Charges	-	-	-
Total Operating Expenditures		**2,126**	**(115)**	**2,011**
77	Transfers - Grants	-	-	-
79	Entitlements	-	-	-
80	Transfers Under Agreement	-	-	-
Total Grants and Transfers		**-**	**-**	**-**
81	Trsf Payment Between Votes	-	-	-
84	Interest Costs - Non Public Debt	-	-	-
85	Other Expenses	153	(116)	**37**
Total Misc. Expenditures		**153**	**(116)**	**37**
88	Recoveries - Internal	(2)	1	**(1)**
89/90	Recoveries - External	(4)	2	**(2)**
Total Recoveries		**(6)**	**3**	**(3)**
TOTAL		**11,171**	**(115)**	**11,056**
Percent Change				**(1.0%)**

s.13, s.17

s.13, s.17

MMRD

MINISTRY OF ENERGY AND MINES
2012/13 to 2015/16
Operating Budget Changes by STOB

$000s

Electricity and Alternative Energy		2012/13 Restated	Change	2013/14 Estimates
50	Base Salaries and Overtime	2,110	13	**2,123**
51	Supplementary Salary Costs	-	-	**-**
52	Employee Benefits	486	23	**509**
54	Legislative Salaries - Indemnities	-	-	**-**
Total Salaries & Benefits		**2,596**	**36**	**2,632**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	95	-	**95**
59	Centralized Management Services	-	-	**-**
60	Professional Services	134	(21)	**113**
63	Information Systems - Operating	47	-	**47**
65	Office and Business Expenses	103	(46)	**57**
69	Utilities Materials and Supplies	-	-	**-**
70	Operating Equip, Vehicles and Other	-	-	**-**
73	Amortization Expenses	8	-	**8**
75	Building Occupancy Charges	-	-	**-**
Total Operating Expenditures		**387**	**(67)**	**320**
77	Transfers - Grants	15,000	(15,000)	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	-	-	**-**
Total Grants and Transfers		**15,000**	**(15,000)**	**-**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	-	-	**-**
Total Misc. Expenditures		**-**	**-**	**-**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(2)	-	**(2)**
Total Recoveries		**(3)**	**-**	**(3)**
TOTAL		**17,980**	**(15,031)**	**2,949**
Percent Change				**(83.6%)**

s.13, s.17

s.13, s.17

EAED

MINISTRY OF ENERGY AND MINES
2012/13 to 2015/16

Operating Budget Changes by STOB

$000s

Executive and Support Services - Minister's Office		2012/13 Restated	Change	2013/14 Estimates
50	Base Salaries and Overtime	338	(47)	**291**
51	Supplementary Salary Costs	-	-	**-**
52	Employee Benefits	78	11	**89**
54	Legislative Salaries - Indemnities	54	(2)	**52**
Total Salaries & Benefits		**470**	**(38)**	**432**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	47	-	**47**
59	Centralized Management Services	-	-	**-**
60	Professional Services	-	-	**-**
63	Information Systems - Operating	9	-	**9**
65	Office and Business Expenses	15	-	**15**
67	Advertising	-	-	**-**
68	Statutory Advertising and Publications	-	-	**-**
69	Utilities Materials and Supplies	-	-	**-**
70	Operating Equip, Vehicles and Other	-	-	**-**
73	Amortization Expenses	-	-	**-**
75	Building Occupancy Charges	-	-	**-**
Total Operating Expenditures		**71**	**-**	**71**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	-	-	**-**
Total Grants and Transfers		**-**	**-**	**-**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	-	29	**29**
Total Misc. Expenditures		**-**	**29**	**29**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(2)	-	**(2)**
Total Recoveries		**(3)**	**-**	**(3)**
TOTAL		**538**	**(9)**	**529**
Percent Change		**-**		**(1.7%)**

s.13, s.17

s.13, s.17

MINISTRY OF ENERGY AND MINES
2012/13 to 2015/16

Operating Budget Changes by STOB

$000s

Executive and Support Services - Corporate Services		2012/13 Restated	Change	2013/14 Estimates
50	Base Salaries and Overtime	1,915	(1)	**1,914**
51	Supplementary Salary Costs	20	-	**20**
52	Employee Benefits	443	16	**459**
54	Legislative Salaries - Indemnities	-	-	**-**
Total Salaries & Benefits		**2,378**	**15**	**2,393**
55	Boards, Commissions, Courts Fees	23	-	**23**
57	Public Servant Travel Expenses	88	-	**88**
59	Centralized Management Services	436	(9)	**427**
60	Professional Services	83	(18)	**65**
63	Information Systems - Operating	320	(6)	**314**
65	Office and Business Expenses	117	(26)	**91**
67	Advertising	-	-	**-**
68	Statutory Advertising and Publications	-	-	**-**
69	Utilities Materials and Supplies	-	-	**-**
70	Operating Equip, Vehicles and Other	-	-	**-**
73	Amortization Expenses	49	-	**49**
75	Building Occupancy Charges	6	-	**6**
Total Operating Expenditures		**1,122**	**(59)**	**1,063**
77	Transfers - Grants	-	-	**-**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	-	-	**-**
Total Grants and Transfers		**-**	**-**	**-**
81	Trsf Payment Between Votes	-	-	**-**
84	Interest Costs - Non Public Debt	-	-	**-**
85	Other Expenses	1,251	(19)	1,232
Total Misc. Expenditures		**1,251**	**(19)**	**1,232**
88	Recoveries - Internal	(1)	-	**(1)**
89/90	Recoveries - External	(4)	2	**(2)**
Total Recoveries		**(5)**	**2**	**(3)**
TOTAL		**4,746**	**(61)**	**4,685**
Percent Change				**(1.3%)**

s.13, s.17

s.13, s.17

MINISTRY OF ENERGY AND MINES
2012/13 to 2015/16
Operating Budget Changes by STOB

$000s

Innovative Clean Energy (ICE) Fund		2012/13 Restated	Change	2013/14 Estimates
50	Base Salaries and Overtime	324	(106)	**218**
51	Supplementary Salary Costs	-	-	**-**
52	Employee Benefits	75	(23)	**52**
54	Legislative Salaries - Indemnities	-	-	**-**
Total Salaries & Benefits		**399**	**(129)**	**270**
55	Boards, Commissions, Courts Fees	-	-	**-**
57	Public Servant Travel Expenses	25	(20)	**5**
59	Centralized Management Services	-	-	**-**
60	Professional Services	75	(55)	**20**
63	Information Systems - Operating	-	-	**-**
65	Office and Business Expenses	7	(2)	**5**
69	Utilities Materials and Supplies	-	-	**-**
70	Operating Equip, Vehicles and Other	-	-	**-**
73	Amortization Expenses	-	-	**-**
75	Building Occupancy Charges	-	-	**-**
Total Operating Expenditures		**107**	**(77)**	**30**
79	Entitlements	-	-	**-**
80	Transfers Under Agreement	14,441	(9,711)	**4,730**
Total Grants and Transfers		**14,441**	**(9,711)**	**4,730**
85	Other Expenses	-	-	**-**
Total Misc. Expenditures		**-**	**-**	**-**
88	Recoveries - Internal	-	-	**-**
89/90	Recoveries - External	-	-	**-**
Total Recoveries		**-**	**-**	**-**
TOTAL		**14,947**	**(9,917)**	**5,030**
Percent Change		**-**		**(66.3%)**

s.13, s.17

s.13, s.17

ICE

MINISTRY OF ENERGY AND MINES

CAPITAL BUDGET - 2012/13 to 2015/16

$000s

	2012/13 Restated	Change	2013/14 Estimates
Ministry Operations			
Specialized Equipment	120	(120)	-
Information Technology	56	(56)	-
Vehicles	52	232	**284**
MINISTRY CAPITAL	**228**	**56**	**284**

s.13, s.17

s.13, s.17

s.13, s.17

s.13, s.17

MINISTRY OF ENERGY AND MINES

OTHER FINANCING TRANSACTIONS - 2012/13 to 2013/14

(in $000s)

Northwest Transmission Line	2012/13 Estimates	2013/14 Estimates	Increase (Decrease)	% Change
Receipts	(60,000)	(57,000)	3,000	(5%)
Disbursements	60,000	57,000	(3,000)	(5%)
Net Cash Required (Source)	-	-	-	-

Disbursements are provided by the province to BC Hydro for the Northwest Transmission Line (NTL) under a federal-provincial cost sharing agreement. Federal funding is received by the Ministry of Energy and Mines on BC Hydro's behalf.

s.13, s.17

Ministry of Energy and Mines
June 2013 Update - 2013/2014 Estimates

Full Time Equivalent (FTE) Staffing Information

FTE Talking Points

- Full-time equivalents (FTEs) in the BC Public Service are projected to decrease as a result of employee attrition and hiring restrictions announced in September 2012.

- This reflects the expectation of government to continue to prioritize key services and programs while achieving savings and improved effectiveness in service delivery.

- The projected decrease is expected to be achieved through attrition – that is, through normal annual voluntary exits, including retirements.

- There is no plan to return to detailed FTE reporting within budget documents.

- Ministers have accountability to balance the budget to the bottom line dollar figure.

- The number of FTEs that can be accommodated within a ministry's budget depends on many factors including the staff mix throughout the year.

Page 38 redacted for the following reason:
- -
s.13, s.17

Ministry of Energy and Mines
2013 Budget Update – 2013/14 Estimates
Finance Based Questions and Answers

1) How is MEM supporting the BC Jobs Plan and specifically the Natural Resource development projects?

2) What programs &/or budget moved in the June 2013 Budget Update?

3) s.13, s.17

4)

5) What backlog spending has occurred to date under the Natural Resource Authorizations?

6) What spending has occurred to date under the Columbia River Treaty?

7) What are the ministry plans to address the backlog in mines permits and how will this be funded?

8) What are the specific goals to be achieved from reducing the backlog?

Ministry of Energy and Mines
2013 Budget Update – 2013/14 Estimates
Finance Based Questions and Answers

1. How is MEM supporting the BC Jobs Plan and specifically the Natural Resource development projects?

- Under the BC Jobs Plan, government has committed funds to streamline decision making and reduce the backlog in key authorizations needed to approve natural resource development projects.
- s.13, s.17
- The Province is more than halfway to meeting the jobs plan target of 17 new or expanded mines by 2015.
- Since the BC Jobs Plan was released, one new mine is in operation, five more are under construction or permitted, and the Province has approved six major expansions of existing mines.
- The backlog target for Notices of Work was met and the turnaround time to process permits has been reduced from 110 day to 65 days.
- Fiscal 2013/14, the ministry will receive funding from contingencies to continue this work.
- The key to meeting the Platform 2013 commitment to support mining projects post-Environmental Assessment is effective and timely mine permitting.
- The Ministry's Mining Strategy directly supports the BC Jobs Plan.

2. **What programs &/or budget moved in the June 2013 Budget Update?**

2013/14 MEM Operating budgets were reduced by $400.218M in transfers to other ministries.

s.13, s.17

s.13, s.17

5. What backlog spending has occurred to date under the Natural Resource Authorizations?

s.13, s.17

- The Ministry spent $2.755M, in 2012/13, for salaries, travel, contracts, information technology, and other related costs.
- s.13, s.17

6. What spending has occurred to date under the Columbia River Treaty?

- Approved funding for fiscal 2012/13 was $3.150M.
- The Ministry spent $2.776M in 2012/13 for salaries, travel, legal, contracts, information technology, and other related costs.
- The ministry expects to receive additional funding from contingencies in fiscal 2013/14.*
    - *(The ministry currently has approval for $2.8M in fiscal 2013/14)

7. **What are the ministry plans to address the backlog in mines permits and how will this be funded?**

- In 2011/12, 2012/13 and 2013/14, 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 hire staff and for contracts related to permitting.
- s.13, s.17

8. **What are the specific goals achieved and to be achieved from reducing the backlog?**

- The Province is more than halfway to meeting the jobs plan target of 17 new or expanded mines by 2015.
- The target to reduce the exploration permit backlog by 80 percent by August 2012 was reached. Average exploration permitting times have been reduced from 110 days to under 70 days.
- The target to reduce the backlog of mining and placer lease applications by 50 per cent has been met.
- Since the BC Jobs Plan was released, one new mine is in operation, five more are under construction or permitted, and the Province has approved six major expansions of existing mines
- The key to meeting the Platform 2013 commitment to support mining projects post-Environmental Assessment is effective and timely mine permitting.

Ministry of Energy and Mines and Minister Responsible for Core Review

REVISED 2013/14 – 2015/16 SERVICE PLAN

For more information on the British Columbia Ministry of Energy and Mines and Minister Responsible for Core Review
see Ministry Contact Information on page 24 or contact:

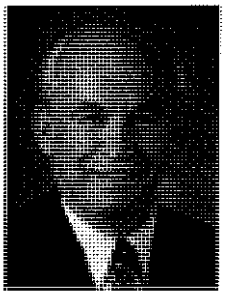
Ministry of Energy and Mines and Minister Responsible for Core Review

PO BOX 9319
STN PROV GOVT
VICTORIA, BC
V8W 9N3

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

Published by the Ministry of Energy and Mines and Minister Responsible for Core Review

Message from the Minister and Accountability Statement



Since its early days as a province, British Columbia has relied on natural resources to power its economy. Our province is blessed with abundant natural resources as well as resourceful and diverse people and businesses. Our government is committed to building a strong economy that will support our world class health care, education, skills training and social services, and the responsible development of our natural resouces are key to a strong sustainable economy.

Sixty years ago, W.A.C. Bennett's vision saw the development of large hydroelectric facilities on the Columbia and Peace Rivers. Today, we still benefit from this investment and are fast approaching the 50th anniversary of the Columbia River Treaty. The Ministry of Energy and Mines' priorities over the coming years include ensuring a balanced Ministry budget in order to control spending and achieve an overall balanced budget for the province of British Columbia.

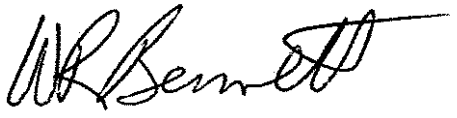
We will conclude the provincial consultations on the Columbia River Treaty and present options to Cabinet on any improvements that can be made to the Treaty. The development of the Site C dam project will be supported through the environmental assessment review process.

We will find efficiencies at BC Hydro and minimize rate increases to consumers and industry while continuing to replace and build hydroelectric and transmission infrastructure. The Northwest Transmission Line and Iskut Extension will be completed and we will work with the clean energy sector to ensure that there remain significant opportunities for renewable energy companies to provide power to British Columbians.

We have set aggressive targets for our mining sector and in order to meet those goals we will continue to support the "one project, one process" initiative to foster more certainty for investors while maintaining our rigorous environmental standards. Key responsibilities for mining are to continue supporting the 2011 Jobs Plan commitments to have eight new mines and nine mine expansions by 2015, and achieve a 60-day turnaround for Notice of Work permitting. Additionally, we will work with the Ministry of Aboriginal Relations and Reconciliation to continue signing mineral tax sharing agreements with First Nations to encourage mine development across the province.

In addition, a core review of government will ensure we are using our resources to the best of our ability to deliver on the priorities of British Columbians. A core review of government will examine the best possible use of government resources, to ensure they are directed to the areas of highest priority, and to protect value for money for taxpayers in the delivery of government services. The core review will also make recommendations on how to improve B.C.'s regulatory reform and red tape reduction initiatives to benefit B.C. businesses. An approach to core review is expected to be finalized in August, 2013.

The *Ministry of Energy and Mines and Minister Responsible for Core Review Revised 2013/14 - 2015/16 Service Plan* was prepared under my direction in accordance with the *Budget Transparency and Accountability Act*. I am accountable for the basis on which the plan has been prepared.



Honourable Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review
June 18, 2013

Table of Contents

Purpose of the Ministry

The Ministry of Energy and Mines is the key provincial ministry responsible for British Columbia's electricity, alternative energy and mining sectors, which comprise public and private interests that explore for and develop electricity, clean or renewable energy (biomass, biogas, geothermal, hydro, solar, ocean, wind or any other alternative energy resource), coal, minerals, and renewable and low-carbon fuels. Through teamwork and positive working relationships with its clients, the Ministry facilitates B.C.'s thriving, safe, environmentally responsible and competitive energy and mining sectors to create jobs and economic growth in communities. In developing energy and mining sector policies, legislation and guidelines, the Ministry consults with other ministries and levels of government, energy, exploration and mining companies, First Nations, communities, environmental and industry organizations, and the public.

Working with its stakeholders, the Ministry develops policies, programs and legislation to maintain B.C.'s mining sector competitiveness and encourage investment in mineral exploration and mining in the province. The Ministry develops and delivers geoscience databases and surveys, and provides funding to other organizations to collect and publish geoscience information. The Ministry is responsible for permitting and inspecting mining projects to ensure the health and safety of workers, the public and the environment. The Ministry also promotes mineral exploration and provides assistance and advice to advance and support continued development of the sector.

The Ministry develops and oversees British Columbia's policies with regard to electrical power generation and transmission. It is responsible for initiatives that promote new energy technologies, energy efficiency and conservation, and alternative energy resources, including renewable and low carbon transportation fuels. The *Clean Energy Act* builds upon B.C.'s unique wealth of clean, renewable energy resources and sets the foundation for significant investments in clean, renewable energy across the province while keeping electricity rates affordable for British Columbians. Through the Innovative Clean Energy Fund, the Ministry is helping to invest in new technologies to respond to global energy and environmental challenges.

The Ministry is responsible for administering all or parts of 19 statutes pertaining to the energy and mining sectors, and has policy responsibilities under the *Utilities Commission Act*. The Ministry is responsible for the following Crown Corporations: the British Columbia Hydro and Power Authority (BC Hydro), Columbia Power Corporation, and Columbia Basin Trust.

Strategic Context

British Columbia is in the fortunate position of having abundant energy and mineral resources as well as innovative, growing energy, mineral exploration and mining sectors.

People, resources and technology combine to provide the energy and mineral products and services required by British Columbians and our export customers, create business and investment opportunities, and develop and market new products and technologies for energy production, use and conservation. The energy and mining sectors help to meet the daily needs of families and businesses, provide important inputs to industrial and manufacturing processes, and generate new jobs, investment and government revenue. The Ministry is committed to working with natural resource sector agencies, communities, First Nations, industry and environmental organizations to ensure that the continued growth, exploration and development of our energy and mining sectors and resources are safe and socially and environmentally responsible.

The Economic Forecast Council expects British Columbia's real GDP will grow by 1.6 per cent in 2013 and 2.5 per cent in 2014. Risks to British Columbia's economic outlook include the following: further slowing of domestic economic activity; renewed weakness in the US economy; the ongoing European sovereign debt crisis threatening the stability of global financial markets; exchange rate volatility; and slower than anticipated economic growth in Asia dampening demand for BC's exports.

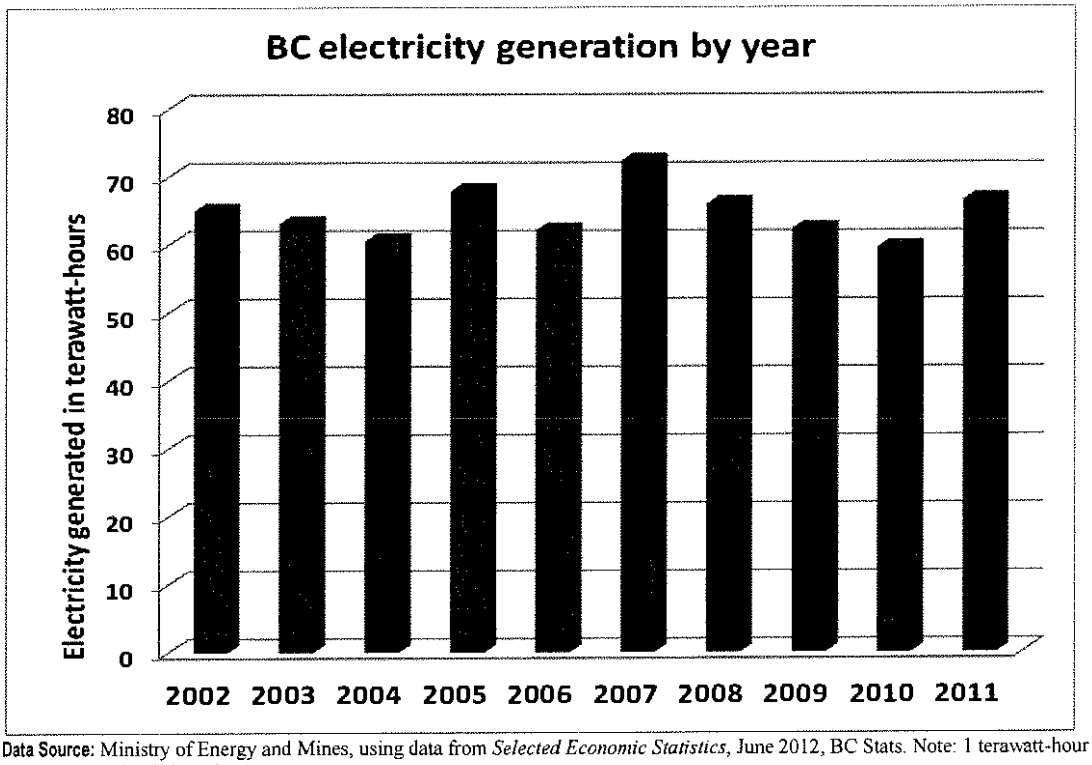
Keeping British Columbia's electricity prices affordable is a government priority. BC Hydro has provided relatively low-cost power to the citizens of B.C. for over 50 years, thanks to the Province's heritage assets, which include historic electricity facilities such as the major dams on the Peace and Columbia Rivers. The establishment of the Heritage Contract ensures that B.C. ratepayers continue to benefit from the low-cost electricity generated by these assets. The British Columbia Utilities Commission sets domestic electricity and natural gas rates based on costs.

Increasing demand for electricity, changing patterns of use and an aging infrastructure require attention. BC Hydro is planning a $6 billion capital program including:

- The Interior to Lower Mainland transmission expansion project—a 250 km 500 kV transmission line along the existing right-of-way between Merritt and Coquitlam. This $700 million project is the largest transmission project in the last 30 years.
- The $222 million Dawson Creek/Chetwynd Area Transmission Project will provide reliable power to the South Peace region, which has a greater demand for electricity than any other region of the province.
- Smart Transmission Grid and Meters will improve reliability, outage detection and reduce electricity theft, while delivering net benefits to ratepayers. The $900 million project is nearing completion.
- The Ruskin Dam and Powerhouse $700 million upgrade is underway and is expected to be completed by 2018. The 80-year-old facility is in need of a major upgrade.
- Operating since 1947, the John Hart dam needs to be replaced. Construction of this $1.1 billion project is expected to begin in 2013 and will address seismic, reliability, and both fish and fish habitat concerns.

- The installation of two additional turbines in existing turbine bays at Mica Generating Station is underway. The $700 million project will provide 1,000 MW of capacity. The target in-service date for the 5th turbine is October 2014; the 6th turbine the following year.

The 2010 *Clean Energy Act* set the policy framework for the future of electricity self-sufficiency, job creation and reduced greenhouse gas emissions in B.C. In 2012, the Province's electricity self-sufficiency definition was changed by: (i) an amendment to the Electricity Self-Sufficiency Regulation under the *Clean Energy Act*, to reflect average water levels rather than critical water levels; and (ii) repealing the requirement in the *Clean Energy Act* for BC Hydro to provide, by 2020, 3,000 gigawatt hours of "insurance" electricity. This approach protects B.C. ratepayers and ensures the development of sufficient new power to meet our needs, while avoiding overbuilding to supply a U.S. market which currently does not require the power.



Data Source: Ministry of Energy and Mines, using data from *Selected Economic Statistics*, June 2012, BC Stats. Note: 1 terawatt-hour = 1,000 gigawatt-hours. Generation is by calendar year.

Due to the heightened awareness of the need to address climate change, consumers continue to focus on reducing their energy consumption, improving energy efficiency, and supporting cleaner energy supply options. By reducing their consumption and choosing cleaner fuels, British Columbians can reduce their greenhouse gas emissions. B.C. has the opportunity to harness its significant renewable energy resources and become a clean-energy powerhouse. Both electricity and natural gas have the potential to help people in B.C. and other jurisdictions reduce their carbon emissions.

British Columbia is Canada's largest producer of copper and its largest exporter of metallurgical coal. B.C.'s mining sector is a key economic driver: the value of commodities produced by B.C. mines was approximately $8.3 billion in 2012, and at an estimated $680 million, exploration spending in B.C. hit record levels. There are currently nine coal mines in operation, ten metal mines, 30 industrial mineral

mines, and hundreds of aggregate pits and quarries. More than 30,000 people are employed in mineral exploration, mining and related sectors, and, of these, more than 12,500 are directly employed at producing mines. Due to continuing demand for B.C.-produced minerals and coal on world markets, both mining company revenues and provincial mineral tax revenues are expected to remain strong.

The Ministry strategy for mineral exploration and mining, directly supports *Canada Starts Here: The BC Jobs Plan (BC Jobs Plan)*.

The *BC Jobs Plan* committed to the opening of eight new mines and the expansion of nine existing mines by 2015. Significant progress has been made with two new mines in production, three new mines under construction and six mine expansions permitted since the *BC Jobs Plan* was released. With all of this activity, mining continues to be one of the safest heavy industries in B.C.

The New Afton mine near Kamloops opened in September 2012 and employs over 400 people, including more than 100 who were part of a training program coordinated by the British Columbia Aboriginal Mine Training Association. New Afton is expected to yield an average of 85,000 ounces of gold, 214,000 ounces of silver and 75 million pounds of copper annually over its 12-year life. At the Mount Milligan mine site northwest of Prince George, 1,000 jobs were created at the peak of construction in the summer of 2012. Once it is fully operational, Mount Milligan, which is being developed at an estimated capital cost of $1.5 billion, will provide 350 full-time jobs over its 22-year expected life. The $470 million Red Chris mine, currently under construction in northwest B.C., will employ about 500 people during the peak of construction and 300 once it is fully operational over an expected 28-year life. While mine developments result in significant numbers of high-paying jobs and substantial, long-term capital investments, mining occupies less than one per cent of the provincial land base.

The Province is playing a key role in facilitating investment in B.C. mines and mineral exploration through trade and investment missions to Asian countries such as Japan, Korea, China and India. The Ministry produces publications and is committed to leading-edge technologies in support of these efforts. British Columbia, in particular Vancouver, is the centre of one of the world's largest pools of international expertise in geology, mine engineering, project financing, and environmental sustainability.

The Ministry annually assesses external factors and the risks and opportunities associated with the factors described above as part of its strategic planning process. As risks and opportunities are identified, they are managed and/or mitigated by the Ministry through a range of strategies so that the Ministry's goals and objectives can be achieved. The following paragraphs discuss external factors that may affect the Ministry's operations in the coming year and how these are being managed.

Competitiveness - Investment dollars move readily around the globe to the jurisdictions that provide the highest net return for given levels of risk. The Ministry continues to streamline and update legislative and policy frameworks to minimize the regulatory burden while maintaining environmental protection. Public geoscience data, maps and other studies, generated by the Ministry and Geoscience BC, provide key information that allows mineral exploration companies and prospectors to target areas for investment in B.C.

Skilled Workers - In the last decade, the rapid expansion of B.C.'s energy and mining sectors has resulted in a growing number of permanent, high-income employment opportunities for British

Columbians. The mining sector alone is expected to have 10,000 job openings by 2020, including those in key occupations such as machinery and transportation equipment mechanics, primary production workers and vehicle drivers. One of the challenges facing resource-based industries today is attracting young people into their workforces as the average age of the workforce increases. *British Columbia's Mineral Exploration and Mining Strategy* outlines approaches to skills training and labour which focus on attracting, developing, retaining, and educating individuals for employment opportunities in the province's resource sectors.

Coal and Mineral Commodity Markets - British Columbia sells large volumes of coal and mineral products in global commodity markets, which are subject to price, currency and demand fluctuations. In 2012, the province exported a total of $9.1 billion worth of coal and metallic mineral products. While this is slightly down from 2011, it represents 29 per cent of all B.C. exports[1]. These exports boost the provincial economy, bringing additional jobs, investment and government revenue.

First Nations in Energy and Mining - Increased collaboration between First Nations and energy, mineral exploration and mining companies is resulting in benefits for all parties. For First Nations there are jobs, contracts and resource revenue-sharing opportunities. The First Nations Clean Energy Business Fund provides resource revenue sharing for impacted First Nations from new private clean and renewable electricity projects, as well as capacity and equity funding.

New arrangements with First Nations continue to be pursued to enable opportunities in Aboriginal communities and to provide regulatory certainty for proponents. The Province has signed Economic and Community Development Agreements with a number of different First Nations for various mine development projects and is currently in discussion with other First Nations about possible opportunities.

Project Assessments - In the past, approximately two-thirds of proposed projects undergoing a B.C. environmental assessment (EA) have also required a federal review. This led to significant duplication between the two levels of government and placed demands on the public, First Nations, and other stakeholders who wanted to be involved in both review processes. In July 2012, the federal government enacted the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), which contains new tools for reducing duplication with other jurisdictions.

In March 2013, the BC Environmental Assessment Office and the Canadian Environmental Assessment Agency .signed a Memorandum of Understanding (MOU) to implement substitution in B.C. B.C. is the first province in Canada to pursue the substitution provisions enabled by CEAA 2012, and this MOU will serve as a model for other jurisdictions in Canada. Substitution means that where both federal and provincial EAs are required, a single EA process is conducted (B.C.'s), but two decisions are made (Canada and B.C.).

To date, the federal Minister of the Environment has approved substitution for the EAs of four mining projects in B.C.: Carbon Creek, Sukunka, Echo Hill and Arctos Anthracite. As a result of substitution, B.C.'s findings and conclusions will be used to support both the federal and provincial governments in making their respective EA decisions.

[1] Source: BC Stats. Metallic mineral products include: copper and molybdenum ores and concentrates; and unwrought aluminum and zinc.

Ministry Commitment to Lean Processes

As of May 2012, Lean is the process improvement method used by all British Columbia ministries and agencies to improve customer service, build internal capacity and eliminate waste in the form of unnecessary rules, processes and non-essential activities. To implement a Lean culture of innovation, customer focus and continuous improvement, in 2012/13 the Ministry piloted one Lean project, involving improving the business processes for coal tenure applications. Lean information sessions and ongoing staff training will be offered in the coming years. The Ministry and its staff, with the help of the BC Public Service Agency, will continue to make Lean culture an integral part of the work environment.

Expenditure Restraint Measures

In support of the Province's commitment to balance the budget by 2013/14, the Ministry has initiated expenditure restraint measures, including adhering to government-wide Managed Hiring Guidelines, travel restrictions, and other office and operating cost management measures to achieve efficiencies and savings. The Ministry is committed to meeting its approved budget without negatively impacting service levels.

Goals, Objectives, Strategies and Performance Measures

A wide range of Ministry strategies are being implemented to facilitate job creation, economic development and the well-being of communities throughout B.C. These strategies include Ministry initiatives in support of the *BC Jobs Plan*, as well as *British Columbia's Mineral Exploration and Mining Strategy*, released in 2012. The Ministry also continues implementation of the *Clean Energy Act*, and the *BC Energy Plan.* The Ministry's performance measures and targets are designed to support its goals.

The Ministry regularly reviews the legislative, regulatory and policy frameworks associated with mining, electricity and alternative energy. As part of this, improving the effectiveness and timeliness of multi-agency federal and provincial reviews of proposed energy and mining projects is a high priority for British Columbia. For mineral exploration and mines, the Ministry maintains effective and efficient regulation of the sites through enforcement when necessary and by encouraging health, safety and environmental best practices.

The *BC Jobs Plan* highlights the importance of the mining sector to the B.C. economy and targets eight new mines to be in operation by 2015, and the expansion of at least nine existing mines. Investments such as the Northwest Transmission Line will facilitate the opening of new areas to mining by providing cleaner, affordable electricity in places where communities currently rely on diesel generators. With its vast mineral and coal reserves and the world's largest concentration of mining and exploration companies, B.C. is well positioned to benefit from ongoing global demand for mined commodities.

The Ministry promotes development and use of alternative energy technology and energy efficiency measures to minimize waste, increase productivity and lower operating costs, while delivering a healthier living and work environment for British Columbians. The *BC Energy Plan* together with the *Clean Energy Act* foster the development of new, sustainable energy and technology industries. This will ensure more comprehensive and proactive approaches to energy issues in British Columbia for the next 20 years, and support the delivery of a secure, reliable supply of affordable electricity that is produced in an environmentally responsible way.

There have been several changes in the performance measures for the Ministry of Energy and Mines *2013/14 – 2015/16 Service Plan* from those of the former Ministry of Energy, Mines and Natural Gas. One performance measure has been dropped: "Annual investment in electricity facilities." The measure does not directly reflect performance for current government policies and programs, following the changes to the definition of electricity self-sufficiency.

The annual targets for Performance Measure 1 and 2 support commitments in the *BC Jobs Plan* to have a total of eight new mines in operation and nine expansions to existing mines in place by 2015. By changing these measures to a cumulative count of new mines and expansions, Performance Measures 1 and 2 more accurately reflect Ministry performance since the release of the Jobs Plan on September 22, 2011.

Another performance measure, "Total energy savings achieved through electric utility and provincial conservation policies, programs and regulations," has been replaced with an improved version, "Cumulative energy savings achieved each year through energy utility and provincial conservation

policies, programs and regulations since 2007/08." By reporting the cumulative energy savings each year rather than energy savings resulting exclusively from new initiatives, the measure more accurately reflects the impact of government policies, programs and regulations on the consumer and ratepayer. For more details, see the discussion section under the Performance Measure 6.

Goal 1: Internationally competitive energy and mining and sectors that contribute to jobs and the economy

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

Strategies

- Support the development of roads and electricity infrastructure required for new mines and mine expansions.
- Work with BC Hydro to ensure an adequate supply of clean electricity is available to support new investments in mines.
- Continue to develop a coordinated, transparent permitting and approval process with clear timelines for all industrial projects, including natural resource development projects.
- Continuously improve geological and resource assessments for geothermal, storage reservoirs, coal, minerals and aggregate through collaboration with industry, 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.

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

Performance Measure	2012/13 Actual	2013/14 Target	2014/15 Target	2015/16 Target
Number of new mines in operation since release of Jobs Plan*	2	4	5	8
Number of expansions to existing mines since release of Jobs Plan	6	7	8	9

Data Source: Ministry of Energy and Mines
**Canada Starts Here: The BC Jobs Plan* was released September 22, 2011

Discussion

The annual targets support commitments in the *BC Jobs Plan* to have a total of eight new mines in operation and nine expansions to existing mines in place by 2015. Performance Measures 1 and 2

have been changed by adding 'since release of Jobs Plan' to both measures. By modifying these from an annual count of new mines and expansions to a cumulative count, these Performance Measures more accurately reflect Ministry performance.

The responsibility for meeting the performance targets is shared jointly with the Ministry of Forests, Lands and Natural Resource Operations.

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

Strategies

- Contribute to trade missions and marketing initiatives led by the Ministry of Jobs, Tourism and Skills Training to attract investment in B.C. energy and mineral projects and business opportunities.
- Further establish B.C. as a recognized centre of excellence for energy and 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 energy and mining sectors by providing leadership, information, investing in infrastructure, and developing new policies, regulations and programs.
- Conduct energy and mining related geoscience research and technical assessments to promote industry investment.
- Continue to work with the Ministry of Forests, Lands and Natural Resource Operations towards an average 60-day turnaround time for processing Notice of Work permit applications for mineral and coal exploration activities.
- The Province will 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.

Performance Measure 3: Annual investment in the mineral exploration and mining sector

Performance Measure	2012/13 Actual	2013/14 Target	2014/15 Target	2015/16 Target
Annual investment in mineral exploration and mines	$3.7 billion	$2.8 billion	$2.8 billion	$2.8 billion

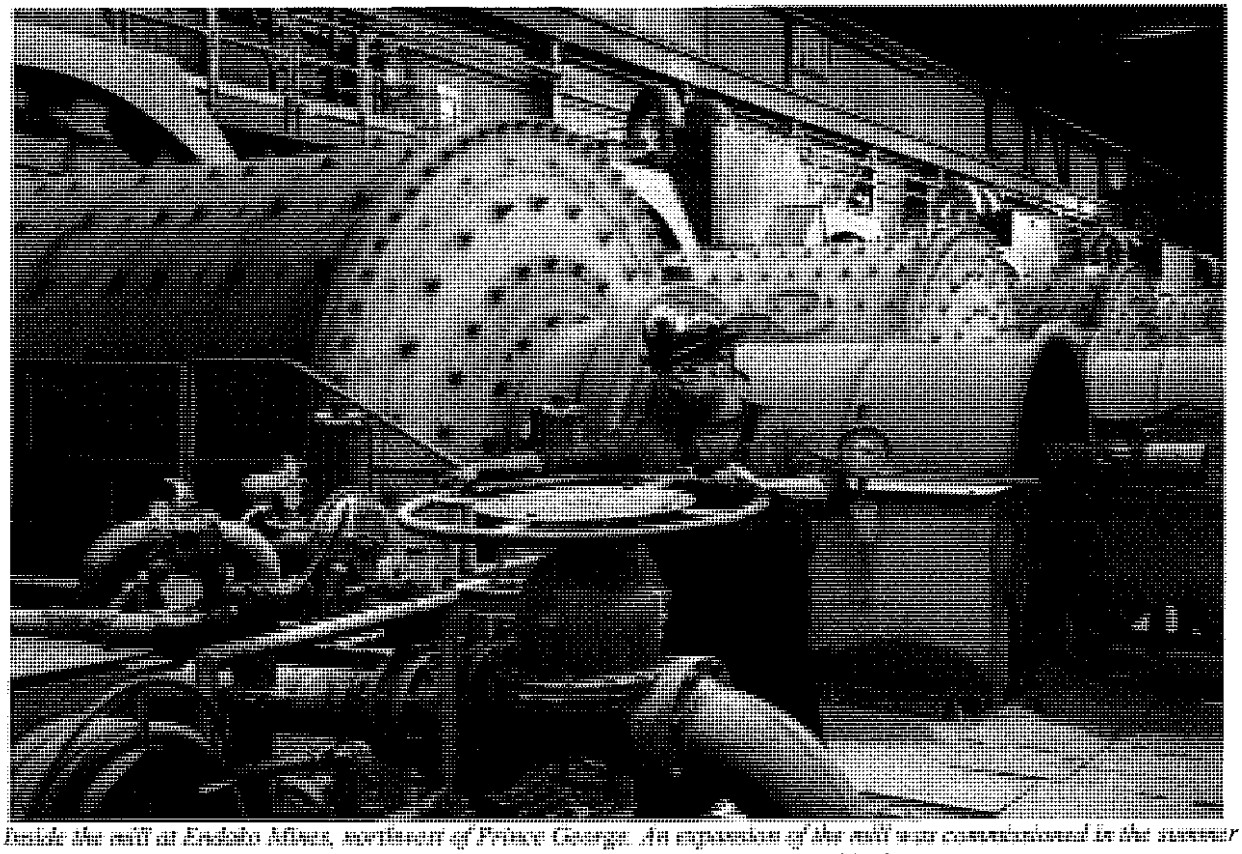
Data Source: Ministry of Energy and Mines, based on calendar year survey results from Natural Resources Canada, Statistics Canada and PricewaterhouseCoopers.

Discussion

Through its strategies to improve B.C.'s competitiveness, the Ministry continuously strives to attract long-term investment in B.C.'s energy and mining sectors and related service industries. Such investment creates jobs and business opportunities throughout the province, which in turn contribute

to the stability and well-being of B.C. communities. A key challenge to achieving investment targets is that the markets for energy and mineral commodities can be cyclical, as can the levels of investment in these sectors. Financial markets and currency fluctuations also affect investment levels. Streamlined processes for energy and mine project permitting and environmental assessment, along with the timely review of tenure applications, help to reduce risk and sustain investment levels.

Annual mineral exploration investment includes expenditures on prospecting, geological surveys, mapping, mineral valuation, drilling and rock work. Annual investment in mines includes mine planning, permitting, environmental assessment, construction, operation and reclamation.



Inside the mill at Endako Mines, northwest of Prince George. An expansion of the mill was commissioned in the summer of 2012, and along with other upgrades to the molybdenum mine, will nearly double the ore processing capacity to 55,000 tonnes daily. The mine employs 420 skilled and professional workers.

Objective 1.3: Optimal revenue from the development of B.C.'s energy and 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.

Performance Measure 4: Direct government revenue derived from mineral exploration and mining

Performance Measure	2012/13 Forecast	2013/14 Target	2014/15 Target	2015/16 Target
Direct government revenue from mineral exploration and mining	$170 million	$170 million	$200 million	$200 million

Data Source: Ministry of Energy and Mines.
Note: Mining revenue comprises free miner certificates, mining receipts, coal tenure revenue and mineral taxes

Discussion

Revenue derived from mineral exploration and mining contributes to government programs such as education and social services.

This indicator shows the forecast of mining revenues expected to be collected from industry and includes free miner certificates, mining receipts, coal tenure revenue and mineral taxes. The mineral exploration and mining industry contributes to government revenues in a number of other ways, including payments related to employment. Based on survey results, PricewaterhouseCoopers estimated that payments to governments by B.C.'s mining industry totalled $504 million in 2012.[2]

B.C.'s coal and mineral producers are subject to demand and price fluctuations in world commodity markets where their products are sold. The Ministry implements resource revenue-collection mechanisms, such as mineral tax, that are market-based to share the market and investment risk, and manage resource development. As a result, government revenues are also subject to market fluctuations and financial conditions.

[2] *Stay The Course: The Mining Industry in British Columbia 2012*

Objective 1.4: A secure, reliable supply of energy for the long term benefit of all British Columbians

Strategies

- Work with BC Hydro to upgrade the Province's heritage generation, transmission and distribution assets to meet future demand.
- Develop and implement policies to keep electricity rates affordable for B.C. families and respond to B.C.'s other energy objectives.
- Ensure reliable electricity supply through innovative, aggressive conservation, ongoing competitive power procurement programs, and BC Hydro funded projects.
- Expand the use of natural gas as a transportation fuel.

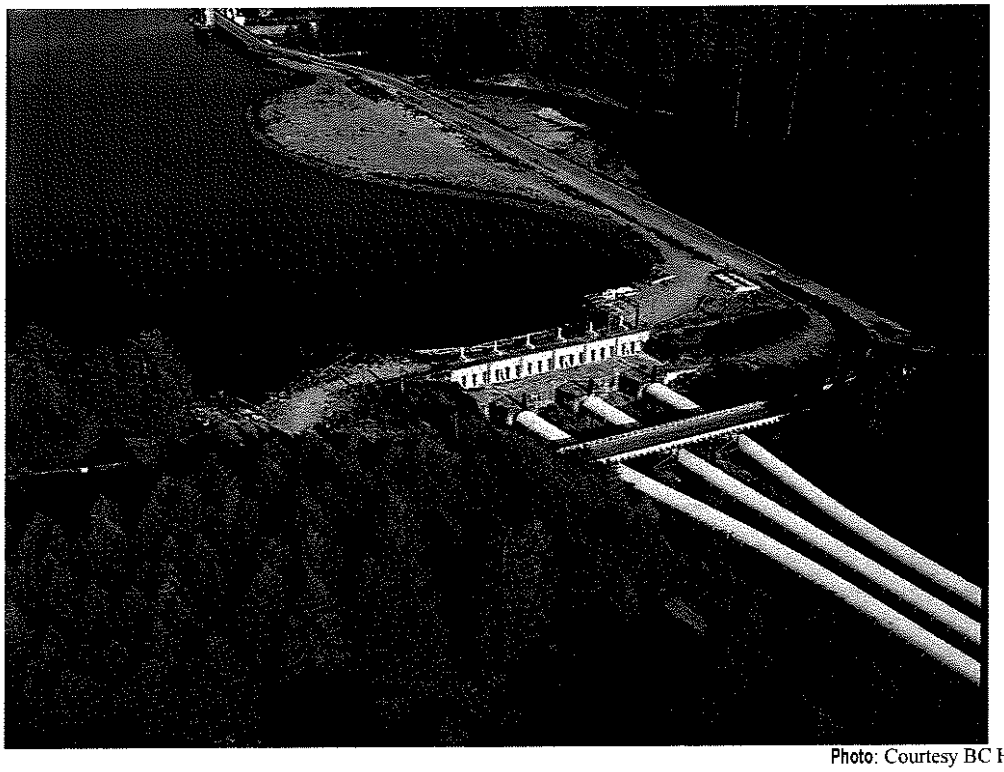


Photo: Courtesy BC Hydro

One of BC Hydro's oldest facilities, the 65-year-old John Hart generating station near Campbell River is due to be replaced by 2018. The replacement, generating 835 gigawatt-hours of electricity annually, will be much more earthquake resistant, more reliable, and—thanks to a new water bypass facility—will improve the habitat for fish. A contract is expected to be signed in the summer of 2013, creating about 400 jobs for the five-year construction period.

Objective 1.5: Efficient and effective energy and 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.
- Complete the development of a Carbon Capture and Storage Regulatory Framework.
- Manage the review of the Columbia River Treaty to ensure benefits for British Columbia continue to be realized.
- In consultation with other ministries and stakeholders, develop and implement new acts and regulations that support the responsible development and use of energy and mineral resources.

Goal 2: Safe and environmentally responsible energy and mineral resource development and use

Objective 2.1: Standards that protect 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.
- Work with industry to identify disposal zones for carbon dioxide sequestration projects and opportunities for carbon dioxide use in enhanced oil recovery.
- 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 Measure 5: WorkSafe BC injury rate at B.C. mines

Performance Measure	2012/13 Forecast	2013/14 Target	2014/15 Target	2015/16 Target
WorkSafeBC injury rate at B.C. mines	1.8	1.8	1.8	1.8

Data Source: WorkSafe BC. **Note:** This measure, formerly known as "Short term injury rate at B.C. mines" has been renamed to reflect the data source. In all other respects, the measure is unchanged.

Discussion

Operations at mines, electricity generating stations and transmission facilities can be hazardous and if not properly managed, can affect the environment. Safeguarding the public and the environment contributes to environmentally responsible development and use of these resources. The threat of accidents, leakages and spills is always present, so ongoing policy development and education are necessary to ensure risk is minimized.

The targets reflect the anticipated average number of accident claims per year at B.C. mines, including open pit coal and metal mines, quarries and underground mines per 100 person years. B.C.'s mining workforce is constantly evolving and is expected to have a number of workers over the next ten years who are new to mining operations. Enhanced health and safety training and inspections are required to ensure mining remains one of B.C.'s safest heavy industries. To provide context for this measure, using 2009 estimates, a 0.1 per cent decrease in the WorkSafeBC injury rate would result in approximately 10 fewer claims or an 8.6 per cent decrease in the number of claims. The claims cost for the three major mines subsectors (i.e., open-pit coal, open-pit metal and underground mines) was estimated at $3.34 million in 2009. Therefore, an 8.6 per cent decrease in the number of claims would result in an estimated $288,000 savings in cost. While the measure remains unchanged for the current year, it has been renamed from "Short term injury rate at B.C. mines" to "WorkSafeBC injury rate at B.C. mines," in order to reflect the source of the data.

Objective 2.2: Clean energy resources, fuels and related technologies complemented by energy efficiency and conservation efforts across all sectors of the economy.

Strategies

- Support energy utilities with the implementation of cost effective demand side management measures.
- Participate in and support long-term clean energy planning initiatives at the regional and provincial level, including the Western Renewable Energy Zones initiative and BC Hydro's *Integrated Resource Plan.*
- Work with the Climate Action Secretariat (Ministry of Environment), other government ministries and agencies, Crown corporations, the public, electricity producers and utilities across B.C. to implement a coordinated approach to energy conservation and efficiency measures and support the deployment of alternative energy options to meet the province's energy needs.
- Continue to support energy efficiency in homes and buildings by monitoring on-bill financing pilots for British Columbians to inform the evolution of the successful LiveSmart BC: Energy Efficiency Program.
- Ensure the procurement of clean and renewable electricity continues to account for at least 93 per cent of total generation, excluding power required for liquefied natural gas projects.
- Continue to implement the *BC Bioenergy Strategy* to take advantage of B.C.'s abundant sources of Mountain Pine Beetle timber, wood wastes and agricultural residues.

- Through the Innovative Clean Energy Fund, support projects that solve real, everyday energy and environmental issues and create economic benefits for all British Columbians.
- Reduce the carbon intensity of the energy used by British Columbians by implementing a low carbon fuel requirement and increasing the supply of clean electricity for transportation.

Promoting the deployment of alternative energy technology contributes to environmentally responsible energy development and use. The Government plays a key role in providing information to the public about practical conservation initiatives, establishing new standards through the B.C. Building Code and *Energy Efficiency Act,* and encouraging the private sector to develop alternative energy sources.

B.C. has a number of alternative energy options such as solar, tidal, biomass, wave, geothermal and wind power. These sources of alternative energy are renewable and can complement existing electricity generating facilities and heating and transportation fuels.

Performance Measure 6: Total energy savings achieved each year through utility and provincial conservation policies, programs, and regulations

Performance Measure	2012/13 Forecast	2013/14 Target	2014/15 Target	2015/16 Target
Cumulative energy savings achieved each year through energy utility and provincial conservation policies, programs, and regulations since 2007/08[1]	20,591,460 GJ	24,724,511 GJ	33,548,401 GJ	39,500,343 GJ

Data Source: Ministry of Energy and Mines.

[1]Measured 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.

Discussion

This new measure reports cumulative energy savings achieved each year through the LiveSmart BC energy efficiency incentive program, utility demand-side management programs, conservation rates, and regulated codes and standards since 2007/08.[3] The measure replaces the previous measure, "Total energy savings achieved through electric utility and provincial conservation policies, programs and regulations." The new measure is driven by energy efficiency and conservation policies of *The BC Energy Plan* of 2007, as well as British Columbia's *Clean Energy Act* objectives for BC Hydro. These objectives are for BC Hydro to reduce expected increases in demand for electricity by 66 per cent by 2020, and to ensure BC Hydro rates remain among the most competitive for North American public utilities. In 2012/13 alone, British Columbia will save energy equivalent to the annual energy consumption of 228,034 households.

[3] The energy savings in this measure reflect energy efficiency and conservation initiatives undertaken since *The BC Energy Plan* of 2007.

The previous measure, "Total energy savings achieved through electric utility and provincial conservation policies, programs and regulations," reported new, or incremental, annual energy savings, while the new measure reports the cumulative energy savings each year. This provides a better account of the performance of energy efficiency and conservation initiatives. For instance, upgrading to a high efficiency appliance reduces energy consumption each year over the effective life of the appliance, rather than for just the year it was purchased. The cumulative measure also harmonizes with the way that BC Hydro reports energy savings. Finally, the new measure has been broadened to include natural gas savings resulting from FortisBC Gas efficiency and conservation initiatives.

BC Hydro's energy savings are drawn from its 2012/13 – 2013/14 demand side management expenditure application, which has been approved by the British Columbia Utilities Commission. BC Hydro is required to seek the approval of the Commission for demand side management expenditures beyond 2013/14, and BC Hydro will align its future demand side management targets with its Integrated Resource Plan, to be submitted to the Government. As expenditures for the FortisBC Gas demand side management plan are approved by the British Columbia Utilities Commission only through 2013, targets for subsequent years assume incremental annual energy savings equivalent to those projected by the utility for 2013. Projected savings from the LiveSmart BC program for 2013/14 and beyond reflect cumulative energy savings from previous measures being carried forward with no new incremental energy savings after April 1, 2013.

Objective 2.3: 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 work with the Ministry of Aboriginal Relations and Reconciliation to build effective business development relationships with First Nations.
- 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.

- Continue to support the Remote Community Energy Network (BC Hydro, Aboriginal Affairs and Northern Development Canada, the First Nations Technology Council and the Ministry) including energy education and training, community energy planning, utility service provision, clean energy development, energy efficiency and energy monitoring.

If the public, First Nations, landowners and non-governmental organizations are informed and participate in responsible resource exploration and development, they will have an opportunity to help identify and contribute constructively to the resolution of issues. They also become more aware of the benefits that resource development can provide to a community, such as regular employment for citizens and expanded infrastructure.

There are close to 70 remote communities in B.C. that are not connected to the major natural gas or electricity grids. These communities have challenges and opportunities in their energy systems that are very different than grid connected communities. The Ministry's community energy solutions support in these communities is tailored to these unique situations.

Resource Summary

Core Business Area	2012/13 Restated Estimates [4]	2013/14 Estimates [5]	2014/15 Plan	2015/16 Plan
Operating Expenses ($000)				
Mines and Mineral Resources	11,171	11,056	11,056	11,056
Electricity and Alternative Energy	17,980	2,949	2,949	2,949
Executive and Support Services	5,284	5,214	5,210	5,208
Innovative Clean Energy Fund special account	14,947	5,030	2,300	2,300
Total	**49,382**	**24,249**	**21,515**	**21,513**
Ministry Capital Expenditures (Consolidated Revenue Fund) ($000)				
Executive and Support Services	228	284	233	233
Total	**228**	**284**	**233**	**233**
Other Financing Transactions ($000)				
Northwest Transmission Line Receipts	60,000	57,000	13,000	0
Northwest Transmission Line Disbursements	(60,000)	(57,000)	(13,000)	0
Total Net Cash Source (Requirements)	**0**	**0**	**0**	**0**

[4] For comparative purposes, amounts shown for the 2012/13 have been restated to be consistent with the presentation of the 2013/14 *Estimates*.
[5] Further information on program funding and vote recoveries is available in the Estimates and Supplement to the Estimates.

Appendices

Ministry Contact Information

Deputy Minister's Office
Eighth Floor, 1810 Blanshard Street
PO Box 9319 Stn Prov Govt
Victoria, B.C. V8W 9N3
Phone: 250-952-0241
Ministry website: www.gov.bc.ca/empr

Mines and Minerals Resources Regional Offices

Northwest
PO Box 5000
Second Floor, 3726 Alfred Avenue
Smithers, B.C. V0J 2N0
Phone: 250-847-7383
email: MMD-Smithers@gov.bc.ca

Central/Northeast
350 - 1011 – 4th Avenue
Prince George, B.C. V2L 3H9
Phone: 250-565-4240
email: MMD-PrinceGeorge@gov.bc.ca

South Central
2nd Floor, 441 Columbia Street
Kamloops, B.C. V2C 2T3
Phone: 250-371-3912 Phone: 250-420-2161
email: MMD-Kamloops@gov.bc.ca

Southeast
1902 Theatre Road
Cranbrook, B.C. V1C 7G1
email: MMD-Cranbrook@gov.bc.ca

Southwest
PO Box 9320 Stn Prov Govt
Sixth Floor, 1810 Blanshard Street
Victoria, B.C. V8W 9N3
Phone: 250-387-4825
email: SouthwestMinesDivision@gov.bc.ca

Mineral Titles Branch

303-865 Hornby Street
Vancouver BC V6Z 2G3
Phone: 1-866-616-4999

Mineral Claims Inspectors

Kamloops
2nd Floor, 441 Columbia Street
Kamloops B.C. V2C 2T3
Phone: 250-371-3786

Smithers
PO Box 1389
Houston B.C. V0J 1Z0
Phone: 250-845-3584

Hyperlinks to Additional Information

A list of legislation administered by the Ministry can be found at:
www.empr.gov.bc.ca/Titles/legislation/Pages/default.aspx

A list of Crowns, Agencies, Boards and Commissions reporting to the Minister can be found at:
http://www.empr.gov.bc.ca/Titles/legislation/Pages/Major_Agencies_Boards_and_Commissins.aspx

Canada Starts Here: The B.C. Jobs Plan can be found at:
http://www.bcjobsplan.ca/wp-content/uploads/2011/09/CSH_BCJobsPlan_web.pdf

Energy and Mines Information

The *BC Energy Plan* can be found at: www.energyplan.gov.bc.ca/

The *Clean Energy Act* and a complete set of backgrounders and factsheets can be found at:
www.mediaroom.gov.bc.ca/DisplayEventDetails.aspx?eventId=490

British Columbia's Mineral Exploration and Mining Strategy can be found at:
http://www.empr.gov.bc.ca/Mining/Documents/MiningStrategy2012.pdf

MINISTRY OF ENERGY AND MINES
CORPORATE INIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Surface Rights Board

KEY MESSAGES:

- The Surface Rights Board (Board), is an independent, quasi-judicial tribunal that resolves conflicts between land owners and companies that are seeking access to private land to explore for, and develop subsurface resources including oil and natural gas, minerals, coal and geothermal resources.
- The Board shares a chair with the Property Assessment Appeal Board (PAAB) and the Civil Resolution Tribunal. The Board receives administrative services from the PAAB which is located in Richmond.

BACKGROUND:

- Under common law, subsurface rights holders have a right to access their subsurface mineral, coal, oil and gas rights through the property of a surface landowner. Legislation modifies this right by entitling the landowner to receive compensation for the access and/or loss of use or damage.
- The mandate and authorities of the Board are established through Part 17 of the *Petroleum and Natural Gas Act (P&NG Act)* and provisions of the *Administrative Tribunals Act (ATA)*. The Board assists parties in resolving disputes related to access when the parties cannot agree on the level of compensation or damage to be paid or to other terms of entry to land. The Board has jurisdiction to hear disputes under the *P&NG Act*, *Mineral Tenure Act*, *Coal Act*, *Geothermal Resources Act* and *Mining Right of Way Act*.
- The Board may have up to nine members, two of which are Chair and Vice-Chair. Members are appointed following a merit-based process in accordance with the *Administrative Tribunals Act* (*ATA*). Currently, there are seven members on the Board.
- The Board operates within the Government's conflict of interest guidelines, guidelines established under the *ATA*, the principles of administrative law and natural justice, and Board procedures.
- The Board is funded through the Ministry of Natural Gas Development.
- A Memorandum of Understanding exists between the Chair and the former Minister of Energy, Mines and Natural Gas to clarify the respective roles of the Minister and Chair, and the administrative and communication processes. Following the government reorganization, the Board is now accountable to the Minister of Natural Gas Development.

Contact: Karen Koncohrada
Cell Phone: s.17
Date: June 23, 2013

- The Board is part-time and receives administrative support from the full-time PAAB. The Board Chair (Cheryl Vickers) and Vice-Chair are also Chair and one of the Vice-Chairs of PAAB. The second Vice-Chair of PAAB is also a member of the Board.
- Cheryl Vickers is also the Chair of the new Civil Resolution Tribunal currently under development by the Ministry of Justice as an online dispute resolution tool for strata property issues and small claims matters.
- The Annual Reports of the Board are available on the Board website. The Chair reports to the Minister of Natural Gas Development quarterly on the number of applications filed, hearings held and decisions made by the Board.
- In 2012/2013, the Board received a total of 71 applications: 69 under the *Petroleum and Natural Gas Act* and 2 under the *Mineral Tenure Act*. Of the applications under the *Petroleum and Natural Gas Act*, 58% were for a review of existing rent payments and 25% were related to new rights of access and compensation.

ATTACHMENTS:

Table 1 - Surface Rights Board members: 2012/2013

Table 2 - Surface Rights Board expenditures: 2012/2013

Table 1. Surface Rights Board members: 2012/2013

Name	Location	Background	Date of First Appointment	Expiry date of Appointment
Cheryl Vickers (Chair) [PAAB Chair]	Vancouver	Lawyer	July 22, 2007	December 31, 2013
Simmi Sandhu (Vice chair) [PAAB Vice-chair]	Vancouver	Lawyer	July 22, 2007	July 31, 2014
Valli Chettiar [PAAB Vice-chair]	Vancouver	Lawyer	June 22, 2012	July 31, 2014
Brian Sharp	Victoria	Real estate professional	November 23, 2012	December 31, 2015
Bill Oppen	Fort St. John	Retired government official	December 8, 2008	December 31, 2013
Viggo Pedersen	Fort St. John	Retired Dairy Farmer	March 5, 2009	July 31, 2013
Rob Fraser (temporary extension)	Victoria	Real estate professional	July 22, 2007	July 31, 2013

Table 2. Surface Rights Board expenditures: 2012/2013:

Expenditure	Budget	Actuals	Comments
Salaries/Benefits	61,000	47,854	Pro-rated costs for members cross-appointed from PAAB
Member Fees/Expenses	23,000	37,273	Part-time members fees and expenses
Travel	23,000	8,809	Travel for members cross-appointed from PAAB
Information systems		1,050	
Office and business	1,000	8,340	Includes office overhead charges billed by PAAB at 15% of shared members salaryand benefits
Total	**108,000**	**103,326**	**Variance $ 4,674**

MINISTRY OF ENERGY AND MINES
CORPORATE INIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Natural Resource Sector Authorizations

KEY MESSAGES:

- To deliver on the commitments in the BC Jobs Plan, Government has provided additional funds from contingencies for Natural Resource Sector ministries to streamline processes and reduce the backlog of key authorizations needed for resource development projects.
- In 2013/14 funding was provided from contingencies of up to $17.485M to support natural resource sector authorization activities in six ministries.
- This funding is continuing with up to $6.64M approved from contingencies for five ministries for the first six months of 2013/14.
- With this extra effort and funding, Jobs Plan targets for permitting efficiency have been achieved while continuing to meet world class environmental and health and safety standards. Specifically:
    - The backlog on mining permits, which are called Notices of Work, was reduced by 80 per cent by August 31, 2012.
    - Water Actand Land Act permit backlog was reduced by 50 per cent by December 31, 2012.
    - These backlog reductions have been maintained.
- The turn-around time on Notice of Work applications has been cut from 110 days in September 2011 to 63 days, as of July 1, 2013.
- The BC Jobs Plan committed to the opening of eight new mines and the expansion of nine existing mines by 2015. Significant progress has been made with one new mine in operation, five more under construction or permitted, and six mine expansions permitted since the BC Jobs Plan was released.

BACKGROUND:

- In July 2011, Cabinet approved a strategy to remove key land and resource management related barriers to economic development and job creation. Treasury Board subsequently approved contingencies funding of up to $11.792M in 2011/12 and up to $17.485M in 2012/13 to support authorization activities within NRS ministries for 18 months, ending in March 31, 2013.
- In the current fiscal year, access to contingencies for up to $7.028M was approved for six NRS ministries for the first six months of 2013/14, as summarized below in Table 1.

Contact: Karen Koncohrada
Cell Phone: s.17
Date: July 3, 2013

Table 1: Summary of NRS Funding Approved from Contingencies
(Millions of Dollars)

s.17

- Ministries were directed to focus resources on activities which will best support progress toward the targets for each project and to develop options for a sustainable funding model which recognizes benefits to industry.
- As of July 1, 2013, the average turnaround time for Notices of Work is 63 days. To achieve the BC Jobs Plan target of a 60-day turnaround time for Notices of Work by the end of 2013, government continues to create greater efficiencies, including:
  - Streamlining First Nations consultation to reduce duplication;
  - Notice of Work electronic applications were launched in February 2013. Client guidelines are under development with detailed instructions on how to submit applications using the new electronic format.
  - A new regulation comes into effect September 1, 2013 allowing low impact mineral and coal exploration applications to bypass the permitting process thus better utilizing staff resources. Once in effect, these exemptions will reduce the number of these applications by up to 15 per cent.

MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Canadian Energy Strategy

KEY MESSAGES:

- When Canada's Premiers met in July 2012 in Halifax, Nova Scotia for the annual meeting of The Council of the Federation (COF), they decided to renew the 2007 COF Energy Strategy, A Shared Vision for Energy in Canada. This initiative is being called the Canadian Energy Strategy.
- At the COF meeting, British Columbia announced that it would not participate in the process at this time. British Columbia officials requested to be kept aware of progress through intergovernmental relations channels.
- The goal is to have the Canadian Energy Strategy available for public release in early 2014. In preparation for the July 2013 annual COF meeting, a status report on the development of the Canadian Energy Strategy will be provided from energy Ministers to Premiers.

BACKGROUND:

- The Strategy is in the early stages of development and the process is being co-chaired by the Premiers of Alberta, Manitoba and Newfoundland and Labrador.
- Energy ministries are leading the development of the strategy with support from intergovernmental affairs officials as required. Under the guidance of Deputy Ministers of energy, a team of senior officials from the co-lead energy ministries has been formed to coordinate the development of the Strategy.
- The three Premiers of the co-chair provinces and all of Canada's energy Ministers, except for British Columbia, met on April 19, 2013 in Toronto to review progress on the development of the Strategy.
- The co-chair provinces are the leads on three main working themes: 1) Sustainability and Conservation; 2) Technology and Innovation; and 3) Delivering Energy to People.
- These three working themes are being addressed by ten sub-working groups (see attachment), comprised of officials from provinces/territories that volunteer, depending on their level of interest, for each respective group.
  Stakeholder engagement is a key component of the Canadian Energy Strategy.
  A draft stakeholder plan identifying potential opportunities for engagement is under development. A range of stakeholders have expressed a strong interest in providing feedback into the development of the Canadian Energy Strategy. To enable this, preliminary planning is underway for a spring stakeholder workshop.

Contact: Karen Koncohrada
Cell Phone: s.17
Date: June 24, 2013

ATTACHMENT:

Canadian Energy Strategy Action Areas

Canadian Energy Strategy Action Areas

Sustainability and Conservation – Lead Manitoba

1. Promote energy efficiency and conservation.
2. Transition to a lower carbon economy.
3. Enhance energy information and awareness.

Technology and Innovation – Lead Newfoundland and Labrador

4. Accelerate the development and deployment of energy research and technologies that advance more efficient production, transmission and use of clean and conventional energy sources.
5. Develop and implement strategies to meet energy-sector human resource needs now and well into the 21st century.
6. Facilitate the development of renewable, green, and/or cleaner energy sources to meet future demand and contribute to environmental goals and priorities.

Delivering Energy to People – Lead Alberta

7. Develop and enhance a modern, reliable, environmentally safe, and efficient series of transmission and transportation networks for domestic and export/import sources of energy.
8. Improve the timeliness and certainty of regulatory approval decision-making processes while maintaining rigorous protection of the environment and public interest.
9. Promote market diversification.
10. Pursue formalized participation of provinces and territories in international discussions and negotiations on energy.

Contact: Karen Koncohrada
Cell Phone: s.17
Date: June 24, 2013

Estimate Note: 13

MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Environmental Assessment Process for Energy and Mining Projects

KEY MESSAGES:

- British Columbia has been pursuing a more efficient environmental assessment process with the Federal Government for a number of years. Improvements to the process have now been enabled through the recently amended *Canadian Environmental Assessment Act (CEAA) 2012.*
- The British Columbia Environmental Assessment Office (EAO) entered into a Memorandum of Understanding (MOU) on the Substitution of Environmental Assessments (EA) with the Canadian Environmental Assessment Agency (Agency).
- As of May 31, 2013, the federal Minister of the Environment approved EAO's substitution requests for the environmental assessments of the following proposed projects in BC:
  - Carbon Creek Coal Mine near Hudson's Hope;
  - Sukunka Coal Project near Chetwynd;
  - Echo Hill Coal Mine Project located near Tumbler Ridge;
  - Arctos Anthracite Project located near Iskut;
  - LNG Terminal Export Project located in Prince Rupert.
- Substitution means that where both federal and provincial environmental assessments are required, only one assessment process (the provincial one) would be undertaken and used to inform the decisions by both the federal and provincial Ministers.
- A key principle behind substitution is that it must support and encourage the rigour of federal and provincial EAs.
- Substitution does not change the fundamental purpose of EA, which is to examine proposed major projects for potentially adverse effects that may occur during the life cycle of that project and develop strategies to avoid or minimize those impacts.

Contact: Karen Koncohrada
Cell Phone: s.17
Date: June 24, 2013

BACKGROUND:

Substitution means that a province's EA process can be substituted for Canada's, providing that the receiving jurisdiction meets certain criteria. Under substitution, there is a single EA process, but two separate decisions (both federal and provincial).

Equivalency means that a project would be exempt from the requirement to obtain approval under the *CEAA 2012*. Such an exemption may be granted on a project-by-project basis by the federal Cabinet if the provincial process has been approved for substitution. Once equivalency is granted, only a single EA process and decision is required (provincial).

Additional Substitution Requests:

- EAO is conducting ongoing analysis to identify future requests from a province for substitution, and anticipates requesting substitution regularly.
- The Agency is conducting 20-day public comment periods on each request, following which, the federal Minister of the Environment will make individual decisions on these requests.

Responses to Substitution and EAO Outreach:

- Various environmental non-governmental organizations and First Nations are opposed to the *CEAA 2012* in general. Some are concerned about substitution and equivalency specifically.
- A number of proponents have requested that EAO seek substitution from the Federal Government. EAO has communicated that it will consider the views of proponents; however, decisions about whether to pursue substitution will be based on a range of factors, which may include likelihood of trans-boundary effects, proximity to federal lands, number of federal authorizations likely to be required post-EA, and the Aboriginal consultation context.
- During late March-April 2013, EAO conducted outreach with key stakeholders on a range of issues, including the substitution MOU. These stakeholders included the BC Business Council, Union of BC Municipalities, West Coast Environmental Law and the Canadian Association of Petroleum Producers.
- EAO is arranging meetings with a number of First Nations with an interest in substitution, including First Nations in close proximity to projects where substitution has been approved.

Meeting the Conditions for Substitution:

- *CEAA 2012* contains a number of conditions that must be met in order for a jurisdiction to pursue substitution. These conditions include:
    - Consideration of specific environmental factors (e.g. impacts to fish and fish habitat, migratory birds, aquatic species);
    - Provision of an opportunity for public participation;
    - Provision of public access to records; and
    - Provision of an assessment report to the Agency at the conclusion of a substituted EA.

- In addition, the federal Minister of the Environment has established additional conditions for substitution, including the invitation of federal technical experts to participate in substituted EAs, the provision of Aboriginal capacity funding, and meeting federal 365-day timelines.
- The MOU includes a number of specific EAO commitments that demonstrate how British Columbia meets these conditions for substitution.

Key Details about the MOU:

- The MOU sets an administrative framework that addresses how the substituted process will unfold – before, during and after a substituted EA.
- The MOU is signed by the President of the Agency and the Associate Deputy Minister of EAO.
- The focus of the MOU is on substitution, both on a project basis and for classes of projects, and states that the Parties will explore equivalency at a later date.
- Aboriginal consultation is largely dealt with in an annex, which sets out the procedural delegation of Aboriginal consultation to BC for purposes of substitution.
- The Agency has agreed to continue to provide funding for Aboriginal groups participating in substituted EAs. The details of the funding mechanism are being determined, but it has been agreed that EAO will administer the distribution of federal funding on behalf of the Agency.
- The MOU creates the role of an Agency Liaison to work with EAO Project Leads managing substituted EAs to ensure the federal government is aware of key issues with respect to the EA and Aboriginal consultation.
- The Agency commits to timelines in considering substitution requests from British Columbia.
- A joint implementation steering committee will develop operational procedures, monitor implementation and address key issues.

MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: International Energy and Mining Relations

KEY MESSAGES:

- British Columbia attracts significant international interest in investment in its oil and gas, mineral exploration and mining, electricity and alternative energy sectors, which together are worth more than $15 billion annually.
- This interest is global and results in frequent visits by foreign delegations and requests for meetings with the Minister from Ambassadors and others representing countries in the regions of the Asia-Pacific, Middle East, Europe, South America and North America.
- In 2012, British Columbia exported almost $11.4 billion worth of energy and minerals, including coal, natural gas, electricity, copper and other mineral commodities. The top destination markets were the United States, Japan, China and South Korea.
- In recent years, British Columbia's mines Minister and/or officials have attended the annual China Mining conference in November and combined this travel to Asia with events in Japan, South Korea and other Southeast Asian countries. In addition, several outgoing Premier's trade missions to Asian countries have taken place in recent years attended by certain Ministers and officials.
- The Government of Canada has signed, or is currently negotiating, various international trade and investment agreements with countries from these regions. These agreements typically seek to cover market access, investment and trade in energy and mineral resources.
- British Columbia has constitutional jurisdiction over these resources, and provincial officials work closely with their federal counterparts to include British Columbia's interests.

BACKGROUND:

- Investment opportunities in British Columbia's Liquefied Natural Gas (LNG) industry have attracted global interest. Since 2012, over $6 billion in investments have been made to acquire upstream natural gas assets and execute strategic corporate acquisitions, including joint ventures that would anchor the development of pipelines and LNG plants in British Columbia. It is estimated that up to $1 billion has already been spent to prepare for the construction of LNG infrastructure.
- The 2012 production value of mining in British Columbia was $8.3 billion and exploration spending was $680 million.

- British Columbia is internationally recognized as a centre of expertise in mining and related fields, such as metallurgy, environmental engineering, mine safety and the geosciences. Vancouver is the base of operations for more than 800 global mining and mineral firms, including two of the world's largest mining companies.
- British Columbia has a world-class service industry for the thousands of oil, gas and mining companies that make British Columbia their destination or home. In Vancouver there are more than 400 service suppliers to exploration, development and production companies worldwide. This expertise is augmented by universities and research centres that keep information and technology flowing.
- British Columbia houses immense renewable resource potential with $100 billion in investment opportunities and 37,000 MW of renewable power ready to be tapped.
- The Government of British Columbia often receives requests of the Minister or Premier to negotiate Memorandums of Understanding (MOUs) with other governments covering a variety of topics, including energy and mining. Typically such MOUs seek cooperation and exchanges of staff for the purposes of sharing technical expertise, best practices and knowledge, and to foster better relations between the two jurisdictions. The approach to negotiating such MOUs is to determine if there are areas of joint benefit for both parties and to take small steps in building the relationship. If the MOUs are broader in scope than this Ministry's mandate, then the Intergovernmental Relations Secretariat (IGRS) takes the coordinating lead.
- The Government of Canada's foreign policy priorities for 2013-2014 include ambitious economic and trade agreements with India, Japan, South Korea and Southeast Asia. The mandate also includes promoting Canada as a reliable and responsible supplier of resources to global markets.
- The Trade Initiatives Branch in the Ministry of Jobs, Tourism and Skills Training (JTST) participates in various international trade negotiations in which the Government of Canada is engaged. This ensures that British Columbia's interests and areas over which the Province has constitutional jurisdiction, including natural resources, are safeguarded. The Ministry of Energy, Mines and Natural Gas (EMNG) works with JTST to provide input into these trade agreement negotiations.
- EMNG also provides input into JTST's overseas mission planning department when provincial delegations travel overseas (e.g., China, Japan, South Korea, India, etc.) and in preparation for the frequent foreign delegations that visit British Columbia.

ATTACHMENT:

Status of Canada's Trade Negotiations and Agreements

Status of Canada's Trade Negotiations and Agreements

Canada-European Union Comprehensive Economic and Trade Agreement (CETA): The negotiations include energy and British Columbia has provided input to ensure its specific energy interests are safeguarded. The ninth and last official round of negotiations, was completed in October 2011. Negotiators continue to work to conclude negotiations in 2013 through focussed FPT meetings on an issue-by-issue basis.

Trans-Pacific Partnership (TPP) (Australia, Brunei, Chile, Canada, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam): The 17th round of negotiations will take place in Lima, Peru from May 15-24. Members are aiming to conclude negotiations by the end of 2013, but this timeline may be compromised with the likely addition of Japan to the negotiations.

South Korea: Canada and South Korea launched FTA negotiations in 2005. Negotiations stalled in March 2008 over auto, beef and pork issues. In 2012 and 2013, Canadian and Korean officials have been re-engaging in FTA negotiations.

Japan: Canada and Japan held their second round of bilateral negotiations towards an Economic Partnership Agreement from April 22-26 in Ottawa.

India: The second part of the 7th round of negotiations was held in India in late March 2013. The Canada-India Foreign Investment Promotion and Protection Agreement (FIPA), concluded in 2007, has not yet been ratified (India wants it re-negotiated).

In addition to being a Member of the World Trade Organization (WTO), Canada has concluded Free Trade Agreements (FTAs) with the following countries:

Canada - Panama - Brought into force: **01-April-2013**
Canada - Jordan - Brought into force: **01-October-2012**
Canada - Colombia - Brought into force: **15-August-2011**
Canada - Peru - Brought into force: **1-August-2009**
Canada - European Free Trade Association (Iceland, Liechtenstein, Norway and Switzerland) - Brought into force: **01-July-2009**
Canada - Costa Rica - Brought into force: **01-November-2002**
Canada - Chile - Brought into force: **05-July-1997**
Canada - Israel - Brought into force: **01-January-1997**
North American Free Trade Agreement (NAFTA) - Brought into force: **01-January-1994**

MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: New West Partnership

KEY MESSAGES:

- The New West Partnership (NWP) Energy Memorandum of Understanding (MOU) was established as a way for British Columbia, Alberta and Saskatchewan to work together to strengthen and expand the region's energy sector.
- The three provinces continue to collaborate on an Asia energy export and marketing strategy and environmental regulation within the energy sector, while previous work focused on hydraulic fracturing and related best practices.

BACKGROUND:

- The NWP is an economic partnership between British Columbia, Alberta and Saskatchewan establishing Canada's largest open market and creating a framework for ongoing cooperation to strengthen the western economy.
- The NWP, signed by the three Premiers on April 30, 2010, came into effect on July 1, 2010 and contains four separate agreements:
  - New West Partnership Trade Agreement;
  - International Cooperation;
  - Innovation; and
  - Procurement
- On December 16, 2010, an Energy MOU under the NWP was signed by the Provinces' Energy Ministers establishing a collaborative framework to strengthen and expand the region's energy sector.
- Under this MOU, the Provinces undertake to work in collaboration to:
  - exchange information on regulatory streamlining and process improvements;
  - promote energy technology development and deployment in the energy sector;
  - promote energy infrastructure of mutual interest;
  - coordinate on strategies for increased market access and market diversification of energy goods;
  - continue to work together to pursue a commercial arrangement for the adoption and implementation of the Petroleum Registry within British Columbia; and
  - exchange information on energy efficiency and alternative energy and promote responsible energy development and use.

Contact: Karen Koncohrada
Cell Phone: s.17
Date: June 24, 2013

- A Deputy Minister-level Steering Committee, assisted by a Secretariat, has been established to coordinate Energy MOU related work. The Steering Committee chairperson rotates between the Provinces. Saskatchewan assumed the chair position from Alberta on December 16, 2012.

s.13, s.17

- Additional work recently completed or near completion under the NWP Energy MOU includes:
  - the production of an oil and gas fiscal regimes report that summarizes the petroleum fiscal regimes for the western provinces and territories;
  - an evaluation of industry issues to discuss and resolve matters of concern raised by industry, and;
  - greater collaboration on information and knowledge sharing and the development of Best Practices related to hydraulic fracturing along with FracFocus.
- British Columbia was the first province in Canada to regulate the public disclosure of additives used for hydraulic fracturing. FracFocus.ca is the registry which provides a transparent accounting of hydraulic fracturing operations and includes a database of the ingredients used to support natural gas extraction and extensive content about the regulations and safety procedures governing industry activity.
- On January 1, 2012, public disclosure for hydraulic fracturing fluid became mandatory in British Columbia. By law, a list of ingredients used must be uploaded to the registry within 30 days of finishing completion operations, the point in time when a well is able to produce gas.
- On December 31, 2012 Alberta joined British Columbia in requiring the disclosure of hydraulic fracturing fluids on FracFocus.ca.

Contact: Karen Koncohrada
Cell Phone: s.17
Date: June 24, 2013

Estimate Note: 16

MINISTRY OF ENERGY AND MINES
CORPORATE INITIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Trade, Investment and Labour Mobility Agreement (TILMA) between British Columbia and Alberta

KEY MESSAGES:

- Under the TILMA, Alberta committed to remove residency and agency requirements from its oil, gas and coal regulations that require BC companies undertaking these activities in Alberta to maintain an office or agent in Alberta.
- These requirements were to have been removed by October 1, 2008, but that has not occurred.
- Officials continue to negotiate how this commitment will be met.
- Currently, companies in the oil, gas and coal sectors that operate inter-provincially establish their head office in Alberta rather than in British Columbia.

s.13, s.16

BACKGROUND:

- The TILMA is an agreement between British Columbia and Alberta to remove economic barriers between the two provinces.
- TILMA was approved at a British Columbia and Alberta joint Cabinet meeting on April 28, 2006. The agreement came into force on April 1, 2007 and was fully implemented by British Columbia before April 1, 2009.
- On July 1, 2010, TILMA was expanded to include Saskatchewan under the New West Partnership Trade Agreement (NWPTA). TILMA will continue to be in force alongside the NWPTA until Alberta fully complies with its TILMA obligations relating to residency and agency in its oil, gas and coal regulations.
- Part V of TILMA lists the exceptions to the Agreement. With respect to energy and minerals, measures related to tenuring, exploration, development, management or conservation of energy or mineral resources are excepted from TILMA as long as they are non-discriminatory.
- Part VI of TILMA identifies transitional measures which must be addressed by one or both of the parties. Alberta's residency and agency requirements in the *Coal*

Conservation Act, *Oil and Gas Conservation Act*, *Oil Sands Conservation Act* and *Pipeline Act* and the supporting regulations were required to be TILMA-compliant by October 1, 2008.

- British Columbia does not have similar residency or agency requirements in any of its energy or mineral statutes.

Ministry of Energy and Mines
Estimates 2013/14

Electricity & Alternative Energy

Alternative and Renewable Energy

BC Hydro

Ministry of Energy and Mines
Estimates 2013/14

Exports/Cross-Border Issues:

Innovative Clean Energy (ICE) Fund:

IPPs/Self Generators:

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Geothermal Tenure Issuance and Management

KEY MESSAGES:

- A request for a geothermal permit is currently being reviewed. It is expected to be posted for a competitive bid process between July and September 2013. The bids submitted for this sale will be evaluated on several criteria in addition to bonus price.
- The Province held one geothermal tenure disposition in 2011 where three geothermal permits at Canoe Reach on Kinbasket Reservoir were disposed. Two dispositions were held in 2010 where four geothermal permits were disposed.
- British Columbia has several promising geothermal energy prospects. Potential project sizes may vary from 200+ megawatts (MW) in the Coast Mountains, to approximately 5 -15 MW for interior projects.
- In northeastern British Columbia, Sedimentary Basin Geothermal could provide many projects, each in the range of 3-6 MW.
- Electricity generated from geothermal resources could provide a significant source of clean and renewable power for British Columbia.

BACKGROUND:

- Under the *Geothermal Resources Act* (*GRA*) of 1982, geothermal resources are regulated in British Columbia when the water temperature is greater than 80°C 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 regulates 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. If a permit holder discovers through the drilling of a geothermal well a developable geothermal field, they may apply for a Geothermal Lease which allows development and production of the resource.
- The National Geothermal Energy Program (between 1976 and 1986) identified many potential geothermal sites in British Columbia.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- Several wells were drilled under the National Geothermal Program at Meager Creek (near Pemberton) where a 290°C resource was discovered. Although there has been no commercial development in the Province, a 20 kilowatt demonstration plant was operated at Meager Creek in the early 1980s. Ram Power holds the only geothermal lease in the Province located at Meager Creek.
- There are six active geothermal permits in British Columbia. Three are at Canoe Reach of the Kinbasket Reservoir, approximately 25 kilometers south of Valemount. The remaining three permits are adjacent to the Meager Creek Geothermal Lease and are often referred to as North Meager or the Upper Lillooet.
- A request for a geothermal permit near Lakelse Lake (south of Terrace) was received in late 2012. The permit is currently in the referral process.
- Depending on the outcome of the referral process, it is expected that the permit will be posted for competitive sale between July and September 2013. The sale will use a bid system that requires proponents to submit an exploration plan. Bids will be scored on the plan and the proponents' experience with geothermal exploration.
- There has been interest in sedimentary basin geothermal prospects across Western Canada with potential projects announced in Saskatchewan and the North West Territories. While geothermal energy prospects from sedimentary basin aquifers are considered lower risk due to the existing oil and gas exploration data sets, resources are modest with potential developments being 3-6 MW in size.
- 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.
- A royalty scheme for geothermal is not in place. The Canadian Geothermal Energy Association has recommended that geothermal companies be subject to corporate income taxes and that no royalties should be levied on geothermal energy.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

Estimate Note: 1

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Clean Energy Vehicle (CEV) Program

KEY MESSAGES:

- British Columbia is a leading jurisdiction in adopting clean transportation technology.
- The 2010 Budget and Throne Speech announced the $100 million Climate Action and Clean Energy (CACE) Fund in part to support clean transportation and clean energy.
- From the CACE Fund, $18.8 million is being used for investment in clean transportation initiatives:
  - $14.3 million for a new British Columbia CEV Program;
  - $2.5 million for enhancements to the SCRAP-IT Program; and
  - $2 million in funding for the Carbon Offset Aggregation Cooperative.
- The CEV Program, announced November 5, 2011, was extended by one year to March 31, 2014 (from March 31, 2013) and includes:
  - funding for hydrogen fuelling infrastructure and electric vehicle charging infrastructure;
  - point-of-sale incentives for "clean energy vehicles" (i.e., hydrogen fuel cell vehicles, plug-in electric vehicles, and natural gas vehicles);
  - rebates for residential electric vehicle charging stations.
- CEV Program partners include the New Car Dealers Association of BC, the Canadian Hydrogen and Fuel Cell Association, BC Hydro, major automakers (Nissan, Mitsubishi, General Motors, and Toyota), other industry, Green Fleets BC, Fraser Basin Council, Building Owners and Managers Association, and Condominium Homeowners and Managers Association, communities and academic institutions.
- Investments under the CEV Program will lead to new economic opportunities for British Columbia businesses in providing infrastructure and services for the clean transportation sector.

BACKGROUND:

- The CEV for BC™ Point of Sale Incentive Program (administered through the New Car Dealers Association of BC) provides up to $5,000 off the pre-tax sticker price per eligible vehicle. As of June 2013, 535 incentives have been issued.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

- The Residential Electric Vehicle Charging Station Rebate Program is delivered as a LiveSmart BC program and provides up to $500 for home charging stations. As of June 2013, 167 incentives have been provided. $650,000 has also been provided to the Building Owners and Managers Association to run a Multi-Unit Residential Building charging infrastructure program.
- The Charging Infrastructure Project has invested $6.5 million of the $14.3 million CEV Program and is deploying up to 1,000 charging points that have two-way communication with the grid. These include 30 DC Fast Chargers (DCFC) – 13 by Fall 2013 – that charge within ~30 minutes.
- The Charging Infrastructure Project was designed in partnership with Plug-In BC, a multi-stakeholder working group that collaborated to support market transformation towards electric transportation in the light duty vehicle sector and helped develop a Green Highway. It utilizes the expertise and resources of a comprehensive list of collaborators, including the federal, provincial and local governments, international jurisdictions, electric utilities, industry (automakers, charging technology and service providers), academia, not-for-profit organizations, and codes and standards bodies.
- The delivery of the CEV Program includes significant efforts to increase awareness and understanding, conduct analyses, and engage with communities, industry and academic institutions to support an overall market transformation to CEVs.
- In April 2012, the Fraser Basin Council was selected by the Ministry of Environment to deliver charging infrastructure grants to communities, business and institutions under the Community Charging Infrastructure Fund. $2.7 million of the $6.5 million Charging Infrastructure Program was allocated to install 450 publicly available charging points throughout the Province by summer 2013. Successful applicants received funding for 75 percent of eligible costs of a station, up to $4,000 per station.
- In October 2012, BC Hydro and Natural Resources Canada provided $4.4 million for the Charging Infrastructure Project under the ecoEnergy Innovation Initiative Demonstration Project Fund. With matched funding from the Province ($2.2 million under the Charging Infrastructure Project) and BC Hydro ($2.2 million), the $8.8 million Demonstration Project will deploy smart grid DCFC and Level 2 (240 volt) charging infrastructure during 2012-2016. A public announcement is pending.
- British Columbia has a growing, globally-recognized presence in natural gas vehicle technology and hydrogen fuel cell technology, and has a nascent sector in electric vehicle components and integration. British Columbia has strong research, testing and development expertise in the clean transportation sector and under the CEV Program, $600,000 was provided to 10 different academic and trade school projects.
- The Province has enacted the Greenhouse Gas Reduction (Clean Energy) Regulation under Sections 18 and 35 of the *Clean Energy Act* that allows utilities to provide incentives for natural gas vehicles in the heavy duty sector and to invest in fuelling infrastructure. The incentive program has stimulated private sector and utility development of natural gas fuelling infrastructure in British Columbia.
- The Renewable & Low Carbon Fuel Requirements Regulation, under the purview of the Ministry of Energy and Mines, will reduce overall carbon intensity of transportation fuels by 10 percent by 2020. Compliance obligations with intensity reductions have been revised to commence July 1, 2013.

CROSS-REFERENCE:

4 - Green Highway

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

Estimate Note: 2

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Hydrogen and Fuel Cells Strategy

KEY MESSAGES:

- British Columbia is a recognized world centre for hydrogen and fuel cell technology. British Columbia is home to 35 hydrogen and fuel cell companies that employ 1,200 skilled workers.
- Since 2002, industry has invested more than $1 billion in Canada's hydrogen and fuel cell sector. The majority of this investment has been in British Columbia.
- Since 2005, the Province has invested approximately $4 million in the sector to support industry growth, hydrogen fuelling stations and early demonstration projects.
- As a result of British Columbia's leadership, the fuel cell Centre of Excellence for Daimler and Ford is located in British Columbia, and Mercedes Benz's manufacturing centre for fuel cells will be located in British Columbia.
- British Columbia is also home to the world's first waste hydrogen capture, collection, distribution and dispensing system: the Integrated Waste Hydrogen Utilization Project. An expanded project, the North Vancouver Liquefaction Project, will be capable of supplying locally sourced, clean hydrogen to fuel cell projects and other general hydrogen markets along the west coast of North America.
- In 2010, with $89 million of combined provincial, federal and BC Transit funding, BC Transit deployed a fleet of 20 fuel cell buses in Whistler. This is the world's largest fuel cell fleet operating in revenue service in a single location, and has attracted significant international and industry attention.
- British Columbia's leadership in hydrogen and fuel cell technology has led to significant private sector investment, translating to increased jobs and economic opportunities for businesses in this emerging clean technology sector.

BACKGROUND:

- The Hydrogen & Fuel Cell Strategy (Strategy), updated in 2008, is an industry initiative which seeks to accelerate the demonstration, deployment and commercialization of hydrogen and fuel cell technologies.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- Immediate commercial opportunities for fuel cell products exist in the areas of fuel cell forklift trucks, fuel cell back-up power systems, and stationary fuel cell plants.
- BC Transit's fuel cell bus project demonstrates leadership in sustainable transportation and is helping to create the market-pull necessary to attract additional private sector investment in fuel cell drive systems, bus platforms, and hydrogen-fueling infrastructure in British Columbia. This fleet demonstration has initiated additional international sales for British Columbia companies.
- The budget for the bus project includes funding for re-powering the buses in 2014, following a performance review of the fleet.
- BC Transit anticipates completing a review of the fleet's performance in June 2013, and presenting recommendations on the continuation of the fuel cell buses to its board in July 2013. Government direction on the fuel cell buses will likely be sought in Fall 2013.
- The North Vancouver Liquefaction Project would allow British Columbia to source local, green hydrogen for the BC Transit bus project (as opposed to shipping the hydrogen from Quebec). In addition, it will attract major auto manufacturer deployments in British Columbia, support other hydrogen and fuel cell projects in the Province, and provide a made-in-BC hydrogen source to markets along the west coast of North America.
- In March 2011, the Province, with funding from the Climate Action and Clean Energy Fund, provided $450,000 in funding to support the ongoing operation and maintenance of hydrogen fuelling stations to March 2013.
- There are currently six hydrogen fuelling stations in British Columbia including: the Whistler fuelling station; the Surrey Powertech Labs Station; two stations at two Surrey City Works yards; the Vancouver Pacific Spirit NRC-IFCI Station; and the Burnaby Ballard Station. In addition, Powertech Labs operates a mobile re-fuelling station that will soon be located permanently within the Metro Vancouver area. The only currently operating stations are the Whistler, Ballard and Powertech stations.
- The Canadian Hydrogen and Fuel Cell Association will be approaching government in the Summer or Fall of 2013 with an updated strategy and recommendation.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Green Highway

KEY MESSAGES:

- British Columbia is working with the Pacific Coast states (Washington, Oregon and California) to develop a network of fuelling locations that support clean, energy efficient vehicles. This network is referred to as the West Coast Green Highway.
- The Green Highway will build on British Columbia's leading Hydrogen Highway to include hydrogen supply, plug-in electric vehicle charging, and natural gas fuelling to support reduced transportation emissions and development of a low carbon economy.
- Green Highway stations will support implementation of British Columbia's Natural Gas Strategy, Clean Energy Vehicle Program and Low Carbon Fuel Requirement Regulation.
- On June 29, 2013, the BC2BC 2013 International Golden Plug Event is planned as a ceremony between leaders in B.C. and Washington State that will symbolically connect the electric vehicle fast charging networks in the Pacific Northwest along the north-south corridor. This event will also kick-off the BC2BC Electric Vehicle Road Rally where 10 drivers of all-electric vehicles will travel from the B.C.-Washington State border to the U.S.-Mexico border without using any gas.
- Since 2010, the Province has invested approximately $6.3 million in Green Highway activities, including $2 million towards new hydrogen fuelling infrastructure and stations and the operation and maintenance of existing hydrogen fuelling stations, and $4.3 million towards public charging infrastructure.
- Projects that received funding include the North Vancouver Hydrogen Liquefaction Project, a new Green Highway station yet to be located permanently in Metro Vancouver, a Vancouver Airport hydrogen station, 13 DC Fast Chargers throughout the Province, and the Community Charging Infrastructure Fund that will result in the deployment of 450 public Level 2 (240 volt) charging stations in communities and at businesses throughout the Province. A 14th DC station, located at Powertech Labs in Surrey, has a planned launch date of June 28, 2013.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

- The Greenhouse Gas Reduction (Clean Energy) Regulation, announced in May 2012, allows utilities to offer incentives for natural gas vehicles and building natural gas fuelling infrastructure. This Regulation is intended to promote utility and private sector investments in natural gas fuelling infrastructure.
- British Columbia's leadership in clean energy vehicles and supporting fuelling and charging infrastructure will translate to increased jobs and economic opportunities for British Columbia businesses in this emerging clean technology sector.

BACKGROUND:

- The Hydrogen Highway vision has now expanded to a "Green Highway". The Province originally committed to work with California and other Pacific states to complete a hydrogen highway that runs from Whistler to San Diego by 2010. The newly envisioned Green Highway is a commitment under the February 2010 Pacific Coast Collaborative Memorandum on Action.
- There are currently six hydrogen fuelling stations in British Columbia including: the Whistler fuelling station; the Surrey Powertech Labs Station; two stations at Surrey City Works yards; the Vancouver Pacific Spirit NRC-IFCI Station; and the Burnaby Ballard Station. In addition, Powertech Labs operates a mobile re-fuelling station that will soon be located permanently in the Metro Vancouver area. The only currently operating stations are the Whistler, Ballard and Powertech stations.
- The British Columbia portion of the Green Highway is being expanded with the purchase and installation of 30 DC Fast Charging stations. The first 13 stations will be located in Saanich, Duncan, Nanaimo, Vancouver (Science World), North Vancouver (2), Surrey, Langley, Squamish, Whistler, Hope, Merritt and Kamloops in fall 2013, with funding under the Clean Energy Vehicle Program. The remaining 17 stations will be located throughout the Province, with Federal Government matching funding, between 2014 and 2016.
- The North Vancouver Liquefaction Project will allow British Columbia to source local, green hydrogen for the BC Transit bus project (as opposed to shipping the hydrogen from Quebec). In addition, it will attract major auto manufacturer deployments in British Columbia, and support other hydrogen and fuel cell projects in the Province. The project is currently on hold, pending a financing decision by Air Liquide.
- British Columbia has a growing, globally-recognized presence in hydrogen fuel cell technology, hydrogen fuelling infrastructure, hydrogen fuel cell vehicle testing, and natural gas vehicle technology, and has a nascent sector in electric vehicle components and integration. British Columbia also has strong research, testing and development expertise in the clean transportation sector. Ongoing investments in these clean transportation sectors in British Columbia will lead to increased market presence for this sector both locally and internationally.

CROSS-REFERENCE:

2 - Clean Energy Vehicle Program

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

Estimate Note: 4

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Renewable and Low Carbon Fuel Requirements Regulation

KEY MESSAGES:

- The Renewable and Low Carbon Fuel Requirements Regulation (Regulation) requires:
  - a provincial annual average of five percent renewable content in gasoline sold in British Columbia;
  - a provincial annual average of four percent renewable content in diesel sold in British Columbia; and
  - 10 percent reduction in the carbon intensity of transportation fuels by 2020.
- The 2012 compliance period for renewable content in gasoline and diesel was the calendar year January 1 – December 31, 2012. All fuel suppliers were in compliance.
- The compliance period for low carbon fuels is the 18-month period January 1, 2012 – June 30, 2013. It is, effectively, a reporting-only period for the low carbon requirements. Compliance reports are due by September 30, 2013.
- An inspection program, based on professional accounting and auditing practice, is being developed to ensure compliance with the reporting requirements.
- The *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements Regulation) Act* was amended on May 31, 2012 to enable changes to the Regulation. Amendments to the Regulation will take effect on July 1, 2013.
- Further implementation measures include:
  - Development of an electronic reporting system to ensure accuracy and transparency and to enable credit trading;
  - Creation of an industry advisory panel to provide guidance and to address issues any of concern;
  - Posting of carbon intensity values on the Ministry website to provide certainty for low carbon fuel suppliers; and

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

- Development of Part 3 Agreements between the Ministry and fuel suppliers to allow credits to be awarded for actions that do not immediately reduce the carbon intensity of fuels, but that are expected to result in increased or accelerated adoption of low carbon fuels over the longer term.

BACKGROUND:

- British Columbia is the only jurisdiction in Canada with both a renewable fuel requirement and a low carbon fuel requirement. California is the only other jurisdiction in North America with a low carbon fuel standard.
- The Government of Canada has implemented a renewable fuel standard requiring a national average of five percent renewable content in Canada's gasoline supply, and a national average of two percent renewable content in all diesel and home heating oil supplies. Proposed amendments to the standard would include a permanent nationwide exemption from the 2% renewable content requirement for heating distillate oil for space heating purposes.
- Alberta, Saskatchewan, Manitoba and Ontario have created renewable fuel requirements. Renewable fuels used to meet Alberta's Renewable Fuels Standard must demonstrate at least 25% fewer greenhouse gas emissions than the equivalent petroleum fuel. Saskatchewan has announced a review of its ethanol grant program.
- The State of Washington is considering some form of low carbon fuel standard similar to that implemented by the State of California. Industry is currently in consultation with state government to assist with the development of a standard.
- The State of Oregon is proceeding with the implementation of reporting requirements for low carbon fuels as a first step towards a full low carbon requirement similar to California.
- The European Union has set targets for renewable energy and requires national action plans that establish pathways for the development of renewable energy sources.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Waste to Energy Under Clean or Renewable Electricity Guidelines

KEY MESSAGES:

- Local governments in the province are considering waste-to-energy (WTE) facilities as a more sustainable alternative to landfills.
- Electricity generated from municipal organic waste used to fuel a WTE facility is considered to be clean or renewable.
- Electricity generated from the non-organic waste, such as plastics, would not be considered clean or renewable. It would also require the purchase of carbon offsets consistent with provincial climate policy.
- Waste-to-energy facilities must meet provincial air emission and environmental protection standards.

BACKGROUND:

- The Province has maintained guidelines defining "green" electricity since 2002.
- The Clean or Renewable (CRE) Guidelines were developed following the release of the 2007 Energy Plan and BC Hydro has since focused its power procurement on resources that are considered to be clean or renewable.
- Under the CRE Guidelines, electricity produced by a WTE facility using municipal solid waste (MSW) as fuel was clean or renewable if it were designated as such by the Minister of Energy, Mines and Natural Gas (Minister).
- Beginning in 2009, Ministry of Energy, Mines and Natural Gas (MEMNG) staff began developing criteria which the Minister could use when determining whether to designate a WTE facility as clean or renewable.
- In the Fall of 2009 the developer of a WTE facility formally requested designation as a clean or renewable generator.
- In February 2010, as a policy, electricity produced from the biogenic component of mixed municipal solid waste used to fuel WTE projects was designated as clean or renewable, allowing BC Hydro to purchase the non-biogenic output of WTE projects with a requirement for greenhouse gas emission offsets.
- The *Clean Energy Act* (*Act*) moved the Province's definitions of clean or renewable energy resources from policy guidelines into legislation.
- Under the *Act*, "clean or renewable resource" means biomass, biogas, geothermal heat, hydro, solar, ocean, wind or any other resource prescribed through regulation.
- In October 2010 the Clean or Renewable Resources Regulation was enacted under the *Act* which designated "Biogenic Waste" as a clean or renewable resource.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- The company that requested designation of its planned WTE facility as clean or renewable has been advised that, in line with the *Act* and the Clean or Renewable Resources Regulation, electricity generation attributable to biogenic waste would be considered clean or renewable while the balance of the facility's output would require carbon offsets.
- To date MEMNG has not provided direction to BC Hydro regarding the treatment of WTE under its power acquisitions processes, as no new WTE projects have proceeded.
- On July 25, 2011 the Minister of Environment approved Metro Vancouver's Solid Waste Management Plan, including approval to pursue WTE as an option for managing waste. Metro Vancouver was directed by the Minister of Environment to undertake a competitive process for any new or upgraded WTE facilities that considers options both inside and outside of the Metro Vancouver Region.
- Metro Vancouver is continuing development of a proposed 370,000 tonne WTE project with a target in service date of 2018. A request for qualifications (RFQ) process closed February 2013. Metro Vancouver received 22 proposals from firms interested in building and/or owning operating the WTE facility. Metro Vancouver has short-listed 10 proposals and is planning to determine a preferred technology and identify potential sites within the next two years. BC Hydro is aware of the proposed energy and power that could be acquired from the project.
- Two key variables in the economics of WTE facilities are the tipping fees paid by the jurisdiction with the waste, and the revenue from power sales. BC Hydro should establish a fixed power price it is willing to pay so WTE proponents in Metro Vancouver's process compete based on tipping fees alone.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: British Columbia Electricity Market Structure

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 and procurement rather than the price set in a competitive market.
- The British Columbia Utilities Commission (BCUC) regulates BC Hydro and other electrical utilities to ensure a low cost, reliable electricity supply. Municipal utilities are exempt from BCUC regulation.

Supply

- British Columbia has over 17,000 megawatts (MW) of installed generation capacity:
  - BC Hydro (69 percent) ~12,019 MW, 43 facilities;
  - Industrial Self-Generators/Independent Generators (14 percent) ~2,406 MW, 37 facilities;
    - Alcan (5 percent) ~896 MW, 1 facility
    - Teck (3 percent) ~480 MW, 1 facility
    - Other (6 percent) ~1,030 MW, 35 facilities
  - IPPs (13 percent) ~2,295 MW, 76 facilities;
  - CPC/CBT (3 percent) ~453 MW, 3 facilities; and
  - FortisBC (1 percent) ~200 MW, 4 facilities.
- BC Hydro's total capacity is comprised of:
  - 46 percent from projects in the Columbia basin;
  - 30 percent from projects in the Peace basin;
  - 14 percent from Vancouver Island/coastal mainland hydroelectric projects; and
  - 10 percent from Burrard Thermal Generating Station and other small thermal plants.
- Based on Statistics Canada figures for 2008, 93 percent of electricity generated in British Columbia comes from clean and renewable sources.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 19, 2013

Demand

- Utility shares, by sales of energy in 2011, are:
  - BC Hydro: 93.2 percent;
  - FortisBC: 4.2 percent;
  - All municipally-owned utilities: 2.6 percent; and
  - Other investor-owned utilities: 0.03 percent.
- BC Hydro's electricity sales by Customer type in 2011/2012:
  - 35 percent for Residential (1,671,412 customers);
  - 34 percent for Light Industrial/Commercial (197,821 customers);
  - 26 percent for Large Industrial (168 customers); and
  - 4 percent for other (3,490 customers).

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 high, and buy power during off peak times when prices are low.
- BC Hydro has been a net purchaser of electricity, and the province a net importer, in three of the last five years.
- The electricity trade balance partly reflects cost savings by purchasing imported power when costs are less than generating that power from domestic resources (in particular, from Burrard Thermal Generating Station); however, ultimately BC Hydro has been a net importer.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Hydro Competitive Electricity Rates

KEY MESSAGES:

- BC Hydro has completed its fifth annual rate comparison report, based on electricity rates for fiscal 2013.
- BC Hydro's rate comparison report shows that BC Hydro's ratepayers continue to have among the lowest electricity prices in North America.

BACKGROUND:

- One of the energy objectives in section 2 of the *Clean Energy Act* is to ensure that BC Hydro's rates remain among the most competitive of rates charged by public utilities in North America.
- Under section 8(4) of the *Clean Energy Act,* BC Hydro is required to produce a rate comparison report which:
  - includes the rates of at least one public utility from each of over 15 jurisdictions in North America, specifying the inclusion of key jurisdictions – Alberta, Quebec, Ontario, Manitoba, Washington State, Oregon and California;
  - compares BC Hydro's rates for the various rate classes – i.e. residential, commercial, and industrial customers – to the selected public utilities' rates; and
  - provides BC Hydro's own previous five years of ratepayer classes' rates.
- Currently, BC Hydro uses a Quebec Hydro report called "Comparison of Electricity Prices in Major North American Cities" to compile its rate comparison report findings.
- BC Hydro completed its fifth annual rate comparison report in December 2012.
- The previous rate comparison report show that BC Hydro residential rates are among the six lowest surveyed, while commercial and industrial rates are between the third and seventh-lowest.
- The new rate comparison report showed on average BC Hydro residential ratepayers pay the fourth to seventh lowest rates, commercial ratepayers pay the fourth to seventh lowest rates, and large industrial customers pay the third to fourth lowest rates in North America.
- BC Hydro's rates continue to be among the lowest in North America.

ATTACHMENT:

8A - BC Hydro Comparison Report (Excerpt)

Contact: Les MacLaren
Cell Phone: s.17
Date: June 19, 2013

Monthly Bills and Average Prices as of April 1, 2012

This is the fifth Electricity Rate Comparison Annual Report (**Report**) prepared by BC Hydro in response to the Rate Comparison Regulation, issued by Ministerial Order No. M167, under the *Utilities Commission Act*, on March 30, 2009. The Report provides a comparison of BC Hydro's monthly bills and average prices for residential, commercial and industrial customers with other North American utilities, including those in Alberta, Quebec, Ontario, Manitoba, Washington, Oregon and California.[1]

Each year BC Hydro participates in a Hydro-Quebec comparison survey, submitting bill calculations based on electricity prices that are in place as of April 1 of the current year, and which may reflect approved interim rate increases. Hydro-Quebec compiles the information and provides the monthly bills and average prices for 12 Canadian utilities and 10 American utilities in an annual report. The BC Hydro Report provides survey information taken from the Hydro-Quebec report: Comparison of Electricity Prices in Major North American Cities.[2]

The Hydro-Quebec report provides the monthly bills, excluding taxes and non-utility levies, calculated for specific consumption points for four different customer segments: residential, small power, medium power and large power. The average price is also calculated, for each customer segment and specific consumption point, by dividing the monthly bill by the amount of monthly energy consumption. For example, if an electric bill for 1,000 kWh was calculated to be a monthly amount of $50, the average price would be $50 divided by 1,000 kWh, or 5 cents/kWh.

The monthly bills for customers are presented in Table 1, Table 2, Table 3 and Table 4. The average prices for customers are presented in Table 5, Table 6, Table 7 and Table 8. BC Hydro's monthly bills and average prices over the past five years are summarized in Table 9 and Table 10.

[1] Monthly bills and average prices for American utilities have been converted to Canadian dollars using the exchange rate as at 12 PM Eastern on April 2, 2012 of CDN $0.9917 per US $1.

[2] http://www.hydroquebec.com/publications/en/comparison_prices/index.html.

The Hydro-Quebec residential segment includes calculations for BC Hydro's residential customers. The Hydro-Quebec small power segment includes calculations for both BC Hydro's general service under 35 kW customers and general service 35 kW and over customers, while the medium power segment includes calculations for BC Hydro's general service 35 kW and over customers. Lastly, the Hydro-Quebec large power segment includes calculations for BC Hydro's general service 35 kW and over customers and transmission service customers. Table 11 shows the specific BC Hydro rate schedules that have been included in each Hydro Quebec segment. Table 12 summarizes BC Hydro's relative rankings in each rate class since the first year of participation in the survey in 2008.

Based on the data from the Hydro-Quebec survey, BC Hydro's monthly bills and average prices for all customer segments are generally within the first (i.e., lowest rate) quartile of utilities, with low rates providing a competitive advantage to customers in British Columbia. The rankings of the top five participating utilities with the lowest monthly bills and average prices are noted in the tables. Out of the 22 utilities providing data, BC Hydro's monthly bills and average price rankings against the Hydro-Quebec report for April 1, 2012 data are as follows:

Rate Class & Usage	April 1, 2012
Residential - 625 kWh	4th
Residential - 750 kWh	4th
Residential - 1,000 kWh	4th
Residential - 2,000 kWh	7th
Residential - 3,000 kWh	7th
Small Power - 750 kWh/6 kW	6th
Small Power - 2,000 kWh/14 kW	5th
Small Power - 10,000 kWh/40 kW	7th
Small Power - 14,000 kWh/100 kW	5th
Small Power - 25,000 kWh/100 kW	4th
Medium Power - 100,000 kWh/500 kW	5th
Medium Power - 200,000 kWh/500 kW	5th
Medium Power - 200,000 kWh/1,000 kW	5th
Medium Power - 400,000 kWh/1,000 kW	4th
Medium Power - 1,170,000 kWh/2,500 kW	5th
Large Power - 2,340 MWh/5,000 kW/25 kV	6th
Large Power - 3,060 MWh/5,000 kW/25 kV	6th
Large Power - 5,760 MWh/10,000 kW/120 kV	3rd
Large Power - 17,520 MWh//30,000 kW/120 kV	4th
Large Power - 23,400 MWh/50,000 kW/120 kV	4th
Large Power - 30,600 MWh/50,000 kW /120 kV	4th

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Hydro Regulatory Accounts

KEY MESSAGES:

- BC Hydro's regulatory accounts have a current balance of approximately $4.3 billion, and are forecast to increase to $5.3 billion in 2019, and decline thereafter.
- Three of the largest deferral accounts are those matching the timing of costs and benefits for Demand Side Management programs, Site C, and Smart Metering and Infrastructure.
- The two largest other accounts are for the transition to International Financial Reporting Standards.
- The accounts that capture variances from forecasts when rates are set are being paid down by about $200 million per year with the rate rider on current bills.

BACKGROUND:

- BC Hydro has been using regulatory accounts since the early 1980s.
- As of March 31, 2012 there were 27 regulatory accounts with a net balance owing from future ratepayers of $2.7 billion.
- In November 2012 BC Hydro calculated that the net balance on regulatory accounts would increase to $4.3 billion by the end of fiscal 2013 due to a change to International Financial Reporting Standards (IFRS). The IFRS accounts do not create new costs or financial risks, but change the timing of recognition of costs and revenues as income.
- There are three primary types of regulatory accounts:
    - **Forecast variance accounts** capture variations (above and below forecast) for volatile items such as reservoir inflows and market prices (which drives import costs and trade income). These accounts should average out over time. If large amounts accumulate, a rate rider has been established to pay down amounts owing from future customers. There is currently a 5 percent rate rider in effect that reduces balances by about $200 million per year. As of March 31, 2012, the total for forecast variance accounts was $774 million. This was forecast to rise to $1,047 million in fiscal 2013, mainly due to an increase of $297 million in non-current pension costs.
    - **Capital-like accounts** are established to match the costs of programs and investments with the beneficiaries of those investments. Power Smart program costs are recovered over 10 to 15 years. Costs to develop Site C and smart metering and infrastructure will be brought into rates when those assets come into service. The March 31, 2012 balance for capital-like accounts was $1,055

Contact: Les MacLaren
Cell Phone: s.17
Date: June 21, 2013

million. This was forecast to rise to $1,476 million in fiscal 2013, due to increases in demand side management, Site C, smart metering and Infrastructure deferral accounts.

- **Offsets and provisions accounts** are mostly non-cash items such as First Nations Settlement Costs and environmental provisions. For these accounts, a future liability is recognized and the account is drawn down over time as payments are made. The March 31, 2012 balance for these types of accounts was $625 million, and they were forecast to rise to $703 million in fiscal 2013.

- In addition to these regulatory account categories, BC Hydro has an additional account category for its transition to IFRS. These accounts totalled $222 million on March 31, 2012 and are projected to increase to $1,168 million in fiscal 2013.
- The IFRS deferral accounts are intended to spread out the rate impact of transitioning to IFRS. Without them, the immediate rate impact of transitioning to IFRS would be much larger. For example, under former accounting rules, BC Hydro capitalized overhead on capital projects, which sat under Property Plant and Equipment on the balance sheet. This is not allowed under IFRS, so BC Hydro created a regulatory account where almost $1 billion will be amortized over the same term as the assets they are associated with.
- After fiscal 2013, the rate of increase in regulatory account balances is expected to moderate, with balances peaking at approximately $5.3 billion in 2019 and decreasing beyond that.
- In spring 2010, the *Budget Measures Implementation Act* included the ability for Treasury Board, by regulation, to establish accounting standards that differ from those of other standards bodies.
- In 2011, Treasury Board adopted a portion of US Generally Accepted Accounting Principles that allows for rate regulated accounting and regulatory accounts.
- The former Auditor General of British Columbia appeared to have a fundamental disagreement with government's policy decision to continue rate regulated accounting, although it is strongly supported by the Office of the Comptroller General and regulated utilities across North America.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Hydro Review and Implementation

KEY MESSAGES:

- In spring 2011, the Province appointed a panel of Deputy Ministers to review BC Hydro and develop options to reduce the impact of rate increases.
- The June 2011 review report included 56 recommendations on how BC Hydro could reduce costs.
- BC Hydro has established a team to oversee and implement the recommendations.
- BC Hydro expects to implement the recommendations that apply to it by the end of 2013/14.
- In early February, the Province announced changes to the electricity self-sufficiency policy, which will reduce forecast rate increases by up to eight percent in 2016 and 20 percent in 2020.
- In July, the Province changed the self-sufficiency regulation to require BC Hydro to plan for average water conditions, and to remove the requirement for 3,000 gigawatts per year of insurance by 2020.
- Recommendations on other policy issues, such as reviewing water rentals and BC Hydro's capital structure, have been considered but not implemented at this time, as they affect the Province's fiscal plan.

BACKGROUND:

- On March 1, 2011, BC Hydro applied to the British Columbia Utilities Commission (BCUC) for a 9.73 percent rate increase in each of the following three years.
- Government announced a review of BC Hydro on April 7, 2011 to try to find ways to minimize rate increases while maximizing benefits to the Province, taxpayers and ratepayers.
- The panel examined BC Hydro's financial performance, including:
  - operating costs;
  - cost containment strategies;
  - capital planning and spending;
  - BC Hydro's forecasting system;
  - procurement processes; and
  - rate structures.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 21, 2013

- The Government review does not replace the more detailed examination of BC Hydro's Revenue Requirements Application normally conducted by the BCUC.
- On May 22, 2012, the BCUC was directed to set rates so that the total three-year effect on customer bills is the same as what BC Hydro applied for. On June 20, 2012, the BCUC approved the 1.44 percent increase for 2013.
- BC Hydro has established a Project Management Office to implement the panel's recommendations by following up with detailed actions and specific timelines. BC Hydro continues to report quarterly to Government on its progress.

CROSS-REFERENCE:

9 - BC Hydro Regulatory and Deferral Accounts

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Hydro Smart Meter and Smart Grid Programs

KEY MESSAGES:

- BC Hydro's Smart Meter and Smart Grid Project is modernizing the BC Hydro grid by improving reliability, operating efficiencies and service, reducing electricity theft, helping facilitate energy conservation, and increasing worker and public safety.
- Under the Smart Meter Initiative (SMI), BC Hydro is installing digital meters along with a telecommunications system that supports two-way communications between the meters and BC Hydro.
- The Smart Grid Project includes technology for theft detection, enabling SCADA (supervisory control and data acquisition), infrastructure upgrades, and new telecommunications and information systems to make the distribution network more intelligent and to allow for future technologies such as distributed generation and electric vehicles.
- BC Hydro's SMI business case indicates that smart meters pay for themselves by delivering $1.6 billion in total benefits for a net benefit of $520 million over 20 years after all costs are deducted.
- While there is some public concern primarily about health and privacy impacts, BC Hydro considers smart meters safe. Dr. Perry Kendall, Provincial Health Officer, states that "given the current scientific evidence, the consensus of public health practitioners is that at current exposure levels these electromagnetic fields do not constitute a threat to the health of the public". BC Hydro reports that 20 years of exposure to a smart meter is equal to exposure during a single 30 minute cell phone call.
- The B.C. Privacy Commissioner found that BC Hydro is taking reasonable steps to protect its customers' private information.
- BC Hydro had installed 93 percent (1.73 million of 1.87 million) smart meters, and was directed by Government to complete the remaining installations by December 31, 2013.
- BC Hydro is working with customers who still have concerns with smart meters. Currently, BC Hydro will not install a new meter without the customer's agreement. After contacting the customers on the "on hold" list, BC Hydro will be in a better position to provide some idea of what alternatives to a regular smart meter installation may be considered.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 20, 2013

BACKGROUND:

- More than 150 jurisdictions around the world, including 116 in North America, are moving to install smart meters and put smart grid components in place.
- The 2010 *Clean Energy Act* (*CEA*) required BC Hydro to install and activate smart meters by December 31, 2012. The *CEA* requires the British Columbia Utilities Commission (BCUC) to set BC Hydro's rates to allow for recovery of smart meter and smart grid costs. The Smart Meters and Smart Grid Regulation (Minister's Regulation) sets requirements for BC Hydro, specifying the equipment capabilities and where the meters must be installed.
- The *CEA* exempts BC Hydro from BCUC approval for complying with the obligations imposed by the Minister's Regulation. BC Hydro or its agents may enter property, other than private dwellings, without the owner's consent for purposes relating to BC Hydro's smart meters and its smart grid.
- The BCUC must consider the Government's goal of having smart meters and a smart grid in use for customers of other utilities when considering similar applications.
- In December 2012, the Minister's Regulation was amended to, in effect, remove BC Hydro's obligation to complete the smart meter installation program by December 31, 2012. The Minister's Regulation amendment recognized that of the approximately 1.9 million meter installations required by the statutory deadline of December 31, 2012, approximately 140,000 were not scheduled to be completed by the end of 2012. The then Minister of Energy, Mines and Natural Gas directed BC Hydro to complete all remaining installations no later than December 31, 2013, and to provide quarterly updates to the Ministry.
- Of the 1.9 million BC Hydro meters, about 90,000 have not been replaced with smart meters as of March 31, 2013. About 65,000 of these deferrals are a result of customers refusing a smart meter. Of these, BC Hydro anticipates about 50,000 will continue to refuse one despite further customer communication.
- In addition, a BCUC proceeding related to FortisBC's July 2012 application to seek approval for their Advanced Meter Initiative (AMI) is ongoing. A BCUC decision is expected by July 20, 2013. It is possible that the BCUC will approve the AMI program subject to FortisBC offering an "opt-out" program to FortisBC customers who prefer having a "radio-off" smart meter installed and are willing to pay the incremental costs.
- Such an outcome would reflect the regulator's approach in Quebec and some U.S. jurisdictions, and could be considered for BC Hydro.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Burrard Thermal Generating Station

KEY MESSAGES:

- Phasing out of Burrard Thermal (Burrard) is part of the Province's commitment to reduce greenhouse gas emissions and become a clean energy powerhouse.
- Burrard can still be maintained as an important 'back up' facility when needed.
- On November 5, 2010, the Province issued a regulation under the *Clean Energy Act* limiting BC Hydro's use of this facility.
- The "Authorization for Burrard Thermal Electricity Regulation" (Regulation) allows BC Hydro to rely on Burrard, as required, until completion of Mica 5 and 6, the Interior to Mainland Transmission line and upgrading of the Meridian Substation.
- The March 8, 2013 Ministerial Order No. 059 amends the Regulation to enable BC Hydro to operate Burrard Thermal to produce steam for sale to Imperial Oil's adjacent asphalt plant in accordance with BC Hydro's Electric Tariff Supplement No. 56.
- The Burrard phase out commitment was made in 2001 and reinforced through the Energy Plan, the August 2009 Throne Speech and by direction to the British Columbia Utilities Commission (BCUC) under section 3 of the *Utilities Commission Act* in October 2009.

BACKGROUND:

- The BCUC's July 2009 Decision on BC Hydro's Long Term Acquisition Plan directed BC Hydro to rely on 5,000 gigawatt-hours (GWh) from Burrard annually, for planning purposes. This decision was at odds with Government policy to phase out Burrard. The Government restated its policy intentions in the August 2009 Throne Speech, stating that "Phasing out Burrard Thermal is a critical component of British Columbia's greenhouse gas reduction strategy".
- On October 29, 2009, the Government issued Direction No. 2 to the BCUC under section 3 of the *Utilities Commission Act*, directing that BC Hydro should no longer plan to rely on Burrard for firm energy.
- The direction does provide flexibility for BC Hydro to rely on Burrard for capacity, or 'back up' purposes, for up to 900 megawatts of capacity.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

- The *Clean Energy Act* restated Government's position on Burrard being phased out for energy purposes. Section 12 (3) of the Act directs that BC Hydro must not operate Burrard except:
  (a) in case of emergency
  (b) to provide transmission support services or
  (c) as authorized by regulation.
- The Province clarified its intention to BC Hydro's use of Burrard through the November 5, 2010 Regulation, limiting the use of this facility.
- The Regulation allows BC Hydro to rely on Burrard, as required, until completion of Mica 5 and 6, the Interior to Mainland Transmission line and upgrading of the Meridian Substation, with all projects on track and to be operational by the end of 2015.
- With respect to Burrard providing steam to Imperial Oil, sales are generally through the use of an auxiliary non-generating boiler. Ministerial Order No. 59 makes it clear that BC Hydro may run one of Burrard's generating boilers when necessary to meet its steam commitments to Imperial Oil, should auxiliary boiler steam be unavailable.

CROSS-REFERENCE:

22 - *Clean Energy Act* Implementation

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Industrial Electricity Policy Review

KEY MESSAGES:

- Several industrial electricity policy issues arose during the British Columbia Utilities Commission (BCUC) hearing on the Dawson Creek-Chetwynd Area Transmission (DCAT) Project.
- Government committed to launching a public process to address the issues raised in the hearing as well as other outstanding industrial electricity policy issues.
- Government announced the Industrial Electricity Policy Review on January 13, 2013. It appointed a task force consisting of Messrs. Chris Trumpy, Peter Ostergaard and Tim Newton to review the industrial electricity policy and regulatory framework.
- The task force completed three rounds of in-person and written consultation
- The consultation identified several issues not covered in the Terms of Reference (ToR). The Minister extended the Review from July 31, 2013 to October 31, 2013 in order to provide the task force sufficient time to consider these additional issues.

BACKGROUND:

- BC Hydro's current industrial tariff governing how new industrial customers connect to the provincial grid was implemented in 1991. Since then the circumstances for both industrial customers and BC Hydro have changed.
- The BCUC issued a review of BC Hydro's Transmission Service Rate (TSR) for industrial customers in December 2009, but Government has not taken any action on the recommendations to date.
- Government's current electricity policy framework contains multiple objectives that compete, and at times conflict, with each other complicating the BCUC's DCAT review process.
- Ratepayer groups have consistently warned Government and BC Hydro on the economic risks associated with rapidly rising electricity costs. The impact is particularly acute on industrial customers given how much electricity they consume and the fact they are generally trade-exposed price-takers.
- The Ministry issued a ToR for the Industrial Electricity Policy Review and appointed a task force to oversee the Review in January 2013.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 19, 2013

- The task force consists of Chris Trumpy, former Deputy Minister, Peter Ostergaard, former Assistant Deputy Minister and Chair of the BCUC, and Tim Newton, former Vice President of Powerex, a BC Hydro subsidiary.
- The purpose of the review is to examine the existing policy and legislative framework governing provincial industrial electricity policy and report to the Minister of Energy and Mines.
- The primary focus of the review is to identify how industrial electricity policy links to economic development, electricity conservation and meeting Government's greenhouse gas reduction targets. The task force was also asked to identify potential conflicts and "trade-offs" between these areas.
- Between January and May 2013 the task force met with key industrial, electricity and environmental stakeholders with interests in the outcome of the Review.
- The task force issued a Draft Consultation Summary (Summary) compiling the input it received from all stakeholders on May 1, 2013. It received verbal and written comments on the Summary.
- The task force originally intended to release a draft task force report to stakeholders on May 31, 2013.
- A review of stakeholder submissions and the task force's draft consultation summary identified some issues that require additional analysis. The Review has been extended to October 31, 2013 to provide the task force with additional time. The original ToR required the task force to release a final report publicly by July 31, 2013.
- The ToR directs the task force to issue an Interim Report publicly prior to the final report. Ministry officials are currently working with the task force to establish new timelines to complete the Review.
- Ministry officials are developing a communications strategy to inform stakeholders of the rationale for the extension, how the process will unfold over the next four months as well as to manage the release of the report.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Hydro Integrated Resource Plan (IRP)

KEY MESSAGES:

- BC Hydro's Integrated Resource Plan (IRP) will set out how it proposes to meet future electricity demand, which is expected to grow by 40 percent over the next 20 years.
- BC Hydro will submit its IRP to Government by August 3, 2013.
- The IRP will demonstrate that from a planning perspective, BC Hydro is well positioned to meet current and future demand, including serving the needs of Liquefied Natural Gas and mining projects.

BACKGROUND:

- BC Hydro is required by the *Clean Energy Act* (Act) to prepare and submit for Government review, an IRP that sets out its long-term plan for acquiring the electricity resources to meet its customers' needs for the next 20 years.
- In accordance with the Act, 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 British Columbia'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 next 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 established a Technical Advisory Committee to provide technical advice to BC Hydro during the development of the IRP. This Committee included many of the regular intervenors at British Columbia Utilities Commission hearings and met six times. The Ministry of Energy and Mines sat on this Committee.
- BC Hydro suspended the IRP process in April 2011 following the Government's announcement of the 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.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- On February 3, 2012, as part of the Government's announcement of its Liquefied Natural Gas (LNG) Strategy, the Premier and Minister of Energy, Mines and Natural Gas (Minister), announced that the self-sufficiency policy would be amended to require BC Hydro to meet customer demand based on an average water year, instead of the previous critical water definition. This change, which has the effect of reducing the need for new firm energy by about 4,500 gigawatt-hours per year, will ensure BC Hydro customers continue to pay some of the lowest prices for electricity in North America.
- 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.
- More recent information suggests that BC Hydro's final IRP will report an energy surplus, some of which is expected to be taken up by LNG and mining demand.
- The construction of Site C will still be recommended to prevent a shortfall of generating capacity beginning in 2019. Upgrades to the Revelstoke and GM Schrum dams are part of contingency planning should there be a need for additional capacity in the future.
- Much of the projected surplus is driven by planned energy conservation actions, and BC Hydro proposes to reduce expenditure on these to limit costs associated with the surplus.
- BC Hydro has not consulted on the changes made to the IRP since December 2012.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Liquefied Natural Gas Power Requirements

KEY MESSAGES:

- BC has more than enough electricity to supply the projected needs of LNG facilities.
- Negotiations are underway to ensure British Columbia's LNG facilities are the cleanest in the world.
- Negotiated electricity rates with LNG proponents are expected to minimize the rate impacts for other customers.
- The challenge is to balance emission impacts, additional revenue to the Crown, impacts associated with electricity generation and transmission infrastructure, while maintaining industry competitiveness and timeliness.

BACKGROUND:

- In government's 2013 Platform Commitments, there are four relating to LNG and electricity:
  - Provide affordable energy rates for families, communities and industry;
  - Ensure British Columbia's LNG facilities are the cleanest in the world;
  - Work with Clean Energy BC to ensure continued opportunities for renewable power to be a source of power for British Columbia; and
  - Pursue new power sources for LNG manufacturing, including Site C, that will secure future energy for consumers.
- LNG facilities require large amounts of energy for the liquefaction process, 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.
- The LNG facility near Hammerfest, Norway, uses electric motors to drive the liquefaction process. The electricity is supplied by an adjacent gas-fired power plant. A proposed LNG facility in Freeport, Texas, is planning to use electric drives.
- The two most advanced projects, Kitimat LNG and Douglas Channel LNG Partners, were permitted based on electric drives for liquefaction.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 26, 2013

- The Ministry and BC Hydro entered into discussion with LNG proponents on their energy needs noting that LNG projects would not be eligible for BC Hydro's industrial tariff rates, but would be required to contribute the full cost of the transmission reinforcements and new generation resources required to serve them. The LNG rates and contributions would be contained in agreements that will likely require government direction to the BC Utilities Commission to implement. The transmission upgrades between Prince Rupert and Kitimat have been exempt from BCUC oversight.
- A portfolio of intermittent renewable power sources is not cost competitive and does not provide adequate reliability to support LNG facilities.
- The former Minister of Energy, Mines and Natural Gas publicly stated that while the Province's policy preference was for electric drives for liquefaction, ultimately the choice of energy source would be a business decision made by individual proponents.
- BC Hydro has offered a portfolio of renewables, gas-fired power and market supply.
- Shell has decided to pursue a "hybrid" option, with gas turbines for liquefaction, and power for ancillary equipment. Their Environmental Impact Statement reflects this hybrid option, with grid power from BC Hydro or self-generation as alternatives for powering ancillary equipment.
- Energy choices made by LNG developers also influence the supporting transmission infrastructure that is required. In the case of Shell's LNG proposal, the reinforcement of the existing 500 kilovolt (kV) transmission line between Prince George and Terrace, and replacement of the 287kV lines between Terrace and Kitimat, are required at a cost of about $240 million (M) (with Shell contributing $200M). Adding a fully electrified LNG plant the size of Shell's in Kitimat would require a new 500kV circuit from Prince George and upgrading the 287kV system to 500kV at a cost of over $1 billion.
- The power supply situation for LNG facilities locating in the Prince Rupert area is more complex. Currently the area is served by a single 287kV transmission line across very challenging terrain (some towers are in the Skeena River). LNG loads of 300-400 MW (i.e., ancillary loads) could likely be accommodated by the same reinforcement of the 500kV circuit between Prince George and Terrace that would be required to supply LNG and Kitimat, and would also require an upgrade of the 287kV line from Terrace to Prince Rupert. Transmission reinforcement to serve loads greater than this would be prohibitively expensive, so a mixture of local gas-fired and renewable power would be required. The inability to move large volumes of low cost and low emission intensity market power to Prince Rupert would result in the power portfolio being higher cost and/or more carbon intense.

CROSS-REFERENCE:

8 - BC Hydro Competitive Electricity Rates

14 - BC Hydro Integrated Resource Plan

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Northwest Transmission Line and Iskut Extension

KEY MESSAGES:

- The Northwest Transmission Line (NTL) will encourage industrial and clean energy development in the northwest part of British Columbia while supporting the Province's goal of mitigating greenhouse gas emissions.
- Permit cost increases have been due to challenges clearing rights of way and building roads, higher labour costs due to shortages and winter work, and deciding to use heavier line to increase capacity and reduce losses.
- The terms of the Contribution Agreement with Canada require British Columbia to electrify Iskut. The proposed Iskut Extension will extend publicly owned, high-voltage transmission infrastructure north to support regional economic development.
- As part of a commercial agreement between BC Hydro and Imperial Metals, Imperial Metals is constructing the transmission line portion of the Iskut Extension to BC Hydro standards and will sell it to BC Hydro.
- This commercial arrangement will meet Government's goal of extending the publicly-owned, high voltage system as well as maintain Imperial Metal's earliest in-service date for the Red Chris Mine.

BACKGROUND:

- The NTL is a 287 kilovolt (kV) line that runs 344 km from Skeena Substation (near Terrace) to Bob Quinn Lake. The $746 million (M) project will support mining, and potentially clean energy development north of Terrace.
- The Government of Canada (Canada) committed $130M to the NTL provided it:
  1) met federal environmental assessment standards;
  2) met the federal obligation to consult with First Nations; and
  3) electrified Iskut to reduce emissions from diesel generation within 12 months of when the NTL enters service.
- The NTL is fully permitted and is under construction. BC Hydro estimates it will enter service in summer 2014.
- Imperial Metals Corporation's (Imperial) Red Chris Mine (Red Chris) requires a minimum of a 138 kV transmission line to interconnect to the provincial grid. This infrastructure would normally be permitted, constructed and owned by Imperial.
- Imperial's proposed 138 kV line would not provide enough capacity to support further mining development north of Iskut. Imperial included a line route for both a 138 kV and 287 kV transmission line when it filed to amend its Environmental Assessment Certificate (EAC) in 2011.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 21, 2013

- In April 2012, BC Hydro entered formal negotiations with Imperial to secure the larger line that could support more investment.

s.12

- Since BC Hydro was not able to meet an in-service timeline of spring 2014 for the Iskut Extension, both parties proposed that Imperial construct the line (ensuring the avoided cost contribution requirements were met) and then sell it to BC Hydro once completed, provided certain contractual obligations were met.
- Government issued a direction to the British Columbia Utilities Commission exempting the facilities and agreement from Certificate of Public Convenience and Necessity review, in order to maintain Imperial's earliest in-service date for the Red Chris Mine. The agreement was signed and executed in March 2013.
-
-
-
-
-
- s.13, s.16
-
-
-
-

Contact: Les MacLaren
Cell Phone: s.17
Date: June 21, 2013

Estimate Note: 16

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Revenue to Government from the Electricity Sector

KEY MESSAGES:

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

BACKGROUND:

- The electricity sector in British Columbia is a significant contributor to provincial revenue and the provincial economy.
    - 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 Benefits (DSB) Entitlement;
    - 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 enjoyed by British Columbia businesses.
- The major contributors to the Province's Summary Account income statement and the associated 2011/2012 actual revenues are:
    - $558 million – BC Hydro's net income;
    - $15 million – net income from Columbia Power Corporation;
    - $(1 million) – Columbia Basin Trust net loss;
    - $346 million – BC Hydro water rental;
    - $90 million – DSB Entitlement forecasted for 2012/2013; and
    - $184 million – school taxes and other taxes and grants paid by BC Hydro to the Province and local Governments.
- New annual data for the parameters above will be available in the 2012/13 Public Accounts.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 26, 2013

Estimate Note: 17

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Site C Clean Energy Project

KEY MESSAGES:

- BC Hydro intends to complete the Site C Clean Energy Project by 2022, subject to the current approval and construction schedule, at a capital cost of $7.9 billion (nominal).
- Site C would provide 1,100 megawatts (MW) of capacity and produce about 5,100 gigawatt-hours (GWh) of electricity annually – about eight percent of BC Hydro's current electricity needs, providing enough electricity to power more than 450,000 homes.
- On January 28, 2013, BC Hydro submitted the Site C Clean Energy Project Environmental Impact Statement (EIS) to the Canadian Environmental Assessment Agency and the British Columbia Environmental Assessment Office for review.
- The provincial and federal governments are undertaking an independent, harmonized environmental review of Site C led by the Canadian Environmental Assessment Agency and the BC Environmental Assessment Office. This includes a Joint Review Panel process.
- The EIS indicates BC Hydro anticipates significant impact to: 1) fish and fish habitat; 2) habitat for certain migratory birds including species considered "species at risk" and species considered to be of provincial concern; and 3) unique terrestrial habitat including fragmentation and impacts to two red-listed rare plant species.
- Site C would create an estimated 7,000 person-years of direct construction employment, and up to 35,000 direct and indirect jobs through all stages of development and construction. Site C would also help facilitate the integration of additional clean and renewable projects — such as wind, run-of-river hydro and solar — by providing reliable backup to these intermittent resources.

BACKGROUND:

- The Site C Clean Energy Project (Project) is a proposal to build the third dam and hydroelectric generating station on the Peace River, seven kilometers southwest of Fort St. John.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 20, 2013

- 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. As well, hydroelectric projects are a renewable and clean source of energy with a long life of more than 100 years.
- The Project need is based on BC Hydro's evaluation of forecast customer demand, existing and committed supply-side resources and conservation and efficiency initiatives. Without the Project, BC Hydro forecasts the current energy and capacity surplus will turn to an energy deficit by 2024 and a capacity deficit by 2025 (this does not factor in potential future electricity demand from liquefied natural gas projects in British Columbia, but includes meeting the current demand-side management target of 7,800 GWh /year energy savings and associated capacity savings of 1,400 MWh by Fiscal 2021 and completing the Revelstoke Unit 6 project).
- BC Hydro estimates an adjusted unit energy cost of $110/MWh for Site C ($2013), whereas the alternative portfolios of clean energy projects with natural gas generation and without natural gas generation would be between $156-181/MWh (i.e., portfolios including wind, run-of-river, hydro, biomass, pumped storage, geothermal and upgrades to existing generation facilities, keeping electricity generation within the 93 percent clean or renewable resources objective stated in the *Clean Energy Act*).
- Under the *Clean Energy Act*, BC Hydro is exempted from the requirement to seek approval of the Project from the British Columbia Utilities Commission (BCUC). The Project requires environmental approval and other regulatory permits and approvals before proceeding to construction. In addition, the Crown has a duty to consult and, where appropriate, accommodate First Nation groups.
- The environmental assessment (EA) is a joint process between the Canadian Environmental Assessment Agency and the British Columbia Environmental Assessment Office, guided by the February 13, 2012 three-stage "Agreement to Conduct a Cooperative Environmental Assessment, Including an Agreement to Establish a Joint Review Panel of the Site C Clean Energy Project" signed between Canada and British Columbia. The complete process, including a Joint Review Panel, is anticipated to last three years.
- Stage 1 of the EA review is a pre-panel technical review expected to take 24 months (August 2013 completion target). A Working Group composed of federal and provincial, local government and First Nations representatives were recently established, and will be responsible for reviewing the EIS. The Ministry of Forests, Lands and Natural Resource Operations (FLNRO) provided consolidated comments on the EIS from all natural resource ministries.
- The EIS identifies and assesses potential project effects and opportunities to provide lasting benefits for the region including First Nation groups. Where adverse effects are unavoidable, BC Hydro will evaluate options for mitigation, and identify where significant impacts from the Project cannot be mitigated.
- In Stage 2, following the pre-panel technical review of the EIS, a three-person Joint Review Panel, jointly-appointed by the federal and provincial governments, will review the EIS for sufficiency (April 2014 target). This stage will also provide for public hearings, including submissions by First Nation groups. In Stage 3, the Panel's report will be reviewed, and followed by joint preparation of a referral package for final decision by Provincial and Federal Ministers (September 2014 target).

s.13, s.16

- Assuming Environmental Certification, Stage 4 of the Project review process allows for a prudency review of the project design and construction planning to determine whether Site C should proceed to construction. This review would be based on the final project definition as approved by environmental regulators.
- Stage 5 of the Project review process is construction of the project. If Site C is approved, construction would take about seven years.
- The Minister of Energy and Mines, as the Minister responsible for BC Hydro, is not a designated decision-maker in the EA process, in order to avoid the perception of conflict. The federal and provincial environment ministers will be making appointments to the Joint Review Panel in the latter part of July 2013.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 20, 2013

Estimate Note: 18

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: British Columbia Utilities Commission: Role 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.
- The *Utilities Commission Act* was amended in spring 2010 to implement many elements of the Province's clean energy strategy.
- The purpose of these amendments and the *Clean Energy Act* was to ensure that our clean energy objectives, how utilities deliver on these objectives, and how the BCUC regulates utilities, are all in alignment.

BACKGROUND/STATUS:

- The BCUC is an independent regulatory tribunal. The Minister of Justice is responsible for administering most aspects of the *Utilities Commission Act* which establishes the authority of the BCUC.
- 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.
- Prior to 1980, BC Hydro rates and other activities were approved by Cabinet. The *Utilities Commission Act*, first proclaimed in 1980, expanded utility regulation - which previously existed for only investor owned utilities - to include BC Hydro.
- During the tenure of the previous administration, a number of Minister's Exemption Orders and Special Directions were issued to limit the BCUC's authority with respect to the regulation of BC Hydro. The previous administration also passed 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 2001 New Era document made a commitment to restore "an independent BC Utilities Commission" and to return BC Hydro to full BCUC regulation.
- The *Utilities Commission Act* was amended in the spring of 2008 to implement many elements of the 2007 Energy Plan and again in the spring of 2010 to advance the Province's Clean Energy Strategy.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 25, 2013

- 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 and renewable resources.
- The *Clean Energy Act* introduced a new requirement for the BCUC to ensure that BC Hydro ratepayers do not pay for expenditures for export.
- The *Clean Energy Act* also exempted certain key/strategic energy investments from BCUC review, although the BCUC retains the power to examine the prudency of expenditures on these investments when setting BC Hydro's rates.
- The *Clean Energy Act* and the changes to the *Utilities Commission Act* modified the framework within which the BCUC regulates the plans, programs, projects and contracts of utilities. It is the responsibility of the BCUC to balance ratepayer and utility shareholder interests within the modified legal framework.

CROSS-REFERENCE:

21 - BCUC Recent Decisions

22 - *Clean Energy Act* Implementation

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Mandatory Reliability Standards

KEY MESSAGES:

- The BC Energy Plan: A Vision for Clean Energy Leadership (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 is currently leading a process to register transmission service customers and owners to comply with MRS.
- Government understands that there are some implementation issues that need to be resolved so the MRS regime meets British Columbia's interests. To that end, the BCUC has launched an inquiry on MRS implementation and will make recommendations to Government.

BACKGROUND:

- The 2008 amendments to the *Utilities Commission Act* (*UCA*) create a mechanism for introducing mandatory reliability standards for British Columbia's bulk electricity system.
- Under the *UCA* amendments, the BCUC must adopt standards required to remain 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 or the Western Electricity Coordinating Council (WECC). Major British Columbia electricity sector participants (e.g. BC Hydro and FortisBC) are active in these organizations.
- The mandatory reliability standards apply to owners, operators and users of the bulk power system and generators and distributors of electricity, as specified in the Mandatory Reliability Standards Regulation (Regulation) enacted in February 2009.
- The *UCA* required British Columbia Transmission Corporation to provide a report, filed on March 19, 2009 to the BCUC, on new North American standards. The report assessed whether adopting the standard would have any adverse impact on reliability in British Columbia, the suitability of the standard 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. BC Hydro now produces these reports annually.
- The *UCA* requires that reports be made available to the public and that the BCUC consider any comments provided.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 21, 2013

- After allowing for public comment, in June 2009, the BCUC adopted 103 mandatory reliability standards.
- The BCUC ordered that entities subject to the reliability standards under the Mandatory Reliability Standards Regulation must register with the BCUC by November 1, 2009 at which time they were required to begin complying with the 103 adopted standards.
- Two additional reports on additional reliability standards were filed in February 2010 and March 2011.
- BC Hydro continues to monitor reliability standards to identify those that may be suitable for adoption in British Columbia.
- Government passed amendments to the *UCA* that enable 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.
- Industrial customers, represented by the Association of Major Power Consumers approached Government in December 2011 to request Government amend the Regulation to exempt industrial customers from MRS. s.13, s.16

- s.13, s.16

- Ministry staff met with all major stakeholders between December 2011 and August 2012 and concurs with the BCUC's proposed approach. Stakeholders presented informed opinions but did not provide any quantifiable evidence as to why industrial customers should, or should not, be covered by MRS. Further, they only represent one customer group. An inquiry is an arm's length, transparent way for stakeholders to discuss the issues.
- The BCUC launched its process in October 2012. Final written submissions are due May 30, 2013. The BCUC will provide recommendations to Government in the Summer of 2013.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Recent Decisions

KEY MESSAGES:

- The British Columbia Utilities Commission (BCUC) is an independent, quasi-judicial, public tribunal that is not bound by government policy except through legislation, Cabinet direction issued by regulation, or through Ministerial regulations.
- Many of the projects it decides on are developed in light of government policy and the public interest.

BACKGROUND/STATUS:

- The BCUC is an independent regulatory tribunal. The Minister of Justice is responsible for administering most aspects of the *Utilities Commission Act* which establishes the authority of the BCUC.
- 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 *Clean Energy Act* and changes to the *Utilities Commission Act* modified the framework within which the BCUC regulates the plans, programs, projects and contracts of utilities. It is the responsibility of the BCUC to balance ratepayer and utility shareholder interests within the modified legal framework.
- The BCUC has released 14 decisions so far this year, with the majority affecting BC Hydro and FortisBC.

FortisBC: Amalgamation and Postage Stamp Rates

- FortisBC submitted an application to the BCUC requesting common rates for its four utilities, followed by amalgamation of those utilities. On February 25, 2013, the BCUC determined that amalgamating FortisBC and setting a common rate within the service area is not in the public interest.
- Amalgamation would have significantly reduced FortisBC gas rates on Vancouver Island and in Whistler, slightly increased them in the Lower Mainland, and significantly increased them in Fort Nelson.
- FortisBC disagreed with the BCUC's decision, and submitted a request for the BCUC to reconsider. The Ministry sent a letter of support that was included with FortisBC's reconsideration submission. The BCUC has agreed with the request to reconsider.

FortisBC: Kelowna Purchase

- FortisBC sought to purchase Kelowna's utility assets, to operate as the utility for Kelowna residents instead of the City of Kelowna.

- On March 1, 2013, the BCUC approved this transaction, but on less favourable terms to FortisBC than had been requested. FortisBC argued that this decision jeopardized a transaction that would benefit both FortisBC and Kelowna ratepayers. Ultimately, FortisBC went through with this transaction on the BCUC's terms and its, and Kelowna's, ratepayers benefitted.

FortisBC Natural Gas Vehicles and Biomethane

- The Province has enacted the Greenhouse Gas Reduction (Clean Energy) Regulation under Sections 18 and 35 of the *Clean Energy Act* that allows utilities to provide incentives for natural gas vehicles in the heavy duty sector and to invest in fuelling infrastructure. The incentive program has stimulated private sector and utility development of natural gas fuelling infrastructure in British Columbia.
- In the Alternative Energy Services Inquiry, the Commission determined that competition serves consumers better than utility regulation. FortisBC has been required to establish a number of non-regulated entities.
- FortisBC currently offers a Natural Gas Vehicle Program where they provide either compressed natural gas or LNG to fleet vehicle operators. An LNG pilot rate was approved for the program in 2009 for a period of five years. FortisBC applied in 2012 to set a permanent rate for LNG of $4.25 per gigajoule (GJ).
- On June 4, 2013, the BCUC denied FortisBC's request to make the rate permanent. In an unusual departure from cost of service based rates, the BCUC decided to set the rate at $6.50 per GJ to reflect a proxy market price until 2020. FortisBC has suggested that they will request a new rate since they do not think that their natural gas program can be competitive under the new LNG rate determined by the BCUC.
- On May 6, 2013, The BCUC has approved contracts with FortisBC and three new biomethane projects. A fourth one is planned, but is on hold until the Lieutenant-Governor in Council gives the BCUC advance approval to exempt it from *Utilities Commission Act* regulation.

Rate of Return on Equity

- On May 10, 2013, the BCUC reduced FortisBC's allowable rate of return on equity. This limits costs for FortisBC ratepayers. Since BC Hydro's return on equity is benchmarked off FortisBC's, this decision also reduces BC Hydro's allowable net income and would have an impact on the fiscal plan of about $55 million in 2014.
- Government is looking at its options to maintain BC Hydro's return on equity and avoid the impact to the fiscal plan.
- BC Hydro will submit a Revenue Requirements Application to the BCUC in February 2014.

CROSS-REFERENCE:

2 - Clean Energy Vehicles

19 - BCUC Roles and Responsibilities

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: *Clean Energy Act* Implementation

KEY MESSAGES:

- The *Clean Energy Act* (*Act*), enacted in June 2010, sets out 16 provincial energy objectives, including: electricity self-sufficiency; conservation; greenhouse gas reduction; and fostering jobs and opportunities for rural communities and First Nations.
- The *Act* commits British Columbia to having at least 93 percent of electricity generated in British Columbia from clean or renewable resources.
- Nine new regulations have been enacted to implement the *Act*.
- BC Hydro is now developing its first Integrated Resource Plan under the new regulatory framework established by the *Act*. It is to be submitted by August 3, 2013.

BACKGROUND:

- In the August 2009 Throne Speech, the Government announced that green energy will be a cornerstone of British Columbia's climate action plan.
- In the February 2010 Throne Speech, the Government committed to build on the contributions of the Green Energy Advisory Task Force and launch a comprehensive Clean Energy Strategy to put British Columbia at the forefront of clean energy development.
- The *Act* 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 a number of strategic energy investments, such as the Northwest Transmission Line, Site C and capacity additions at Mica and Revelstoke, from review by the BCUC (projects will remain subject to environmental assessment), while maintaining BCUC review with respect to rate setting;
  - creating a framework for BC Hydro to pursue electricity exports, including transmission capacity, while protecting BC Hydro ratepayers;
  - strengthening BC Hydro by reintegrating British Columbia Transmission Corporation; and
  - continuing the commitment to installing smart meters and a smart grid.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

- Since the *Act* was enacted, regulations governing clean or renewable resources, the 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.
- A Regulation under section 18 of the *Act,* encouraging the adoption of natural gas as a transportation fuel for heavy duty fleet vehicles and marine vessels, was issued on May 16, 2012.

CROSS-REFERENCE:

2 - Clean Energy Vehicle Program

11 - BC Hydro Smart Meter and Smart Grid Programs

12 - Burrard Thermal Generating Station

34 - Electricity Exports – Litigation Update

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Feed-In Tariff Regulation

KEY MESSAGES:

- The *Clean Energy Act* provides for the introduction of a Feed-In Tariff (FIT) to support clean electricity production from specified technologies.
- While a number of clean energy technologies could benefit from the introduction of a feed-in tariff, a FIT would result in increased electricity rates.
- There are no plans at this time to introduce a feed-in tariff in BC.

BACKGROUND:

- Sections 16 and 35(m) of the *Clean Energy Act* allow for the creation of a FIT in British Columbia.
- FITs have been implemented in jurisdictions such as Ontario and Germany to support rapid, widespread development of small-scale renewable energy projects and displace coal-based electricity generation.
- In British Columbia, where power generation is already more than 93 percent clean and renewable, the concept of a British Columbia FIT was to take a different approach than those in other jurisdictions – supporting the early deployment of emerging technologies and seeking to displace diesel-based electricity generation in remote communities.
- In August 2010, the Ministry of Energy and Mines (MEM) released a Consultation Paper proposing details of a FIT program to be implemented by BC Hydro.
- The Consultation Paper received more than 100 comments from industry organizations, clean energy companies, non-government organizations and members of the public.
- Informed by the results of the consultation, MEM began preparing a draft FIT Regulation in late 2010.
- Work stopped on the draft regulation when the review of BC Hydro was initiated in April 2011, as the proposed FIT was estimated to have a rate impact, albeit relatively small. With BC Hydro in surplus, there is no need for additional power through a FIT program.
- Development of a FIT regulation continues to be suspended.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Greenhouse Gas Reduction (Clean Energy) Regulation

KEY MESSAGES:

- Sections 18 and 35 of the *Clean Energy Act* (*Act*) give Cabinet the power to approve, through regulations, utility prescribed undertakings that reduce emissions.
- The Greenhouse Gas Reduction (Clean Energy) Regulation, announced in May 2012, and enabled under the *Act*, allows utilities to offer incentives for natural gas vehicles and to build natural gas vehicle fuelling infrastructure.
- The Regulation allows utilities to make these investments over a time-limited period with caps on expenditures to kick-start the natural gas vehicle market while providing room for a competitive market to develop.
- Following the issuance of the Regulation, FortisBC launched its Natural Gas for Transportation Incentive Program (NGV Program) on June 15, 2012 to support natural gas use in medium and heavy-duty vehicles and ferries.
- The Program has been highly successful in the first round of funding, providing incentives to more than 400 vehicles and one marine ferry.

BACKGROUND:

- The Regulation defines three prescribed undertakings: grants for vehicles and safety upgrades; compressed natural gas (CNG) fuelling stations; and liquefied natural gas (LNG) fuelling stations.
- The Regulation expires on April 1, 2017, and permits 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 also limits on program administration and marketing.
- If a utility chooses to pursue measures identified in the Regulation, the *Act* provides that the British Columbia Utilities Commission (BCUC) must allow a utility to collect sufficient revenue in each fiscal year to enable it to recover its costs. The *Act* does not require utilities to engage in the measures.
- The NGV Program is providing incentives for the purchase of new natural gas vehicles, and incentives to support fleets in upgrading their maintenance areas to be natural gas-safe. The NGV Program is anticipated to support 1,400 – 1,500 natural gas vehicles, representing approximately one percent of the market. Pacific Northern Gas is now also considering developing a complementary program for its service territory.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

s.13, s.16

- The vehicle fuelling infrastructure market for both CNG and LNG is not yet a competitive market and requires market stimulation. The Regulation, designed with the time and expenditure limits, ensures market stimulation of natural gas in the transportation sector, while also setting limits on regulated utilities' involvement in the market to allow for a competitive market to develop.
- The Regulation includes the ability for utilities to offer zero-interest loans for the purchase of a natural gas vehicle, in a pay-as-you-save type of model where the loan would be repaid through savings on the cost of natural gas versus gasoline or diesel fuel. Although the market is not yet sufficiently developed to move to this type of support mechanism, Ministry staff and utilities will continue to monitor the market and may work with stakeholders to explore this concept further.
-

s.13, s.16

- In December 2012, the BCUC issued an Alternative Energy Services Decision that included directions and principles related to CNG and LNG fuelling service offerings. The Decision requires FortisBC to establish separate classes of service for its CNG/LNG fuelling service offerings, but FortisBC is still able to recover costs for the activities under the Regulation across all ratepayers, up to the limits specified in the Regulation.
- The BCUC has recently ruled that FortisBC can use more LNG from its Tilbury and Mt. Hayes LNG facilities for fuel for natural gas vehicle customers. However, the BCUC denied FortisBC request for guaranteed, ongoing firm LNG supply fuel for vehicle customers, which retains first priority for FortisBC customers who heat and power their homes with natural gas.
- The recent BCUC decision on FortisBC's LNG application is causing FortisBC to re-examine their ability to offer incentives for LNG vehicles. Although the non-regulated market players are pleased with the decision, if the decision results in a lack of incentives for LNG vehicles, it could negatively impact market growth of natural gas in the transportation sector.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Columbia River Treaty Review

KEY MESSAGES:

- The Columbia River Treaty (CRT) has been a success — it's recognized around the world as a model for transboundary water management.
- British Columbia believes the Columbia River Treaty has significantly benefited the U.S. and Canada.
- The Ministry of Energy and Mines is leading the review of the CRT in Canada in advance of September 16, 2014, which is the latest date either Canada or the U.S. can give the required 10 years notice to unilaterally terminate the Treaty on the earliest possible date in 2024.
- The Ministry is the coordinating agency for the Review and has established a CRT Review Team to provide recommendations to Cabinet in the fall of 2013.
- We continue to consult with First Nations and the public on the future of the Treaty and anticipate that those consultations will be completed this fall.
- Last month, the Province released a discussion paper that examines the significant benefits that the Columbia River Treaty coordination continues to bring to both B.C. and the United States.
- I understand that on June 27 our US counterparts released draft recommendations while continuing to conduct studies and consult with their stakeholders. A final draft is expected in September 2013.
- We will not be commenting on the US recommendations until the final draft is released.

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.
- Although the CRT has no specified end date, either Canada or the U.S. can unilaterally terminate most of the agreement provisions as early as September 16, 2024, provided that at least 10 years notice is given (on or before September 16, 2014).
- Currently, the Treaty returns approximately $100-300 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.

Contact: Les MacLaren
Cell Phone: s.17
Date: July 3, 2013

- Although international treaties like the CRT are within the jurisdiction of the executive branch of the Federal Government, the Canada-British Columbia Agreement (1963) transferred most treaty rights and obligations to the Province, and also requires the agreement of the Province before terminating or amending the Treaty.
- The primary purposes of the CRT are to provide flood control 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 in three dams – Duncan, Arrow 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 (Koocanusa Reservoir) back into Canada almost as far as Cranbrook.
- Canada (British Columbia) received an upfront $64M one-time payment for 60 years of flood control in 1964.
- Canada's (British Columbia's) share of U.S. downstream benefits were sold to the U.S. for the first 30 years for $254 million to help finance the construction of the Treaty dams.
- In Canada, BC Hydro is the designated "Entity" with the responsibility to implement the Treaty 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 Treaty is entirely the responsibility of the Federal government which has jointly designated the Bonneville Power Administration and the U.S. Army Corps of Engineers as the U.S. Entity responsible for implementation.

CRT REVIEW:

- The Province is undertaking a CRT Review process to evaluate future decision options, including possible continuation, amendment or termination of the Treaty.
- The Ministry of Energy and Mines is leading the Review and has established a CRT Review Team to provide recommendations to Cabinet by the fall of 2013.
- The Province and the Federal Government are working together to ensure a coordinated and comprehensive approach to the CRT Review including First Nations consultation.
- The CRT Review team has completed the major portion of the public consultation and has delivered two rounds of eight community events, an all-day technical conference, and public sessions in three additional communities. More than 1,000 Basin residents attended the events.
- Basin residents will be able to provide feedback on a draft public consultation report and are encouraged to continue to share their views through email, blog posts and Facebook.
- The CRT Review Team has achieved agreement with participant First Nations on respective consultation plans and has largely completed interest scoping.

- The CRT Review Team is now engaging in consultation related to decision scenarios, including a preliminary assessment of potential impacts on aboriginal interests. This engagement will occur through the summer of 2013. First Nations will also have the opportunity to provide input and review the Crown's First Nation consultation reports. It is anticipated this process will be completed by fall 2013.
- The CRT Review Team has had several discussions with U.S. counterparts on key issues regarding the Treaty Review. There are differences in opinion on issues that will likely be negotiated after the governments have decided on their respective recommendations. Outstanding issues are flood control operations after 2024 and the return of the Canadian portion of the downstream power benefits.
- The CRT Review Team will be providing a recommendation to Cabinet, informed by the public and First Nations consultations, in the Fall of 2013.
- On June 25, 2013, the province released a discussion paper that examines the significant benefits that the Columbia River Treaty coordination continues to bring to both B.C. and the United States. The paper highlights that coordination enables the U.S. to effectively manage their flood control needs, energy reliability, ecosystem function, and water supply, as well as commercial navigation of the river
- On June 27, 2013, the US Entity released working draft recommendations on the future of the Treaty. The draft is intended to provide a basis for further regional discussion in the US. In September, a subsequent draft will be released for stakeholder and public comment, prior to recommendations being made to the US State Department in December 2013

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Community Energy Solutions

KEY MESSAGES:

- The Province is providing resources, support and tools for communities to develop community energy plans, and implement clean energy and energy efficiency policies and projects in their communities.
- The Community Action on Energy and Emissions (CAEE) initiative is a successful partnership between the Province, utilities, First Nations and local governments to leverage and support community energy solutions.
- To date, more than 70 British Columbia communities have participated in CAEE, 24 communities have received additional mentorship, and 35 communities have received Energy Savings Kits.
- The CAEE initiative is leveraging over $40 million in additional federal and private sector investment.
- The Province is partnering with BC Hydro to deliver a First Nations Energy Efficiency Building Policy (FNEEBP) project with communities to support the development of energy efficiency standards and measures in new and existing housing on-reserve.
- The Province is a member of the Quality Urban Energy Systems of Tomorrow BC (QUEST BC) caucus which supports British Columbia communities to lead in the development of Integrated Community Energy Solutions (ICES). In April 2013, the Province commissioned a new report on the status of ICES progress in British Columbia which will be released by QUEST BC this summer.
- These innovative community energy projects are creating jobs, supporting regional, economic and social development opportunities, reducing greenhouse gas emissions, reducing energy costs, and improving energy conservation and overall community sustainability.

BACKGROUND:

- Since 2006, the Province has contributed approximately $10 million in funding support for energy efficiency and clean energy development in First Nation and remote communities. Supported proponents include: the Taku River Tlingit (*pr. Kling-Kit*) (Atlin), Gitga'at (*Git-gat*) (Hartley Bay) and Klemtu hydro electric projects; Lasqueti Island, Xeni Gwet'in (*Honey-wuh-teen*), Old Massett, Skidegate and Dzawada'enuxw (*Za-wah-day-nook*) energy efficiency and solar thermal projects; the Toad River distribution line; First Nations Summit Society for Energy Savings Kits;

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

and community energy planning, assessments and feasibility studies in Hesquiaht (*Hesh-qwee-at*), Wuikinuxv (*O-wee-ken-o*), Dease River, Nazko, and Kwicksutaineuk/Ah-Kwa-Mish (*Kweek-soo-tain-nuk-ah-kwa-a-meesh*)First Nations communities.

- CAEE is currently administered on behalf of the Province by the Fraser Basin Council. The current CAEE offering is a Remote Community Implementation (RCI) Program and Community Mentorship initiative funded through a grant of $1.65 million from the 2008/2009 budget.
- In 2012/2013, an additional $6 million in provincial funding was granted to the Fraser Basin Council to support the Gitga'at First Nation hydropower project. The Gitga'at requested additional funding in order to address increases in construction costs, and the contribution was approved following completion of an independent assessment of project costs.
- The Community Mentorship initiative, developed by the Ministry of Energy and Mines (MEM), has been successful in job creation and energy project development in communities. To date, representatives from 20 communities have participated in webinar presentations and 4 communities have received one-on-one mentorship from experienced project leaders. An expansion of the Community Mentorship initiative is currently being pursued with VanCity, BC Hydro, Aboriginal Affairs and Northern Development Canada, Natural Resources Canada and QUEST BC.
- In 2013/2014, the CAEE initiative will be reviewed to identify renewed program and mentorship streams with utility, Federal Government and private sector funding. Potential focus areas could include community policies on integrated energy systems, First Nations energy efficient housing, and low carbon economic development.
- In March 2013, MEM received confidential notice from Natural Resources Canada that its proposal to support remote community integrated energy projects was notionally approved. Once an agreement is signed, $2.3 million in additional federal funding will go towards the development of three unique remote community clean energy projects that highlight technology, policy, business and operational solutions to address the many community energy barriers experienced in remote communities.
- The FNEEBP project is currently working with the communities of Ahousaht, Musqueam, Tsleil Waututh (*Tslay-wa-tooth*) and Kwadacha to support the development of energy efficiency standards and measures in on-reserve housing through building policies, and improved understanding of energy efficiency measures, costs and benefits. In 2013, the project delivered a Housing Energy Technical, Costing and Design Report.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Remote Community Electrification Policy and Regulation

KEY MESSAGES:

- The Remote Community Electrification (RCE) Program offers BC Hydro utility service to eligible communities not connected to the electrical grid.
- The RCE Program supports regional economic development through increased energy system reliability and reduced energy costs for its customers.
- The Ministry of Energy and Mines (MEM) chairs the Remote Community Energy Network (RCEN), which includes the Province, BC Hydro, Aboriginal Affairs and Northern Development Canada (AANDC) and the Fraser Basin Council. The objective of the RCEN is to assist BC remote communities in implementing community energy solutions by coordinating their access to network members' programs.
- In 2009, the Province signed a Memorandum of Understanding (MOU) with BC Hydro and AANDC to ensure transparency in the obligations required by all parties including the ongoing financial obligations of the federal government in providing funding for energy services in First Nations communities.
- s.13, s.16
-

BACKGROUND:

- The Province provides policy direction for the RCE Program through the BC Energy Plan and the Remote Communities Regulation.
- The RCE Program requires that costs associated with energy system upgrades and regular operations/maintenance be recovered from currently responsible agencies such as AANDC. The BC Utilities Commission has approved the RCE Program on this cost-recovery basis to ensure limited impact on ratepayers.
- The RCE Program was developed in recognition of the fact that some communities in the Province do not have access to electricity service, are struggling with unreliable, costly community-owned systems and lack the financial resources and technical capacity to maintain them properly.

Contact: Les McLaren
Cell Phone: s.17
Date: June 14, 2013

- In some cases, participation in the RCE Program results in the communities being connected to the main electrical grid, but in most cases it results in communities being designated as "Non Integrated Area" (NIA) customers of BC Hydro with discrete generation and distribution systems developed within the community.
- Remote communities that are not BC Hydro customers presently pay approximately 40 cents/kWh for electricity. Under the RCE Program, communities that become NIA customers pay Zone 2 rates (approximately 14 cents/kWh), while communities that are connected to the grid pay Zone 1 rates (approximately 10 cents/kWh).
- The RCE Program results in significant long term cost-savings and a reduced administrative burden for AANDC in remote First Nations communities. Under the RCE Program, BC Hydro takes over operation, maintenance, billing, and capital upgrades of energy systems in these communities.
- In the short term, under the MOU, AANDC is responsible for providing any necessary system upgrades to BC Hydro standards at no cost to BC Hydro. AANDC is also responsible to transfer system operations and maintenance payments to BC Hydro once a new system is under BC Hydro oversight. s.13, s.16

s.13, s.16

- The Remote Communities Regulation under the *BC Hydro Public Power Legacy and Heritage Contract Act* creates an obligation for BC Hydro to serve remote communities listed in the Schedule to the Regulation.
- The current 20-year cost forecast range for the RCE Program to provide electricity to 25 communities is $105 million to $125 million and to date, the Program costs have consistently remained below the forecasted amounts.
-
-

s.13, s.16

-

MINISTRY OF ENERGY AND MINES
ELECTRICTY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Amendments to Energy Efficiency Standards Regulation

KEY MESSAGES:

- The Energy Efficiency Standards Regulation (EESR), under the *Energy Efficiency Act* (*EEA*), sets 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.
- As part of the Province's commitment to energy conservation and efficiency outlined in the *Clean Energy Act*, Ministry staff have been developing EESR amendments with new proposed standards for residential gas boilers, geoexchange heat pumps, linear fluorescent lamps (i.e., phase-out of inefficient T12 lamps) and television set-top boxes (STBs).
- Ministry staff are working with colleagues at Natural Resources Canada (NRCan) and the BC Office of Housing and Construction Standards to finalize the EESR amendments in order to eliminate duplication and align regulatory requirements.

s.12

BACKGROUND:

- Public consultations were held in Fall 2012 on proposed EESR amendments for STBs, T8 lighting (phase-out T12 florescent lamps), small natural gas boilers and geoexchange heat pumps.
- With the exception of STBs, there is general support for the proposed regulations, with the caveat that the Ministry work to harmonize with other jurisdictions and streamline regulatory requirements as much as possible.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- British Columbia and California are the only jurisdictions in North America currently considering regulating STBs. The U.S. Department of Energy is currently conducting an energy conservation standard rulemaking for STBs, beginning with updating the test procedure. Some manufacturers and service providers have expressed opposition to the proposed regulatory approach and have suggested a voluntary industry agreement as an alternative mechanism to achieve energy savings.
- A U.S. voluntary agreement on STBs was announced in December 2012, but environmental advocates and California regulators have concluded it lacks rigour and there is no enforcement mechanism.
- Ministry staff are working with NRCan and industry stakeholders to explore a potential NRCan-led voluntary STB agreement in Canada.

Proposed new Energy Efficiency legislation

- In Spring 2012, the *Energy and Water Efficiency Act* (*EWEA*) was introduced in the BC legislature. The *EWEA* was a complete rewrite of the current BC *EEA* and contained a number of significant improvements to the current *EEA* provisions.
- Notably, the *EWEA* would have authorized administrative penalties for contraventions of energy efficiency regulations, enabled new requirements for industrial energy usage reporting and regulation of energy systems, and broadened the scope of the *EEA* to include water efficiency and conservation.
- The *EWEA* received bipartisan support during second reading but was not introduced for committee stage debate.
- Ministry staff will prepare a submission to bring forward *EWEA* for consideration at the spring 2014 session of the legislature.

March 2012 EESR amendments

- In March 2012, EESR amendments established a delayed effective date for efficiency standards for 40-60W light bulbs to December 2014 (to conform with Natural Resources Canada), along with minor housekeeping changes to other existing EESR standards.

July 21, 2011 EESR amendments

- In July 2011, EESR amendments received Order in Council approval, setting new efficiency standards for TVs and for standby losses for compact audio and video products. It also included several housekeeping items related to previous EESR standards for windows, water heaters and furnaces.

MINISTRY OF ENERGY AND MINES
ELECTRICTY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Industrial Energy Efficiency

KEY MESSAGES:

- The industrial sector in British Columbia accounts for more than 40 percent of the total energy used in the Province. There are substantial opportunities for cost-effective, energy efficiency improvements in existing and planned industrial facilities.
- Helping to facilitate improved energy efficiency in the industrial sector will lower operating costs and emissions, minimize utility rate increases over the long-term, improve British Columbia business competitiveness, and create clean tech jobs.
- As part of a proposed Energy Efficiency Strategy, the Ministry of Energy and Mines (MEM) will help industry improve energy performance by facilitating a system-wide, continuous improvement approach to energy management, including:
    - coordinating with British Columbia utilities and Natural Resources Canada to develop integrated financial support to industry for enhanced all-fuel energy management practices;
    - developing a BC Energy Efficiency Network (Network) to promote improved productivity of BC's industrial sector through strategic planning, research, project funding and capacity building; and
    - pursuing market transformation for the most energy intensive industrial systems and processes by offering a voluntary benchmarking program, and promoting and adopting energy performance standards as appropriate.

BACKGROUND:

- Primary barriers to industry realizing improved energy efficiency include a lack of senior management support for energy management, a lack of awareness of the specific opportunities for improvement, and a lack of awareness of how existing processes and facilities compare to industry benchmarks.
- While BC Hydro has successfully advanced electric energy management through the Power Smart – Strategic Energy Management Program, there is a significant gap in resources available to industrial firms to assist in all-fuel energy management (including natural gas, biomass, diesel and coal). This gap can be addressed by facilitating a coordinated utility energy management program with a broader focus on total energy use.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- In July 2011, the Council of Energy Ministers (CEM) announced a commitment to "Improve industrial energy performance by adopting the ISO 50001 international energy management standard. ISO 50001 provides a voluntary framework and guidance materials to facilitate the systematic and continuous improvement of total energy management. It has been reported that industries can save between 10 and 20 percent of their annual energy use within the first five years of implementing an energy management standard."
- In support of the CEM commitment, the Ministry is a member of the Canadian Standards Association Technical Committee on Energy Management, responsible for developing, maintaining and advancing Canadian energy management system standards. The Ministry is engaging with public utilities to develop measures to support ISO 50001 and has worked directly with large industrial firms to publicize and support their efforts to adopt the standard.
- The 2012 Natural Gas Strategy includes an action to establish a BC Energy Efficiency Network to promote improved productivity of BC's industrial sector through the efficient use of natural gas. MEM developed a Treasury Board Submission in Fall 2012 proposing that the Network be formed as a partnership between government, utilities, industry associations and academia. The Network would have a mandate to advance the adoption of all-fuel energy management practices through strategic planning, research, project funding and capacity building. It was proposed that the Network be a permanent organization, funded through an initial endowment and membership contributions. Due to fiscal constraints, the Ministry is exploring alternative avenues to establish the Network.
- In 2012, Bill 32, the proposed *Energy and Water Efficiency Act* (*EWEA*) included provisions to enable industrial energy reporting and the development of energy efficiency indicators. The proposed *EWEA* also enabled the development of energy efficiency system standards which, among other applications, could be applied to industrial process. The *EWEA* energy reporting and systems standard provisions are key components for a robust industrial energy efficiency strategy.
- Bill 32 did not proceed beyond second reading but did receive bipartisan support. Ministry staff will prepare a submission to bring forward *EWEA* for consideration at the Spring 2014 legislative session.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

Estimate Note: 29

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: LiveSmart BC: Residential Efficiency Incentive Program

KEY MESSAGES:

- Over the past five years, LiveSmart BC: Efficiency Incentive Program has gained recognition and support among homeowners, the home retrofit industry and utilities for its significant contributions towards improving energy efficiency in the residential sector.
- Budget 2013 did not include funding for LiveSmart BC incentives; however, the Province did commit $1 million from the Innovative Clean Energy Fund to reduce the cost of initial home energy assessments.
- In the absence of energy efficiency incentives, the Province has relied on its strong partnership with utilities (BC Hydro and FortisBC) to develop a new program offering in which 100 per cent of incentives are funded through partner utilities.
- Therefore, from April 1, 2013 until March 31, 2014, the LiveSmart BC program offers incentives for insulation and air sealing with a continued $150 provincial subsidy to reduce the cost of the initial energy efficiency assessment that is required to enter the program.

BACKGROUND:

- Between April 2008 and March 2013, the LiveSmart BC: Efficiency Incentive Program has provided access to almost $95 million (M) in incentives to encourage almost 80,000 homeowners to make energy efficiency improvements that reduce energy costs and greenhouse gas (GHG) emissions while improving health and comfort.
- It is estimated that these incentives have stimulated between $852M and $947M in economic activity and created 8,523 to 14,205 person years of employment.
- Participants are each saving an estimated 1.2 tonnes of GHGs annually, for a Program total of almost 100,000 tonnes/year.
- The Program has helped participants reduce their utility bills by between 15 percent and 28 percent.
- Post-program evaluations show more than 90 percent of participants approve or strongly approve of their experience.
- As of March 31, 2013, the LiveSmart BC: Efficiency Incentive Program no longer has provincial funding for residential energy efficiency upgrade incentives, resulting in:
    - reduced energy savings and GHG emission reductions;
    - reduced energy affordability for families; and
    - reduced economic activity and job stimulation.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 21, 2013

- The Ministry continues to administer Program incentives funded by utility partners.
- $1M was approved from the Innovative Clean Energy Fund for 2013/14 to subsidize home energy assessments facilitating access to utility partner incentives.
- Utility partner incentives are available for some envelope (insulation and air sealing) upgrades; however, incentives are no longer available for many significant residential upgrades such as heating systems, hot water heaters and window replacements.
- These reductions in available residential incentives are projected to significantly reduce participation in the Program, from a high in 2011/12 of more than 25,000 entrants to approximately 6,000 expected in 2013/14.
- Public and industry response to the Program has been overwhelmingly positive. The program has been foundational for a number of successful utility, municipal and industry programs and policies, many of which have been held up as examples of best practice.
- While significant gains have been made in five years, there remains a large amount of work to do to transform residential energy performance in British Columbia, and make homes more affordable for families. LiveSmart BC has reached about 9 percent of all eligible homes, leaving 91 per cent of eligible housing stock as potential future program participants.
- The Province is planning to transition from incentive funding to utility on-bill financing for efficiency improvements. BC Hydro (in Colwood) and FortisBC (South Okanagan) are currently undertaking pilot financing programs.

CROSS-REFERENCE:

32 - LiveSmart BC: On-Bill Financing Pilots

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: LiveSmart BC: Small Business Program

KEY MESSAGES:

- Over the past three years, the LiveSmart BC: Small Business Program has gained support and recognition from small business owners, utilities, chambers of commerce, industry associations, the Small Business Roundtable, and other organizations for helping small businesses save energy and lower their utility costs.
- Budget 2013 did not include funding for LiveSmart BC: Small Business Program; however, the Ministry advanced $1.6 million from 2012/13 funds to extend the Business Energy Advisor program component until March 31, 2014.
- Business Energy Advisors offer free energy assessments, provide recommendations for energy efficiency upgrades, help business owners access available utility incentives, and coordinate upgrades. Demand for advisory services has grown steadily.
- Utilities continue to offer energy efficient product incentives to small businesses; however, without the LiveSmart BC top-up to those incentives, it is less cost effective for businesses to move forward with energy efficient upgrades.

BACKGROUND:

- In 2010, there were approximately 391,700 small businesses operating in British Columbia, accounting for 98 percent of all businesses in the Province.
- Research has shown that small businesses do not have the time, knowledge or resources to invest in energy efficiency measures. The LiveSmart BC: Small Business Program provides a free resource to help businesses identify money- and energy-saving opportunities.
- Building on the well-recognized LiveSmart BC brand, and the successful LiveSmart BC: Efficiency Incentive Program for homes, the LiveSmart BC: Small Business Program has partnered with utilities, industry organizations, chambers of commerce and various non-profit groups in order to identify and deliver cost-savings opportunities to small businesses across multiple sectors (foodservice, retail, accommodation, general office space, agriculture, and small business landlords) and regions (Northeast, North Coast/Nechako, Cariboo, Kootenays, Thompson/Okanagan, Vancouver Island/Coast, and Mainland/Southwest).

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- The Province initially committed $15 million over three years to the small business program. In 2012, a further $2 million was added to keep up with program demand.
- From January 2011 – March 2013, the Program offered four components:
  - Business Energy Advisor services that included free energy assessments, help accessing incentives, and help coordinating upgrades;
  - Direct Installation Program, which offered free lighting upgrades to very small businesses in FortisBC electricity territory;
  - Enhanced Product Incentives in the form of top-ups to BC Hydro and FortisBC gas and electric incentives; and
  - Champion Program, which helped small business leaders make their energy-efficient ideas into reality by funding proposed innovative or deep energy saving projects.
- Between January 2011 and March 31, 2013, the LiveSmart BC: Small Business Program has helped over 10,000 small businesses save over 150 gigawatt hours of electricity, and over $6 million in ongoing utility costs, exceeding original program targets by approximately 50 percent.
- Though the program has exceeded original targets, it has served just 3 percent of all small businesses in British Columbia, leaving a potential market of 97 percent for future programs.
- From April 1, 2013 – March 31, 2014, the only component remaining in market is the Business Energy Advisor component. There are currently 15 Business Energy Advisors serving the initial sectors (foodservice, retail, accommodation, general office space, agriculture, and small business landlords) and regions (Northeast, North Coast/Nechako, Cariboo, Kootenays, Thompson/Okanagan, Vancouver Island/Coast, and Mainland/Southwest) of the Province, who will continue to deliver free energy assessments, help business owners access utility incentives, and coordinate upgrades.
- BC Hydro and FortisBC continue to promote the LiveSmart BC: Small Business Program in conjunction with their own small business programs.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: LiveSmart BC: On-Bill Financing Pilots

KEY MESSAGES:

- The Province is pursuing energy efficiency financing pilots to help homeowners and businesses save money on their energy bills while reducing greenhouse gas emissions.
- On-bill financing (OBF) allows participants to help finance energy retrofits from the estimated energy savings from the improvements.
- Unlike traditional bank loan programs, the OBF loan obligation can remain with the property when the first borrower moves out.
- On January 1, 2014, all eligible Kelowna households as well as Vancouver Island homeowners in electrically heated homes will be able to access OBF funds for energy efficiency upgrades from their utility.
- This announcement builds on existing OBF pilots in Colwood (BC Hydro) and the Regional District of Okanagan-Similkameen (FortisBC) launched in November 2012.
- Discussions with utilities are under way on launching a province-wide OBF program as early as 2015.

BACKGROUND:

- Amendments to the BC *Clean Energy Act* (*CEA*) enacted on June 2, 2011 enable utility companies to provide OBF to eligible customers.
- On July 26, 2012, the Minister signed a regulation under the *CEA* to require BC Hydro and FortisBC to implement residential financing pilots in the City of Colwood (electric-heated homes) and the Regional District of Okanagan-Similkameen (gas- and electric-heated homes) respectively, from November 1, 2012.
- On April 12, 2012, the Minister signed a regulation to expand the current pilots to Vancouver Island (BC Hydro) and Kelowna (FortisBC).
- These pilots apply to eligible owners of single-family and row houses as defined by the regulation.
- The *CEA* provisions give the Province regulatory authority to require major utilities in British Columbia to implement OBF and to set broad parameters for program design.
- OBF will be integrated with the existing LiveSmart BC: Efficiency Incentive Program with respect to tradesperson and industry delivery channels and consumer education and outreach materials.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUES: Utility Demand Side Management

KEY MESSAGES:

- Utilities help British Columbian families and businesses reduce their energy bills through energy efficiency and conservation programs – otherwise known as demand-side management (DSM).
- BC Hydro has projected an electricity surplus, and the Ministry is working with BC Hydro to prudently reduce DSM spending to minimize rate increases, while preserving the flexibility to bring back DSM programs to higher levels if demand increases faster than anticipated.
- BC Hydro's DSM expenditures in 2013/14 will total $178 million, with estimated savings of 850 gigawatt-hours (GWh) per year from Power Smart, conservation rates, codes and standards. This is equivalent to the annual electricity demand of 77,000 houses.
- The PowerSense program of FortisBC (electric) saved 32 GWh in 2012. This is equivalent to the annual electricity demand of 3,000 houses. The DSM program of FortisBC (natural gas) saved 450,000 gigajoule in 2012, enough natural gas to heat 6,000 houses. This resulted in greenhouse gas emission reductions of 22,500 tonnes.
- Utility DSM expenditures are approved by the British Columbia Utilities Commission (BCUC).
- The Province provides the regulatory framework for DSM through legislation and regulation, including the *Clean Energy Act*, the *Utilities Commission Act* and the Demand-Side Measures Regulation (DSM Regulation).

BACKGROUND:

- The *Clean Energy 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.
- DSM expenditures are approved by the BCUC for two or three-year terms.
- The DSM Regulation allows the Minister to specify criteria for evaluating cost effectiveness and adequacy of a DSM portfolio.
- BC Hydro's targeted cost of DSM is $37 per megawatt-hour (MWh), significantly below the British Columbia clean and renewable electricity supply cost of $129/MWh.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- BC Hydro is forecast to have an electricity supply surplus for up to 10 years. In order to minimize upward rate pressures resulting from DSM during this period, BC Hydro's Power Smart programs will be reduced in the near-term.
- MEM and BC Hydro staff have developed the following set of principles to guide DSM reductions in future planning:
  - ensure overall cost-effectiveness for consumers and the utility;
  - preserve flexibility to ramp-up DSM in future deficit periods;
  - maintain support for prospective codes and standards;
  - minimize the reduction of "missed opportunity" measures (e.g. providing incentives for incremental improvement to building envelope upgrades or new construction); and
  - maximize the range of ratepayers able to participate in DSM and benefit from lower bills (i.e., ensure equity across customer groups).

s.13, s.17

CROSS-REFERENCE:

14 - BC Hydro Integrated Resource Plan

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Electricity Exports – Litigation Update

KEY MESSAGES:

- Powerex was one of many utilities selling electricity to California during the 2000/01 California Energy Crisis.
- Electricity prices were extremely high during this period, and several California utilities defaulted on their payments.
- California utilities sued electricity suppliers after the crisis. They have settled with 46, but have not done so with the remaining 16, which includes Powerex.
- Powerex continues to defend itself in court and regulatory proceedings.

BACKGROUND:

- During the 2000/01 California energy crisis, Powerex and the Province were able to supply California with power and made substantial profits. Powerex earned about $1.5 billion, after writing off $265 million that California parties defaulted on. The Province earned over $1 billion on Columbia River Treaty power that was sold into the California market.
- Powerex has been involved on an ongoing basis in legal and regulatory proceedings in the U.S. related to the energy crisis, defending against claims by the California Attorney General and other California parties before the U.S. Federal Energy Regulatory Commission (FERC) and in U.S. federal court.
- The final outcomes and resulting financial implications are currently unknown. The claims asserted are for up to approximately US$1.9 billion, not including interest. Many of the claims overlap.

s.17

- The California Parties have settled with 46 entities. Powerex is one of 16 other entities which have not settled to date.
- FERC previously decided that market-wide refunds would be paid by suppliers for sales to California during the October 2000 to June 2001 period. Those refunds would not be in relation to any alleged wrongdoing on the part of the market participants, but in recognition of the fact that the California market was "broken" during the crisis and as a result, California paid prices for its power that were too high. It is not known what Powerex's final refund amount will be.

s.14, s.17

Contact: Les MacLaren
Cell Phone: 250-889-3479
Date: June 21, 2013

- In February 2013, a FERC administrative law judge issued a ruling that was unfavourable to Powerex. The decision is "advisory" to FERC Commissioners and Powerex has appealed it.
- Powerex estimates that it may take at least five years to reach a final ruling. Legal and interest costs may require provisions beyond those BC Hydro has booked in its financial statements.

s.14, s.17

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Regional Transmission Expansion Planning Project

KEY MESSAGES:

- British Columbia collaborates with other Western Interconnection jurisdictions under the auspices of the Western Interstate Energy Board (WIEB) and the Western Electricity Coordinating Council (WECC).
- The U.S. Department of Energy (DOE) has provided funding to develop a 10- and 20-year regional transmission plan. WIEB and WECC both received funding to support a regional transmission planning project in the Western Interconnection.
- The Ministry of Energy and Mines (MEM) and Powerex hold positions on key steering committees to ensure provincial interests are represented.

BACKGROUND:

- The Western Interconnection is the regional transmission grid that stretches from Alberta and British Columbia down to northern Mexico and as far east as Wyoming. British Columbia has a long history of collaboration with other Western Interconnection jurisdictions on matters related to regional transmission planning.
- WIEB is the energy policy arm of the Western Governors' Association. WECC is the regional entity responsible for coordinating and promoting bulk electricity system reliability and regional planning in the Western Interconnection.
- The DOE received funding under the Obama Administration's economic stimulus package to support regional transmission planning. The Western Governors' Association and WECC submitted coordinated applications and received funding.
- WECC has responsibility for delivering a 10-year regional transmission plan by fall 2011, and a 20-year transmission plan by fall 2014. The Western Governors' Association, through WIEB, is required to coordinate regional social, economic and environmental policy input in to the planning process. The WECC Board approved the draft 10-year regional transmission plan in September 2011.
- Consensus has been reached on future electricity generation and transmission scenarios that will form the basis of the 20-year plan. WECC has released the first draft of the plan for stakeholder review. WECC will hold another comment period during the summer prior to finalizing the draft plan for Board approval in September 2013.
- MEM will put forward comments as part of the WIEB, but also has the option to put forward its own comments if deemed appropriate. MEM will consult with staff from Alberta Energy, BC Hydro and the Alberta Electric System Operator to determine whether there is a need to provide a Canadian response to the draft plan.

Contact: Les MacLaren
Cell Phone: 250-889-3479
Date: June 21, 2013

- WECC is currently undergoing a mandate review in light of several reliability events in the Western Interconnection, notably the southwest blackout in fall 2011. The new WECC structure may have an impact on WECC's ability to deliver the 20-year plan on the DOE's current time frame.
- British Columbia's participation in the regional planning process is largely defensive in nature. It is common for U.S.-based public and private entities to not consider Canadian issues when they discuss the future of the western grid. British Columbia and Alberta participation ensure that Canadian issues are considered and action can be taken in circumstances where U.S. decision-makers propose activities that may adversely affect provincial interests.

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Innovative Clean Energy Fund

KEY MESSAGES:

- The Innovative Clean Energy (ICE) Fund supports the development of clean energy technologies in the electricity, alternative energy, transportation and oil and gas sectors.
- The ICE Fund has been used to invest in solutions to British Columbia's energy and environmental challenges by helping emerging technologies bridge critical barriers to commercialization.
- Projects supported by the ICE Fund provide province-wide benefits by creating jobs and helping local communities save energy, build economic diversity, and reduce their environmental footprint.
- Many ICE Fund projects have achieved notable success; advancing their technologies to commercial readiness and creating global market opportunities.
- Since 2008, the Province, through the ICE Fund, has approved more than $77 million for 62 clean energy projects across British Columbia, representing a value over $450 million in total project costs.
- So far, 22 ICE Fund projects are complete and have created 369 construction jobs and 168 ongoing jobs. At this time, 12 projects underway are anticipated to create 272 construction jobs and 124 ongoing jobs when completed.

BACKGROUND:

Status (see Appendix 1):

- As of June 1, 2013, approved ICE Fund commitments total $59.13 million, of which $39.99 million has been dispersed.
- Of 62 approved projects, 22 projects are complete, 12 projects are underway, 11 are seeking partners or additional project funding, 7 projects have withdrawn and 10 projects have had their funding rescinded.

Funding:

- Program funding originally came from a 0.4 percent levy on all final sales of electricity, natural gas, fuel oil and grid-delivered propane, and generated approximately $25 million per year. The ICE Fund levy, collected under the *Social Service Tax Act*, was discontinued following the implementation of the Harmonized Sales Tax.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- The ICE Fund Levy was re-instated April 1, 2013, with the return of PST. There is no longer an ICE Fund levy on electricity sales and it is estimated the levy will now generate $7 million per year at current natural gas, fuel oil and propane prices.
- The ICE Fund Special Account legislation enables spending on a broad range of activities to address Government's energy and environmental priorities and advance British Columbia's clean energy sector.

s.12, s.17

- For 2013/14, the Minister of Finance approved an ICE Fund administrative budget of $300,000 and 3.0 FTEs – a 40 percent reduction from 2012/13.

Applications History:

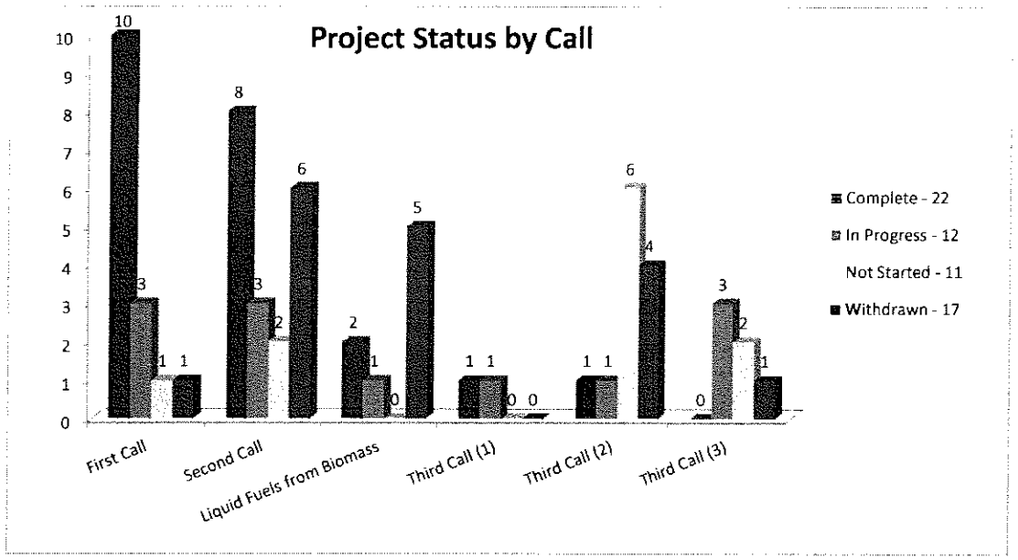
- The First Call for Applications was issued in December 2007. Sixty applications were received for projects valued at about $700 million. Fifteen projects with a combined project value of $78.7 million were approved to receive $24.43 million.
- The Second (Rural) Call for Applications was issued in September 2008. Sixty-four applications were received for projects valued at more than $568 million. Nineteen projects with a combined project value of over $96 million were approved to receive $22.68 million.
- A Call for Liquid Fuels from Biomass was issued in November 2008. Seventeen applications were received valued at $267 million. Eight projects with a combined value over $100 million were approved to receive $10 million. Two projects had their funding rescinded and three projects have since withdrawn citing financial or strategic reasons, reducing the final approved value of the call to $6.06 million.
- A Third (2010 Showcase) Call for Applications was announced in October 2009. More than 100 applications were received in three application intakes for projects totaling over $1.1 billion. In March 2010, two projects with a combined value of $35 million were approved to receive $6.6 million. In July 2011, 12 projects worth $78.91 million were announced to receive $8.13 million. In January 2012, a further six projects valued at $53.30 million received approval for $5.98 million.
- During 2011, the program undertook a detailed review of all projects that had not demonstrated satisfactory progress towards commencement. As a result, the ICE Fund rescinded $13.39 million of funding from eight projects selected in the First, Second and Liquid Fuels from Biomass Calls. Funding made available from these projects was reallocated to complete the Third Call project announcements.
- ICE Fund program funds are generally disbursed to projects through reimbursement of eligible costs and reflect completion of specified milestones identified in the Contribution Agreement signed with each project proponent.

ATTACHMENT:

Appendix 1: ICE Fund Summary

Status of Announced Projects

	Announcement			Current Status		
Call	Date	Projects	ICE Funding	Withdrawn	Projects	ICE Funding
First Call	July 18, 2008	15	$ 24,424,688.64	1	14	$ 22,976,867.00
Second Call	April 3, 2009	19	$ 22,672,357.00	6	13	$ 13,472,765.00
Liquid Fuels from Biomass	April 3, 2009	8	$ 10,000,000.00	5	3	$ 6,055,000.00
Third Call - 1st Announcement	March 25, 2010	2	$ 6,607,463.00	0	2	$ 6,607,463.00
Third Call - 2nd Announcement	July 23, 2011	12	$ 8,129,756.00	4	8	$ 5,044,756.00
Third Call - 3rd Announcement	January 29, 2012	6	$ 5,977,790.00	1	5	$ 4,977,790.00
	Total	**62**	**$ 77,812,054.64**	**17**	**45**	**$ 59,134,641.00**



Active Project Summary with GHG and Employment Benefits

			Expenditure						Percent	
Call	ICE Commited	Total Project	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	Total to-Date	Expended	Remaining
First Call	$ 22,976,867.00	$ 80,428,015.00	$ 2,590,926.33	$ 7,203,385.43	$ 6,333,727.21	$ 1,545,990.72	$ 957,866.10	$ 18,631,895.79	81%	19%
Second Call	$ 13,472,765.00	$ 44,237,562.00	$ -	$ 2,266,019.04	$ 3,036,311.76	$ 782,250.95	$ 483,386.81	$ 6,567,968.56	49%	51%
Liquid Fuels from Biomass	$ 6,055,000.00	$ 21,796,963.00	$ -	$ 698,392.99	$ 3,522,661.63	$ 958,337.81	$ -	$ 5,179,392.43	86%	14%
Third Call-1st Announcement	$ 6,607,463.00	$ 35,035,000.00	$ -	$ -	$ 774,140.00	$ 5,517,204.00	$ 316,119.00	$ 6,607,463.00	100%	0%
Third Call-2nd Announcement	$ 5,044,756.00	$ 40,302,698.00	$ -	$ -	$ -	$ 355,355.00	$ 651,273.00	$ 1,006,628.00	20%	80%
Third Call-3rd Announcement	$ 4,977,790.00	$ 47,752,529.00	$ -	$ -	$ -	$ -	$ 1,992,115.67	$ 1,992,115.67	40%	60%
Total	**$ 59,134,641.00**	**$ 269,552,767.00**	**$ 2,590,926.33**	**$ 10,167,797.46**	**$ 13,666,840.60**	**$ 9,159,138.48**	**$ 4,400,760.58**	**$ 39,985,463.45**	**68%**	**32%**

	GHG Benefits - Tonnes / Year		
Call	Completed	Anticipated*	Total
First Call	62,805	137,341	200,146
Second Call	1,883	7,050	8,933
Liquid Fuels from Biomass	7,785	24,960	32,745
Third Call-1st Announcement	2	5,500	5,502
Third Call-2nd Announcement	9	70,860	70,869
Third Call-3rd Announcement	0	11,637	11,637
Total	**72,483**	**257,348**	**329,831**

	Employment Benefits					
	Temporary Jobs			Ongoing Jobs		
Call	Completed Projects	Anticipated*	Total	Completed Projects	Anticipated*	Total
First Call	259	50	309	98	25	123
Second Call	66	199	265	20	32	52
Liquid Fuels from Biomass	29	5	34	35	25	60
Third Call-1st Announcement	14	107	121	14	8	22
Third Call-2nd Announcement	1	89	90	1	52	53
Third Call-3rd Announcement	0	71	71	0	48	48
Total	**369**	**521**	**890**	**168**	**190**	**358**

* Anticipated Benefits from In Progress and Not Started Projects

Active ICE Fund Projects by Region and Technology

						Employment	
Region	# Projects	ICE Funding	%	Total Project Value	GHG	ST	LT
Cariboo	2	$ 1,197,000.00	2%	$ 19,290,200.00	123	22	19
Kootenay	2	$ 1,750,000.00	3%	$ 9,500,937.00	8,788	52	20
Lower Mainland	19	$ 31,729,253.00	54%	$ 155,420,840.00	76,480	356	183
Okanagan	4	$ 1,664,083.00	3%	$ 5,101,750.00	16,739	40	26
Omineca	7	$ 12,604,730.00	21%	$ 45,743,588.00	146,436	306	34
Skeena	3	$ 3,091,397.00	5%	$ 9,294,294.00	789	36	29
Thompson Nicola	2	$ 123,063.00	0%	$ 437,189.00	13	6	3
Vancouver Island	6	$ 6,975,115.00	12%	$ 24,763,969.00	80,462	73	44
Total	**45**	**$ 59,134,641.00**	**100%**	**$ 269,552,767.00**	**329,830**	**890**	**358**

Energy Category	# Projects	ICE Funding	
Bioenergy	21	$ 38,089,102.00	64%
Energy Conservation	5	$ 5,857,669.00	10%
Energy Management	5	$ 8,410,000.00	14%
Energy Storage	1	$ 203,775.00	0%
Geoexchange	2	$ 1,075,115.00	2%
Hydro	1	$ 44,000.00	0%
Ocean	2	$ 2,469,622.00	4%
Solar	6	$ 2,093,691.00	4%
Waste to Energy	1	$ 666,667.00	1%
Transportation	1	$ 225,000.00	0%
Total	**45**	**$ 59,134,641.00**	**100%**

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Hydro Clean and Renewable Power Acquisitions

KEY MESSAGES:

- As directed by the 2007 Energy Plan to support British Columbia's energy and climate change goals, BC Hydro has :
  - completed the 2008 Clean Energy Call;
  - completed a two-phase Bioenergy Call for Power;
  - initiated a Community- Based Biomass Power Call; and
  - implemented a Standing Offer Program (SOP), which is ongoing.
- On August 3, 2010, BC Hydro made its final announcement for successful projects in the 2008 Clean Power Call (Call), which included 25 electricity purchase agreements for 27 projects, (1 waste heat project, 6 wind and 20 hydroelectric projects).
- The Bioenergy Phase 1 Call, completed in 2009, resulted in four electricity purchase agreements (EPAs) for a total of 579 gigawatt hours (GWh) of electricity per year – enough to power 52,000 homes.
- The Bioenergy Phase 2 Call for projects greater than 5 megawatts (MW), completed in August 2011, awarded four contracts for 754 GWh of firm energy per year and 104 MW of capacity.
- The Community- Based Biomass Call awarded one EPA for a 1 MW biogas project. Discussions are still open with three other projects.
- The SOP was first introduced in 2008 in response to the 2007 Energy Plan. After a two-year review in 2010, it was relaunched in January 2011.
- In March 2013, three rule changes were implemented.

BACKGROUND:

- Under the *Clean Energy Act*, "clean or renewable resource" means biomass, biogas, geothermal heat, hydro, solar, ocean, wind or any other resource prescribed through regulation. BC Hydro power acquisitions in the 2008 Clean Energy Call, a two-phase Bioenergy Call for Power; a Community Based Call, and the SOP, are restricted to projects meeting the "clean or renewable" definition.
- On August 3, 2010, BC Hydro made its final announcement for successful projects in the 2008 Clean Power Call (25 electricity purchase agreements for 27 projects were issued, for 1,168 MW of capacity and 3,266 GWh of energy).

Contact: Les MacLaren
Cell Phone: s.17
Date: June 19, 2013

- Phase 1 of the Bioenergy Call for Power was completed in 2009. Two of the successful proposals are in Prince George, one is in Kamloops and one in Castlegar.
- The Bioenergy Phase 2 Call was a competitive call through Request for Proposals for biomass projects above 5 MW with a target to acquire up to 1,000 GWh per year of cost-effective electricity. s.12, s.17 . The Phase 2 Call was completed in August 2011 and a complete report on the Bioenergy Phase 2 was released on February 15, 2012.
- Four projects were awarded contracts in the Phase 2 Bioenergy Call (West Fraser Mills in Chetwynd, Western Bioenergy in Fort St. James, West Fraser Mills in Fraser Lake and Western Bioenergy in Merritt) and announced on August 4, 2011. The weighted average price for the Phase 2 call is $10 per megawatt hour (MWh) lower than the 2008 Clean Power Call.
- The Community Based Biomass Call was conducted through the Request for Quotes, followed by negotiations with short listed projects. Six projects were shortlisted and two have since withdrawn. The projects selected for contract discussions in December 2010 were Revelstoke, Burnaby - SFU, Richmond, Kamloops, Lytton and Anahim Lake, with a total capacity of 14.5 MW. Lytton and Revelstoke have since withdrawn.
- BC Hydro has received 32 SOP applications. Of these, two are new applications, 11 are proceeding through the review process, 10 have been removed from consideration (as they are part of the bilateral Robson Valley initiative), and nine EPAs have been executed.
- BC Hydro projected that within the first two years of the SOP, it would acquire between 90 GWh/year and 900 GWh/year. The nine contracted projects will generate approximately 205 GWh/year of energy and have a capacity of 48 MW.
- In March 2013, BC Hydro introduced three rule changes to re-affirm the SOP's original spirit and intent, while reducing risk that the program will procure significantly more energy than currently needed.
- BC Hydro is exploring how to address the treatment of high-efficiency cogeneration projects in the SOP going forward.
- On November 23, 2012, BC Hydro received 26 responses (representing 29 projects) to its Request for Expressions of Interest for development of clean energy projects on Haida Gwaii. Next steps could include bilateral discussions with one or more respondents, a more formal Request for Proposals process, or a decision to defer additional procurement activities. BC Hydro will consult with the Haida Nation and engage other groups regarding the proposed approach.
- With the current decreased demand in the provincial electricity load forecast, BC Hydro is focused on reducing supply-side acquisitions and decreasing demand-side management expenditures over the short- to medium-term.

ATTACHMENT:
BC Hydro Energy Procurement Update, May 2013

BC HYDRO'S ENERGY PROCUREMENT UPDATE
MAY 2013

Recent Procurement Activities

Energy Contract Management

- BC Hydro has developed a set of time-critical actions to undertake over coming months to prudently manage resources that it has acquired, committed to or planned over the next 10 years to balance supply with demand, thereby reducing ratepayer impacts. The focus is on taking advantage of opportunities to reduce supply-side acquisitions and delaying a planned increase in demand-side management expenditures.
- BC Hydro's current supply-demand outlook results from the following combination of events: (a) changes to the planning criteria with government amending the self-sufficiency policy from critical water to average water and removing the 3,000 GWh insurance requirement, (b) lower forecast demand due to slower than expected economic recovery, and (c) reduced expectations of electricity demand from the development of the liquefied natural gas (LNG) industry.
- As part its on-going effort to manage contracts, BC Hydro is implementing a series of near-term independent power producer (IPP) supply-side actions that include managing existing electricity purchase agreements (EPAs) and making Standing Offer Program changes. The key actions relate to EPAs in default where projects are not yet built, as well as EPAs where there is some ability to manage the timing of project start-up and additional supply. The EPA actions involve contract terminations or deferrals for 26 projects:

Project/EPA Circumstance	Approximate No. of EPAs	Potential Energy Reduction (GWh/year)	Notes
Contract Defaults	16	~350	Permanent reduction.
Negotiation of COD Deferral	10	~600	One to two year deferral.

- Based on the EPA actions identified above and the recent Standing Offer Program changes, BC Hydro expects to achieve an energy supply reduction of about 1,350 GWh in F2015-16.

Standing Offer Program (SOP)

- Consistent with activities designed to manage the energy supply described above (and in addition to the SOP changes that were made on March 26, 2013) BC Hydro is exploring how to address the treatment of high-efficiency cogeneration projects in the SOP going forward to ensure there is not an oversupply of cogeneration projects. BC Hydro has held meetings with key stakeholders (developers of high-efficiency cogeneration projects) to gather information to inform the path forward. BC Hydro plans to conduct further analysis of the options over the coming weeks.
- Currently, 11 SOP applications are being evaluated by BC Hydro.

Net Metering

- On April 30, 2013, BC Hydro submitted the Net Metering Evaluation Report to the BCUC. As of May 1, 2013, there are 231 Net Metering projects with just over 1 MW of installed capacity.

Haida Gwaii Clean Energy Initiative

- In fall 2012, BC Hydro received submissions for 29 projects in response to its Request for Expressions of Interest for development of a clean energy project on Haida Gwaii. BC Hydro has developed a potential acquisition approach that could involve commercial discussions with one or more parties.
- In April 2013, BC Hydro began consultation with the Council of the Haida Nation and engaged with other Island groups regarding the proposed approach. This consultation is ongoing and will help determine if BC Hydro will proceed with commercial discussions for new clean power on Haida Gwaii.

Community-Based Biomass Power Call

- Discussions are still open with the three remaining projects, but EPAs seem very unlikely to be concluded.

Projects Related to First Nations Impact Benefit Agreements (IBAs)

- There are currently eight IBAs that involve some form of energy development commitment to First Nations. BC Hydro is currently developing a framework to ensure that the IBA commitments are effectively implemented.

s.16, s.17

McBride Projects

- BC Hydro is continuing discussions with Holmes Hydro, ecoTech and Snowshoe Power on the development of a 138 kV transmission line from Valemont substation to a new substation at McBride and the requirements for entering into EPAs with the proponents. In March 2013, a term sheet for a Transmission Development Agreement was signed requiring the proponents to satisfy a number of conditions before BC Hydro's corresponding obligations become binding.
- The timeline for advancing negotiations has been influenced by lack of information from proponents. The next milestone will be the definitive agreements and EPAs, which are anticipated in the September/October timeframe.

Recent EPA Management Activities (EPA updates, amendments, etc.)

- Integrated Fraser Richmond Soil and Fiber project, from the Community Based Biomass program, reached its commercial operation date (COD) on March 24, 2013, and is expected to deliver 8 GWh/year.
- Finavera has announced the conditional sale of its B.C. wind power projects to Pattern. A potential agreement has been developed, which contemplates the amendment of two EPAs (Tumbler and Meikle) and the termination of two EPAs (Wildmare and Bullmoose). BC Hydro is maintaining discussions with the Saulteau First Nations over their concerns with one of the EPAs (Wildmare Wind project).
- With regard to EPAs coming up for renewal, BC Hydro is in negotiations for the 20 MW waste-to-energy project owned by Metro Vancouver and numerous small run-of-river hydro projects having aggregate generation of about 170 GWh/year.

EPA Statistics as of May 1, 2013

- BC Hydro manages 80 EPAs for projects in commercial operation, delivering 15,116 GWh/year of contracted energy to both its integrated and non-integrated system. For a complete list of independent power producers (IPPs), please refer to the List of IPPs Currently Supplying Power to BC Hydro.
- BC Hydro manages 51 EPAs for projects in the pre-commercial operation stage, representing 8,152 GWh/year of contracted energy, or about 5,109 GWh/year when adjusted for potential attrition.

	Post COD		Pre COD	
Project Type	**No. of EPAs**	**Contracted GWh/year**	**No. of EPAs**	**Contracted GWh/year**
Biogas	6	90	0	0
Biomass	10	2,354	9	1,416
Energy Recovery Generation	3	140	0	0
Gas-Fired Thermal	2	3,140	0	0
Municipal Solid Waste	1	131	1	745
Non-Storage Hydro	45	3,470	32	4429
Storage Hydro	10	4,760	4	377
Wind	3	1,031	5	1,185
Total	**80**	**15,116**	**51**	**8,152**

List of IPPs Currently Supplying Power to BC Hydro as of May 1, 2013

Project Name	IPP/Seller	Location	Type	Call Process	Capacity (MW)	Energy (GWh/yr)
Coats IPP	Crofter's Gleann Enterprises	Gabriola Island	Non-Storage Hydro	1985 Negotiated EPA	< 0.5	1
Ocean Falls	Boralex Ocean Falls LP	Bella Bella	Non-Storage Hydro	1985 Non-Integrated Areas RFP	15	12
Mamquam Hydro	Atlantic Power Preferred Equity Ltd.	Squamish	Non-Storage Hydro	1988 Greater Than 5 MW	58	250
NWE Williams Lake WW	Atlantic Power Preferred Equity Ltd.	Williams Lake	Biomass	1988 Greater Than 5 MW	68	545
McMahon Generating	McMahon Cogeneration Plant JV	Taylor	Gas-Fired Thermal	1988 Greater Than 5 MW	105	840
McDonald Ranch	McDonald Ranch & Lumber Ltd.	Grasmere	Non-Storage Hydro	1989 Less Than 5 MW	< 0.5	< 0.5
Morehead Creek	Morehead Valley Hydro Inc.	Williams Lake	Non-Storage Hydro	1989 Less Than 5 MW	< 0.5	< 0.5
Seaton Creek Hydro (Homestead)	Homestead Hydro Systems	New Denver	Non-Storage Hydro	1989 Less Than 5 MW	< 0.5	1
Doran Taylor	Doran Taylor Hydro (JV partnership)	Port Alberni	Non-Storage Hydro	1989 Less Than 5 MW	6	23
Robson Valley (Ptarmigan Creek - RBV)	Robson Valley Power Corporation	McBride	Non-Storage Hydro	1989 Less Than 5 MW	4	26
Boston Bar Hydro (Scuzzy Creek)	Boston Bar LP	Boston Bar	Non-Storage Hydro	1989 Less Than 5 MW	6	38
Akolkolex	Canadian Hydro Developers, Inc.	Revelstoke	Non-Storage Hydro	1989 Less Than 5 MW	10	50
Walden North	Walden Power Partnership	Lillooet	Non-Storage Hydro	1989 Less Than 5 MW	18	54
Brown Lake Hydro	Brown Miller Power LP	Prince Rupert	Storage Hydro	1989 Less Than 5 MW	7	57
Soo River	Soo River Hydro	Whistler	Non-Storage Hydro	1989 Less Than 5 MW	13	65
Salmon Inlet (Sechelt Creek SCG)	MPT Hydro LP	Sechelt	Non-Storage Hydro	1989 Less Than 5 MW	17	68
Moresby Lake (QCPC)	Atlantic Power Preferred Equity Ltd.	Sandspit	Storage Hydro	1989 Non-Integrated Areas RFP	6	20
Hluey Lake (SNP)	MPT Hydro LP	Dease Lake	Non-Storage Hydro	1993 Non-Integrated Areas RFP	3	5
Island Generation	V.I. Power LP	Campbell River	Gas-Fired Thermal	1994 RFP	275	2,300
Arrow Lakes Hydro	Arrow Lakes Power Corporation	Slocan	Storage Hydro	1998 Negotiated EPA	185	767
Hartland Landfill Gas Utilization	Maxim Power Corp.	Saanich	Biogas	2000 RFP	2	15
Hystad Creek Hydro	Valemount Hydro LP	Valemount	Non-Storage Hydro	2000 RFP	6	20
Miller Creek Power	Brown Miller Power LP	Pemberton	Non-Storage Hydro	2000 RFP	30	118
Upper Mamquam Hydro	Canadian Hydro Developers, Inc.	Squamish	Non-Storage Hydro	2001 Greater Than 40 GWh	25	108
Rutherford Creek Hydro	Rutherford Creek Power LP	Pemberton	Non-Storage Hydro	2001 Greater Than 40 GWh	50	172
Pingston Creek	Canadian Hydro Developers Inc. and GLP Pingston Creek Power LP	Revelstoke	Non-Storage Hydro	2001 Greater Than 40 GWh	45	193
Eagle Lake C2 Micro Hydro	Pacific Cascade Hydro Inc.	West Vancouver	Non-Storage Hydro	2001 Less Than 40 GWh	< 0.5	1
Hauer Creek (aka Tete)	Hauer Creek Power Inc.	Valemount	Non-Storage Hydro	2001 Less Than 40 GWh	2	13
Marion 3 Creek	Marion Creek Hydro Inc.	Port Alberni	Non-Storage Hydro	2001 Less Than 40 GWh	5	18
Mears Creek	Synex Energy Resources Ltd	Gold River	Non-Storage Hydro	2001 Less Than 40 GWh	4	20
South Sutton Creek	South Sutton Creek Hydro Inc.	Port Alberni	Non-Storage Hydro	2001 Less Than 40 GWh	5	26
Brandywine Creek Small Hydro	Rockford Energy Corp.	Whistler	Non-Storage Hydro	2001 Less Than 40 GWh	8	34
McNair Creek Hydro	McNair Creek Hydro LP	Sechelt	Non-Storage Hydro	2001 Less Than 40 GWh	10	38
Furry Creek	Furry Creek Power Ltd	Lions Bay	Non-Storage Hydro	2001 Less Than 40 GWh	10	40
Vancouver Landfill Gas Utilization - Ph 1	Maxim Power (BC) Inc.	Delta	Biogas	2001 Less Than 40 GWh	6	40
SEEGEN (Burnaby Incinerator)	Covanta Burnaby Renewable Energy, ULC	Burnaby	Municipal Solid Waste	2002 Customer-Based Generation	22	131
Vancouver Landfill Gas Utilization - Ph 2	Maxim Power (BC) Inc.	Delta	Biogas	2003 Green Power Generation	2	15
China Creek Small Hydroelectric	Upnit Power LP	Port Alberni	Non-Storage Hydro	2003 Green Power Generation	6	25
South Cranberry Creek	Advanced Energy Systems 1 LP	Revelstoke	Non-Storage Hydro	2003 Green Power Generation	9	26
Zeballos Lake	Zeballos Lake Hydro LP	Zeballos	Storage Hydro	2003 Green Power Generation	22	93
Brilliant Expansion 1	Brilliant Expansion Power Corporation	Castlegar	Storage Hydro	2003 Green Power Generation	120	203
Ashlu Creek Water Power	Ashlu Creek Investments LP	Squamish	Non-Storage Hydro	2003 Green Power Generation	50	269

Project Name	IPP/Seller	Location	Type	Call Process	Capacity (MW)	Energy (GWh/yr)
Eldorado Reservoir	District of Lake Country	Kelowna	Storage Hydro	2006 Open Call	1	4
East Twin Creek Hydro	Valemount Hydro LP	McBride	Non-Storage Hydro	2006 Open Call	2	6
Barr Creek	Barr Creek LP	Tahsis	Non-Storage Hydro	2006 Open Call	4	16
Raging River 2	Raging River Power & Mining Inc.	Port Alice	Storage Hydro	2006 Open Call	8	30
150 Mile House ERG	EnPower Green Energy Generation LP	150 Mile House	Energy Recovery Generation	2006 Open Call	6	34
Savona ERG	EnPower Green Energy Generation LP	Savona	Energy Recovery Generation	2006 Open Call	6	41
Lower Clowhom	Clowhom Power L.P.	Sechelt	Non-Storage Hydro	2006 Open Call	11	48
Upper Clowhom	Clowhom Power L.P.	Sechelt	Non-Storage Hydro	2006 Open Call	11	48
Tyson Creek Hydro	Tyson Creek Hydro Power Corp.	Sechelt	Storage Hydro	2006 Open Call	9	54
Bone Creek Hydro	Valisa Energy Inc.	Kamloops	Non-Storage Hydro	2006 Open Call	20	81
Bear Mountain Wind Park	Bear Mountain Wind LP	Dawson Creek	Wind	2006 Open Call	102	197
Brilliant Expansion 2	Brilliant Expansion Power Corporation	Castlegar	Storage Hydro	2006 Open Call	< 0.5	226
Upper Stave Energy	Innergex Renewable Energy Inc. (QC)	Mission	Non-Storage Hydro	2006 Open Call	60	264
Kwalsa Energy	Innergex Renewable Energy Inc. (QC)	Mission	Non-Storage Hydro	2006 Open Call	90	384
East Toba and Montrose	Toba Montrose General Partnership	Powell River	Non-Storage Hydro	2006 Open Call	196	715
Alcan Long Term Electricity Purchase	Rio Tinto Alcan Inc.	Kitimat	Storage Hydro	2007 Negotiated EPA	896	3,307
PGP Bio Energy Project	Canfor Pulp Ltd. Partnership	Prince George	Biomass	2008 Bioenergy Call	60	123
Celgar Green Energy	Zellstoff Celgar LP	Castlegar	Biomass	2008 Bioenergy Call	78	242
Cedar Road LFG	Cedar Road LFG Inc.	Nanaimo	Biogas	2008 Standing Offer Program	1	11
Cypress Creek	Synex Energy Resources Ltd	Gold River	Non-Storage Hydro	2008 Standing Offer Program	3	12
Canoe Creek Hydro	Canoe Creek Hydro Company	Ucluelet	Non-Storage Hydro	2008 Standing Offer Program	6	16
Fitzsimmons Creek	Fitzsimmons Creek Hydro LP	Whistler	Non-Storage Hydro	2008 Standing Offer Program	8	36
Lower Bear Hydro	Bear Hydro LP	Sechelt	Non-Storage Hydro	2008 Standing Offer Program	10	46
Upper Bear Hydro	Bear Hydro LP	Sechelt	Non-Storage Hydro	2008 Standing Offer Program	10	73
Armstrong Wood Waste Co-Gen (RVG)	Tolko Industries Ltd.	Armstrong	Biomass	2009 Negotiated EPA	20	163
Skookumchuk Power	Tembec, a general partnership	Skookumchuck	Biomass	2009 Negotiated EPA	51	267
Dokie Wind	Dokie General Partnership	Chetwynd	Wind	2009 Negotiated EPA	144	375
Pine Creek (Atlin)	XEITL LP	Atlin	Non-Storage Hydro	2009 Non-Integrated Areas RFP	2	5
Fraser Richmond Soil and Fibre	Fraser Richmond Soil & Fibre Ltd.	Richmond	Biogas	2010 CBB	1	8
Crowsnest Pass	AltaGas Ltd.	Sparwood	Energy Recovery Generation	2010 Clean Power Call	11	65
Quality Wind	Capital Power L.P.	Tumbler Ridge	Wind	2010 Clean Power Call	142	459
Powell River Generation	Catalyst Paper, general partnership	Powell River	Biomass	2010 Integrated Power Offer	38	151
Cariboo Pulp and Paper	Cariboo Pulp and Paper Company	Quesnel	Biomass	2010 Integrated Power Offer	61	172
Kamloops Green Energy	Domtar Inc.	Kamloops	Biomass	2010 Integrated Power Offer	76	288
Howe Sound Green Energy	Howe Sound Pulp and Paper Corporation	Port Mellon	Biomass	2010 Integrated Power Offer	112	400
Greater Nanaimo PCC Cogeneration	Regional District of Nanaimo	Nanaimo	Biogas	2010 Standing Offer Program	< 0.5	2
LP Golden Biomass	Louisiana-Pacific Canada Ltd.	Golden	Biomass	2010 Standing Offer Program	8	4
80 EPAs					**3,496**	**15,116**

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Clean and Renewable Power Producers Facts

KEY MESSAGES:

- The Provincial energy objectives in the *Clean Energy Act* confirm the role of clean, renewable energy producers in meeting British Columbia's electricity needs.
- As of June 2013, there were 81 operational projects with Electricity Purchase Agreements (EPAs) with BC Hydro. BC Hydro also manages another 48EPAs for projects in the pre-commercial operation stage. Additionally, there are 11 applications proceeding through the Standing Offer Program (SOP) review process.
- Of the 81 projects delivering power to BC Hydro:
  - 56 are hydro projects, including 11 storage hydro projects;
  - three are wind projects;
  - 16 are biogas/biomass projects;
  - two are gas-fired thermal projects;
  - one is a municipal solid waste project; and
  - three are heat recovery projects.
- To date, these projects deliver 15,127 gigawatt hours (GWh) per year of electricity to BC Hydro; power procurement processes have included Clean Power Calls; Bioenergy Calls; Integrated Power Offer (IPO) for Pulp and Paper Customers, and the SOP for projects with less than 15 megawatts (MW) capacity.

BACKGROUND:

- Several of British Columbia's energy objectives under the *Clean Energy Act* 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 to 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 green house gas emissions; and
  - To reduce waste by encouraging the use of waste heat, biogas and biomass.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- The Province has implemented a number of tax and royalty policies to encourage the development of clean, renewable energy projects in British Columbia.
- All waterpower projects require a water licence to build and operate, issued by the Ministry of Forests, Lands and Natural Resource Operations. Projects over 50 MW also require a certificate under the *Environmental Assessment Act*.
- As of June 24, 2013, there are 558 water licence applications in the Provincial water licensing database with Power-General as one of the (or the sole) beneficial use categories (category).
- As of June 24, 2013, 230 Power-General water licences have been issued that are still current. Some clean, renewable waterpower projects are issued two or more licences.
- At present, there are three operational wind farms and over 350 land tenures issued for wind power projects in the Province.
- BC Hydro awarded 25 EPAs to projects successful in the 2008 Clean Power Call for a total of 3,266 GWh and nine additional EPAs to projects through the SOP.

ATTACHMENT:
Questions & Answers for Clean and Renewable Power Production in British Columbia

June 2013

Q's & A's for Clean and Renewable Power Production in BC

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 B.C. BC Hydro produces 69 percent of total electricity generation in B.C. while other generators include Alcan, Teck, Columbia Power Corp., 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 & system expansion and competitive sourcing from clean, renewable power projects.
- The *Clean Energy Act* affirms 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), and ensuring that at least 93 percent of the electricity generated in BC 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.
- Clean energy producers bring entrepreneurial capital, access to monetary capital and take on associated risk.
- Clean, renewable power producers have a proven track record in B.C., demonstrating the development and operation of cost-effective projects.
- Clean, renewable power producers and their projects contribute to a balanced strategy for ensuring communities, individuals and industries in B.C. have access to adequate supplies of affordable electricity.

What is the role of BC Hydro?

BC Hydro acquires 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 linked 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 15,000 gigawatt-hours per year (GWh/year) of electricity;
- Clean Power Call;
- Bioenergy Call; and
- Standing Offer Program 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 growth in 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.), ensuring non-discriminatory and open 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 operation, maintenance and improvement of large hydro projects, such as:
    - Revelstoke Generating Station (Unit 5 and 6 at about 500 MW each);
    - Peace Canyon Generating Station (installation of new stators and turbine overhaul);
    - Gordon M. Shrum Generating Station (replacement of three stators);
    - Spillway Gate Reliability Updates;
    - Mica Generating Station (replacement of four stators, proposed installation of two large turbines, Unit 5 and 6 at about 500 MW each); and
    - Fort Nelson Generating Station Update;
    - John Hart Generating Station Replacement Project;
    - Ruskin Dam and Powerhouse Upgrade;
    - Smart Metering infrastructure.
- BC Hydro has now moved to the third stage in evaluating the possibility of a third dam on the Peace River called Site C, having submitted the Environmental Impact Statement to the Canadian Environmental Assessment Office and the British Columbia Environmental Assessment Office on January 28, 2013. There are four review stages, which will take four or five years to complete, before a final decision on Site C can be made. If approved, Site C would then enter its fifth stage, which is construction.
- BC Hydro also owns Powerex Corp. Powerex helps optimize BC Hydro's electric system resources, improve the security and reliability of electricity supply for the province, and provide significant economic benefits to British Columbians.
- 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 *Clean Energy Act* requires BC Hydro to submit an Integrated Resource Plan (IRP) to the Government setting out how it will implement Provincial Energy Objectives and the results of public and First Nations consultations on the IRP. The IRP will also include and assessment of export market potential and an assessment of transmission infrastructure requirements over the next 30 years.
- BC Hydro is currently preparing its 2012 IRP with its long-term plan for acquiring the energy resources to meet its customers' needs for the next 20 years.
- When finalized, the IRP will be submitted to Government for review and approval.

What is the role of conservation and energy efficiency?

- Under the *Clean Energy Act* a Provincial Energy Objective is for BC Hydro to meet 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.
- The LiveSmart BC: Efficiency Incentive Program invests $110 million over 5 years (2008-2013) to help families, low income British Columbians and small business owners lower their energy bills and reduce greenhouse gas emissions.
- These types of programs are called "Demand Side Management". BC Hydro's 2008 Long Term Acquisition Plan proposes demand side management programs to save up to 70

percent of incremental energy requirements. This reduces the need to build and purchase new electricity supply.

How many clean and renewable power projects are there in B.C.?

- 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 Alcan, Teck, and FortisBC.
- Following the rule above, as of June 2013, BC Hydro has Electricity Purchase Agreements with 76 clean, renewable power projects. Of these operational projects, 53 are waterpower projects (45 non-storage hydro and 8 storage hydro), 16 are biogas/biomass projects, three are wind power projects, three are energy recovery generation projects, and one is a municipal solid waste project.
- Please note that this total does not include two 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 usually acquires power through competitive processes, 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 to meet Provincial policy.
- 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. It can be expected that as new supply is needed to meet growing needs, this will put upward pressure on electricity rates.
- This is the case regardless of who builds the new projects. For example, BC Hydro's Aberfeldie Redevelopment Project has costs equivalent to accepted projects from BC Hydro's 2006 Call for Power.
- Clean, renewable power producers have demonstrated their ability to finance, build and operate facilities effectively. They bring entrepreneurial capital, access to monetary capital and take on associated risk, have a proven track record in the development and operation of cost-effective projects.

Can clean and renewable power producers export power?

- It is legal to export electricity, as it is for other commodities produced in B.C. For example, BC Hydro, through Powerex, exports electricity surplus to B.C.'s needs.
- 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 for and fund 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 United States and Alberta exists, B.C. 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, and financing of large capital projects without a long term sales agreement.
- Once B.C. achieves electricity self-sufficiency, there will be opportunities to provide B.C.'s clean, low carbon electricity to neighbouring jurisdictions that are looking to reduce their greenhouse gas emissions and meet renewable energy targets. Indications show that B.C. has sufficient resource potential to continue to meet its own needs while capitalizing on opportunities to create jobs in B.C. and help other jurisdictions achieve their environmental goals. A robust, competitive market for electricity will help reduce long term costs to buyers.

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 is acquiring electricity a number of ways including through their Standing Offer Program.
- BC Hydro awarded EPAs for a total of 3,266 gigawatt hours of electricity through the 2008 Clean Power Call. The BC Hydro Standing Offer Program for projects less than 15 megawatts 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 100's.
- The IRP will identify any further domestic need in the province and make recommendations about how best to meet the anticipated load demand.
- Projects could also be developed to export power in the future, although to date development for export has not been pursued.
- 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 B.C.

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 Act* (for a waterpower project) and the *Land Act* from the Provincial government. In deciding whether to issue these permits, Government considers technical information, Federal and Provincial agency comments, 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, 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 *Water Act* and the *Land Act*.
- 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, develop a transmission line from the power project to electrical grid connection, power substation and operations centre. 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 Electricity Purchase Agreement (EPA) from BC Hydro, the length of the land tenure matches the time period for the EPA. However, the length of the water licences is fixed by the *Water 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 of British Columbia for their use of the water and land. The fees are based on the capacity of the project and the amount of electricity produced, and 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 of British Columbia may chose to not renew the water licence and land tenures, and may ask the developer to remove the improvements and return the waterway and lands to original condition.
- The 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, transmission line from the turbine cluster to electrical grid connection, power substation and operations centre. 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.
- 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 Electricity Purchase Agreement (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 of British Columbia for their use of land. The fees are based on the capacity of the project and the amount of electricity produced, and on the area of land under tenure.
- At the end of the tenure term, the Province of British Columbia may chose 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 permits 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 permit under the *Land Act*, and file a water licence application under the *Water Act*.
- 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.
- Where there is a good indication that a project could be successful, the developer moves through the permitting requirements under the *Land Act* and *Water Act* and seeks permission to construct their project.
- There has been a speculative environment among hydro developers. As of June 24, 2013, there were 558 Power-General water licence applications recorded in the Provincial water licensing database with Power-General as one of the (or the sole) beneficial use categories (category), and a total of 230 IPP water licences issued that are still current. Some clean, renewable waterpower projects are issued two or more licences.
- For potential wind power projects, over 350 investigative tenures have been issued and three projects are now operational.
- For potential ocean energy projects, about 40 investigative permits have been issued, with no project being authorized to move to the construction stage.

- It is important to note that an application for a water licence or having an investigative permit 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 under the *Environmental Assessment Act* and is coordinated by the Environmental Assessment Office.
- Projects subject to an assessment under the *Environmental Assessment Act* must not proceed until they have received an Environmental Assessment Certificate, as well as all other applicable permits and licences.
- The Environmental Assessment 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 *Water Act* or the *Land Act.* The permits or licences contain terms and conditions the developer must adhere to, and report on, in order to ensure the environment is protected.
- Environmental Assessment certificates are identified on the Environmental Assessment Office's website; water licences may be queried 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 environmental assessment under the Environmental Assessment Act for Clean Power Projects 50 MW or greater?

BC's environmental assessment (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 much be approved by two provincial Ministers who can issue an Environmental Assessment 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.

How long does an environmental assessment certificate last?

An environmental assessment 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 *Environmental Assessment Act.* 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 *Water Act* or the *Land Act* 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 a permit under the *Water Act* or the *Land Act*.
- First Nations are also consulted with respect to how any potential project may impact their asserted rights and title.
- For projects 50 megawatts or greater the BC Environmental Assessment Office establishes an advisory Working Group that consists of First Nations, federal, provincial and local government who participate throughout the project review. The environmental assessment process fosters public involvement through a number of channels including: notification of key consultation events, thorough formal public comment periods on the Terms of Reference and the Application and public meetings.
- The mini-guide, "Opportunities for Local Government and Public Participation in Provincial Regulatory Processes for Independent Power Producers' Projects," available at: http://www.empr.gov.bc.ca/EAED/AEPB/AEPS/Documents/MiniGuide.pdf, describes the regulatory processes and requirements of the provincial *Water Act*, *Land Act* and *Environmental Assessment Act.*

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

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.
- BC Hydro and other hydroelectric generators pay for the use of provincial water resources. As a provincially-owned resource, clean, renewable energy producers must receive water licences before they can use provincial water resources.

BACKGROUND:

- BC Hydro is acquiring new electrical generating capacity from clean, renewable energy producers. BC Hydro is pursuing the development of Site C, as approved by Cabinet.
- 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 by 2020; and ensuring that at least 93 percent of the electricity generated in British Columbia is from clean or renewable resources. The 2007 Energy Plan established a 50 percent conservation target and 90 percent requirement for clean or renewable resources.
- In 2010, BC Hydro awarded 25 Electricity Purchase Agreements (EPAs) to projects in the 2008 Clean Power Call for a total of 3,266 gigawatt hours (GWh). Nine additional EPAs were awarded to projects through the Standing Offer Program.
- In 2011, BC Hydro awarded four EPAs totalling 754 GWh/yr to successful projects in Phase 2 of the Bioenergy Call for Power.
- The Ministry of Energy, Mines and Natural Gas has the lead responsibility for developing, implementing and maintaining strategic energy policy, whereas the Ministry of Forests, Lands and Natural Resource Operations has the responsibility for Crown land policy.
- Waterpower producers pay for the use of provincial water resources. Water resources remain in public hands and clean, renewable energy projects must receive water licences before they can use the water.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

- As of June 2013, BC Hydro managed 81EPAs for projects in commercial operation, delivering 15,127 GWh/year of contracted energy to both its integrated and non-integrated system including 45 non-storage hydro projects. This includes three EPAs for projects owned by Columbia Power Corporation, one EPA with Rio Tinto Alcan, plus 77 EPAs with smaller private clean energy producers.
- As of June 2013, BC Hydro manages 48 EPAs for projects in the pre-commercial operation stage, representing 7,325 GWh/year of contracted energy, or about 5,000 GWh/year when adjusted for potential attrition.
- Crown land tenures are required if components of the projects are located on Crown land. Water and Crown land rental payments, like royalty payments for forestry, petroleum and mineral resources, are set by the Province to ensure the people of British Columbia receive fair value for these resources. Royalty and rental policies are reviewed from time to time to ensure provincial objectives are being met.
- The BC Hydro Review Panel determined that BC Hydro was paying water rental rates in excess of those paid in other jurisdictions and directed government to review those rates and adjust them when fiscal conditions in the province improve. s.13, s.17

s.13, s.17

- The *Clean Energy Act* created the First Nation Clean Energy Business Fund to facilitate increased First Nations participation in clean energy projects. The funding may flow to First Nations as: capacity development funding; funding to acquire equity positions in clean energy projects or to develop community projects; and revenue sharing with directly impacted First Nations (revenue from water, land and, eventually, wind participation rents).

CROSS-REFERENCE:
22 - *Clean Energy Act* Implementation
37 - BC Hydro Clean and Renewable Power Acquisitions
37A - BC Hydro's Energy Procurement Update – May 2013
38 - Clean and Renewable Power Producer Facts
38A - Questions & Answers - Clean and Renewable Power Producers

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Sale of Self-Generated Electricity

KEY MESSAGES:

- In a decision dated May 6, 2009, the British Columbia Utilities Commission (BCUC) ruled that self-generating customers should not be permitted to benefit from the purchase and resale of electricity at the expense of other BC Hydro customers.
- This decision had significant implications for other BC Hydro customers – like pulp and paper mills – with self-generation.
- 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 power at market prices, leading to higher rates for BC Hydro customers.
- This ruling is consistent with the Heritage Contract. The Heritage Contract ensures that BC Hydro's customers receive the benefit of low-cost heritage electricity from BC Hydro's heritage assets.

BACKGROUND:

- In July 2008, the City of Nelson and Nelson Hydro announced an agreement to sell up to nine 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 purchases from FortisBC at the BCUC-approved rate of 3.507 cents per kilowatt hour (kWh) and the price it receives selling its generation output in the export market.
- Under this proposed arrangement, it was very likely that FortisBC would purchase additional energy from BC Hydro under its Power Purchase Agreement (PPA), at an approved rate of 2.952 cents/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 International Inc. (Mercer, owner of the Celgar pulp mill), which would have allowed Mercer to arbitrage between the price of electricity it could purchase from FortisBC and the price it could receive selling its self-generation into the market.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 18, 2013

- 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 then Ministry of Energy and Mines (MEM) filed a written argument in support of BC Hydro's application.
- MEM 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.
- Self-generators, such as Mercer's Celgar pulp and paper mill, continue to exert pressure on both the BCUC and Government to allow them to engage in arbitrage by selling self-generated electricity at market prices while purchasing low-cost power from their utility.
- In April 2012, Mercer filed a request for arbitration under the North American Free Trade Agreement (NAFTA), alleging that the Province's actions, through BC Hydro and the BCUC, amount to discrimination and seeking damages of $250 million.

CROSS-REFERENCE:
41 - Mercer NAFTA Challenge

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Mercer North American Free Trade Agreement (NAFTA) Challenge

KEY MESSAGES:

- In April 2012, Mercer International Inc., a U.S. company that owns the Celgar pulp and paper mill near Castlegar, 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 differently from every other pulp and paper mill 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 to 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 2008 Bioenergy Phase 1 Call for Power.
- The Province is working with BC Hydro and Government of Canada lawyers to conduct an analysis of Mercer's claim, produce and request relevant documents, identify witnesses and provide strategic guidance in preparation for the NAFTA hearing.
- The arbitration process could last up to two years.

BACKGROUND:

- s.13, s.17
- The effect would be that Mercer would increase power purchases from their utility, FortisBC, which would in turn increase purchases from BC Hydro under Rate Schedule 3808, increasing costs for BC Hydro ratepayers.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 24, 2013

Page 188 redacted for the following reason:
- - - - - - - - - - - - - - - - - - - -
s.13, s.14, s.16, s.17

MINISTRY OF ENERGY AND MINES
ELECTRICITY AND ALTERNATIVE ENERGY DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Waneta Expansion Project

KEY MESSAGES:

- Columbia Power Corporation (CPC) is pleased with progress to date on the Waneta Expansion Project. The project has an excellent safety record and is on budget and on schedule for completion in spring 2015.
- The design/build contractor, SNC-Lavalin Inc., continues to explore opportunities to complete ahead of schedule.
- It will provide enough clean energy to power about 60,000 homes per year and will reduce greenhouse gas emissions by 400,000 tonnes, the equivalent of taking 78,000 cars off the road.
- CPC has power sale agreements with BC Hydro and Powerex for the output of the project.

BACKGROUND:

- The $900 million Waneta Expansion Project (WAX) involves the construction of a 335 megawatt powerhouse adjacent and immediately downstream of the existing Waneta Dam on the Pend d'Oreille River at its confluence with the Columbia River. It will share the hydraulic head created by the Waneta Dam.
- The expansion rights at Waneta were purchased from Teck (formerly Cominco) in 1994.
- Construction is scheduled for completion in 2015.
- Project construction activities are currently focused on: concrete, mechanical and roof work in the powerhouse area; fabrication of a scroll case and placing cone; concrete and carpentry work at the intake; excavation of the approach channel above the intake area; and construction of the transition forms for the tunnel/intake.
- To date, the project has logged approximately 1.4 million man hours without a major safety or environmental incident. There are currently over 278 people working on the project. Of those, over 75 percent are local (within 100 km). Equity workers currently make up 11 percent of the unionized workforce.
- To date, local spending on goods and services exceeds $140 million.
- In August 2010, CPC and Columbia Basin Trust entered into a partnership agreement with Fortis Inc. for construction of the project. The partnership structure has Fortis Inc. with a 51 percent share, CPC with a 32.5 percent share and Columbia Basin Trust with a 16.5 percent share.
- Energy from WAX will be sold to BC Hydro, while the capacity will be sold to FortisBC.

Contact: Les MacLaren
Cell Phone: s.17
Date: June 19, 2013

- The WAX is being constructed using CPC's design/evaluate/build project approach. This process was used previously for the Arrow Lakes and Brilliant Expansion projects and was favourably reviewed by the BC Auditor General.
- The CPC is acting as the Owner's Representative and manages construction of the project. SNC-Lavalin Inc. is the contractor responsible for the design and construction of the project.
- The project is situated in an area claimed by the Ktunaxa Nation Council and the Okanagan Nation Alliance. Benefit agreements with both First Nations were executed and the owner and contractors are working closely with the First Nations to maximize the opportunities and benefits.
- The associated 10 kilometre transmission line (230 kilovolt) work is progressing well and is targeted for overall completion in 2014 to align with requirements under the design-build contract.
- Columbia Hydro Constructors (CHC) is responsible for the supply of labour for the project. Hiring provisions are in place for local and equity workers.
- The project has a Community Impact Management Committee (CIMC) in place. The committee includes local residents, members of local and regional government, First Nations and representatives from the owners and contractor. The CIMC provides ongoing support to encourage positive community impacts and benefits and relays community concerns resulting from construction of the project. The June 23, 2013 CIMC Community Day drew over 1,500 people and featured project-site tours.
- Local media coverage of the project has been overwhelmingly positive and CPC provides weekly updates to local stakeholders and media.
- In May 2012, a revised Order from the Comptroller of Water Rights was issued to facilitate allocation of water rental payments.
- An amendment to the Canal Plant Agreement, which coordinates operations with other dams in the Kootenays, was completed in October 2012.
- BC Hydro and Fortis BC have completed negotiations regarding an Energy Export Agreement, pertaining to the WAX capacity. This was agreed to as part of the overall negotiations for a new power purchase agreement (PPA) to replace the 1993 PPA that expires in September 2013. On May 28, 2013, BC Hydro filed an application for approval of the new PPA and associated amendments to Rate Schedule 3808 with the British Columbia Utilities Commission.
- Consistent with government policy for the Arrow Lakes Generating Station and Brilliant Expansion Project, the WAX will be exempt from property tax and pay grants-in-lieu for the publically-owned portion of the partnership.

Ministry of Energy and Mines
Estimates 2013/14

Mines and Mineral Resources

Mines and Mineral Resources

Operating Mines

Mine Development Projects

Exploration

Tenures

Policy

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Mineral Exploration and Mining Industry Snapshot

KEY MESSAGES:

- Mineral exploration and mining is a key economic driver in BC.
- This industry provides thousands of well-paying jobs for British Columbians, especially in rural areas of the province.
- Government revenues from exploration and mining activities support essential infrastructure and programs that benefit all British Columbians.

BACKGROUND:

- BC mines produced an estimated $8.3 billion worth of commodities in 2012—nearly 18% of the Canadian total.
- According to estimates, exploration spending in BC hit a record-setting $680 million in 2012. This is a 47% increase from 2011, when exploration expenditures were estimated at $463 million.
- BC is Canada's single largest exporter of coal, the country's largest producer of copper and its only producer of molybdenum.
- There are currently nine coal mines in operation, nine metal mines, more than 30 industrial minerals mines, and hundreds of aggregate pits and quarries.
- There are 20 new major mine and two major expansion proposals currently active in the *Mines Act* permitting and/or the BC environmental assessment processes.
- In addition, there are hundreds of active exploration sites around the province.
- Over 30,000 people were employed in mineral exploration, mining and related sectors in 2012, mostly in rural BC. Of these, more than 12,500 were directly employed by mining operations. The industry also provides thousands of spin-off jobs and business opportunities for suppliers and service providers located close to project sites.
- The average mine worker in BC made over $121,000 in 2012 (salary plus benefits).
- Mineral tax revenues for 2012/13 were approximately $150 million (according to June 2013 estimates from the Ministry of Finance).
- BC 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 800 exploration and mine development companies are headquartered in Vancouver.

Contact: David Morel
Cell Phone: s.17
Date: June 28, 2013

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: BC Jobs Plan Mine Targets and Platform 2013 Commitments

KEY MESSAGES:

- The Province is more than halfway to meeting the jobs plan target of 17 new or expanded mines by 2015.
- Since the BC Jobs Plan was released, one new mine is in operation, five more are under construction or permitted, and the Province has approved six major expansions of existing mines.
- The backlog target for Notices of Work was met and the turnaround time to process permits has been reduced from 110 day to 65 days.
- The key to meeting the Platform 2013 commitment to support mining projects post-Environmental Assessment is effective and timely mine permitting.

BACKGROUND:

BC Jobs Plan

- Since the Jobs Plan was released, one new mine is in operation (New Afton, near Kamloops), and five more are under construction or permitted:
  - Mt Milligan copper-gold mine, near Prince George, is expected to begin production in the second half of 2013;
  - Red Chris copper-gold mine, near Dease Lake, is now moving forward with construction;
  - Bonanza Ledge gold mine, near Barkerville, was permitted in December 2011;
  - Treasure Mountain silver mine, near Hope, was permitted in May 2012;
  - Quintette Coal mine, near Tumbler Ridge, was permitted in June 2013.
- The Province has approved six major expansions of existing mines:
  - Highland Valley copper mine, near Ashcroft;
  - Huckleberry copper-molybdenum mine, near Houston;
  - Quinsam Coal mine, near Campbell River;
  - Elkview Coal mine, near Sparwood;
  - Endako molybdenum mine, near Fraser Lake;
  - Gibraltar Copper-Molybdenum Mine, near Williams Lake.
- The Province reached the reduced backlog target in 2012 and is now focused on reducing the average turnaround time.
- The average turnaround time for all Notices of Work (placer, aggregate and exploration) is 65 days as of June 1, 2013. This is a reduction from 110 days in 2011. Turnaround times for mineral and coal exploration Notices of Work is 68 days.

Contact: David Morel
Cell Phone: s.17
Date: June 28, 2013

Platform 2013

Platform 2013 contains a number of commitments to support the mineral exploration and mining sector under the heading "Mining's comeback – as good as gold". Additional commitments relevant to the sector are also highlighted below.

Commitment	Agency	Status
Fully support any mining project that has been successful in securing Environmental Assessment Office approval.	MEM	One of the key ways to support mining projects post-EA is to provide timely permitting. Ensure effective and timely post-EA mine permitting through extension of temporary funding to enhance permitting.
Continue to negotiate revenue sharing agreements with First Nations.	MARR	s.16, s.17
Work with the federal government to ensure mining projects undergo only one environmental review process.	EAO	Agreement with the federal government (signed March 2013) that allows BC's EA process to be substituted in place of the federal EA process. Four mining projects have been approved for substitution.
Extend the New Mine Allowance and other credits allowing new mines and major mine expansions to receive depreciation credits of up to 133 per cent from 2016 to 2020.	MEM/ FIN	s.13, s.17
Complete the Northwest Transmission Line and Iskut Extension opening up vast areas of Northwest B.C. to mining and mineral exploration.	MEM	The Northwest Transmission is under construction with a target in-service date of May 2014.
Work with Geoscience B.C. to establish long term and predictable funding to continue the $37-million work Geoscience B.C. is doing to foster oil, gas and mineral exploration and development in B.C.	MEM	Work with Geoscience BC to identify funding options for 2013/14.
Continue to streamline mining application processes, ensuring they can all be done online with faster turnarounds for investors.	MEM	We will implement the *Mines Act* regulation so that permit amendments will no longer be required for some low-impact exploration activities as of Sept 2013. These exemptions will reduce the number of applications by up to 15 percent. The online e-Application system will be used to gain efficiencies.
Encourage more secondary school apprenticeships through partnerships like Mount Polley Mine and the Cariboo Chilcotin School District model where high school students get first hand job experience at operating mine sites.	EDUC/ JTST	EDUC, and the Superintendent of Trades and Transitions, is working with innovative districts to: • identify barriers to such partnerships; • identify the necessary conditions for success; • showcase best practice in order to target other school districts and work with them to develop similar programs.
Work with communities, First Nations and industry to examine the feasibility of developing a provincially designated protected area in the Klappan.	MOE/ FLNRO	The Province has not yet designed a process to explore solutions for the Klappan; this is a high priority for the new Ministers. s.13, s.16 s.13, s.16

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Contingency Funding for Mine Permitting

KEY MESSAGES:

- In 2012/13 and 2013/14, 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 hire staff and for contracts related to permitting.
- The target to reduce the exploration permit backlog by 80 percent by August 2012 was reached. Average exploration permitting times have been reduced from 110 days to under 70 days.
- The target to reduce the backlog of mining and placer lease applications by 50 per cent has been met.
- Since the BC Jobs Plan was released, one new mine is in operation, five more are under construction or permitted, and the Province has approved six major expansions of existing mines.
- The Province is currently examining whether to extend contingency funding past September 2013.

BACKGROUND:

- Jobs Plan targets and commitments in Platform 2013 call for a reduction in mine permitting times, eight new and nine expanded mines by 2015 and supporting mining projects that have passed Environmental Assessment.
- There is record mineral exploration expenditure and over 20 new mines or mine expansions are currently in Environmental Assessment or *Mines Act* permitting. To put this in perspective, there are 18 metal and coal mines currently operating in BC.
- For the 2012/13 fiscal year, natural resource ministries received temporary funding from Treasury Board to reduce the backlog of permit and tenure applications and to improve permit turnaround times. Mines and Mineral Resources Division (MMRD) received $4.6 million to reduce *Mines Act* permit application turnaround times and backlog, and to reduce the mineral, coal and placer tenure backlog. In October of 2012, Treasury Board provided an additional $1.85 million for the first six months of 2013/14 for MMRD to continue to deliver on these priorities.
- Funding has been used to hire staff and for contracts related to permitting. Forecast expenditure of contingency by September 30 is $1.850 million. Without continuation of funding, staff will be laid off on September 30, 2013 and permitting will slow.

Contact: David Morel
Cell Phone: s.17
Date: June 28, 2013

- A number of process and technology improvements have also been introduced to improve efficiencies in the permitting process including multi-year permits, e-applications for permits and changes in legislation and regulation to reduce permitting requirements.
- The target to reduce the exploration permits backlog by 80 percent by August 2012 was reached. Average exploration permitting times have been reduced from 110 days to 68 days. The target is 60 days before the end of 2013.
- The target to reduce the backlog of mining and placer lease applications by 50 percent has been met.
- Since the BC Jobs Plan was released, one new mine is in operation, five more are under construction or permitted, and the Province has approved six major expansions of existing mines.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Operating Coal Mines in BC

KEY MESSAGES:

- There are currently nine coal mines operating in BC.
- The estimated value of the coal produced by these mines in 2012 was more than $5 billion, nearly two-thirds of BC's total mining production value.
- BC is Canada's largest exporter of coal.

BACKGROUND:

- The following coal mines are currently operating in BC:

Operation	Company	Community	Est. FTEs	Type of Coal
Brule	Walter Energy	Chetwynd	180	Pulverized Coal Injection
Coal Mountain	Teck Resources Limited	Sparwood	310	Metallurgical, Thermal
Elkview	Teck Resources Limited	Sparwood	1,040	Metallurgical
Fording River	Teck Resources Limited	Elkford	1,195	Metallurgical
Greenhills	Teck Resources Limited	Elkford	620	Metallurgical, Thermal
Line Creek	Teck Resources Limited	Sparwood	515	Metallurgical, Thermal
Quinsam	Quinsam Coal Corporation (Vitol Anker International B.V.)	Campbell River	280	Thermal
Trend	Peace River Coal Inc. (Anglo American plc)	Tumbler Ridge	340	Pulverized Coal Injection
Wolverine	Walter Energy	Tumbler Ridge	475	Metallurgical

- Due to low metallurgical coal prices, in March 2012, Walter Energy announced it was curtailing production at its Willow Creek mine, which is located near Tumbler Ridge. Walter Energy has indicated that the Willow Creek mine will resume production once coal prices improve, and that in the meantime, the wash plant and rail loadout facilities at Willow Creek continue to operate to support the nearby Brule mine.
- With a production value of over $5 billion last year, coal accounted for nearly two-thirds of the overall production value of the BC mining industry, estimated to be $8.3 billion in 2012.
- BC coal mines provided over 5,000 direct full-time jobs in 2012.

- BC is Canada's largest exporter of coal.
- About 90 percent of coal mined in BC is high-quality metallurgical (steel-making) coal.
- Since the B.C. Jobs Plan was released in September 2011, six mine expansions have been approved, including two major expansions to existing coal mines (Elkview and Quinsam).
- Teck Resources Limited's *Mines Act* permit amendment to re-open the Quintette coal mine was issued on June 20, 2013. Located approximately 20 kilometres south of Tumbler Ridge in northeastern BC, Quintette closed in 2000 after 18 years of operations.
- There are five potential new coal mine developments active in the BC environmental assessment (EA) process (Arctos Anthracite, Echo Hill, Murray River, Raven and Sukunka).

s.13 s.13

- Teck's Phase II proposal for its currently producing Line Creek Operations is in the BC EA process.

s.13, s.21 s.13, s.21

- Teck also has plans to expand its Fording River Operations. This expansion proposal, called the Swift River Coal Project, is currently in the pre-application phase of the BC EA process.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Operating Metal Mines in BC

KEY MESSAGES:

- There are currently nine metal mines operating in BC.
- These mines provided nearly 4,000 direct full-time jobs in 2012.
- The six key metals mined in BC are copper, molybdenum, gold, silver, lead and zinc.

BACKGROUND:

- The following metal mines are currently operating in BC:

Operation	Company	Community	Est. FTEs	Commodity/ies
Bralorne	Bralorne Gold Mines Ltd.	Lillooet	50	Gold
Copper Mountain	Copper Mountain Mining Corporation (75%) and Mitsubishi Materials Corporation (25%)	Princeton	340	Copper/Gold/Silver
New Afton	New Gold Inc.	Kamloops	400	Copper/Gold/Silver
Endako	Thompson Creek Metals Company Inc.	Fraser Lake	370	Molybdenum
Gibraltar	Taseko Mines Limited	Williams Lake	520	Copper/Molybdenum
Highland Valley Copper	Teck Resources Limited	Logan Lake	1,295	Copper/Molybdenum/ Silver/Gold
Huckleberry	Imperial Metals Corporation	Houston	250	Copper/Molybdenum
Mount Polley	Imperial Metals Corporation	Williams Lake	370	Copper/Gold
Myra Falls	Nyrstar	Campbell River	325	Zinc/Copper/Lead/ Silver/Gold

- BC is Canada's largest producer of copper and only producer of molybdenum.
- The estimated production value of BC metal mines in 2012 was $2.5 billion.
- Since the BC Jobs Plan was released in September 2011, six mine expansions have been approved. Of the six, four are currently operating metal mines: Highland Valley Copper, Huckleberry, Endako and Gibraltar.
- The Treasure Mountain Mine, located 28 kilometres east of Hope, was permitted in May 2012 and began commercial production in early 2013. Huldra Silver Inc. announced on June 25, 2013 that it has put its mine and mill at Treasure Mountain on care and maintenance. The operations were suspended in order to minimize cash obligations. Huldra is pursuing financing options in order to recommence operations

Contact: David Morel
Cell Phone: s.17
Date: June 28, 2013

at both the mine and mill. Silver prices have dropped over 30 percent in the past year. As of June 26, the closing price was US$18.67/ounce, which is the lowest silver has been since the summer of 2010.

- The New Afton mine near Kamloops held its opening ceremony in September 2012. The operation employs more than 400 people, including more than 100 who were part of a training program co-ordinated by the BC Aboriginal Mine Training Association. New Afton is expected to yield an average of 85,000 ounces of gold, 214,000 ounces of silver and 75 million pounds of copper annually over its 12-year life.
- Three metal mines are currently under construction in BC:
  - At the Mount Milligan mine site northwest of Prince George, 1,000 jobs were created at the peak of construction in the summer of 2012, and once it is fully operational, the mine will provide 350 full-time jobs over its 22-year expected life.
  - In northwestern BC, the Red Chris copper-gold mine, which received its *Mines Act* permit in May 2012, is being developed at an estimated capital cost of $500 million. About 450 people will be employed at the peak of construction, and 300 people will be employed full time over an expected 28-year mine life.
  - The Bonanza Ledge gold mine, located about 60 kilometres east of Quesnel, is also under construction.
- The proposed Kitsault silver-lead-tungsten mine received a provincial environmental assessment certificate in March 2013.
  - Avanti Mining Inc.'s applications for authorizations, including *Mines Act* and *Environmental Management Act* permit applications, are under review by the Kitsault Mine Review Committee (as of June 13, 2013).
  - The estimated capital cost of the Kitsault project, located in northwestern BC approximately 140 kilometres north of Prince Rupert, is $939 million.
  - If permitted and developed, Kitsault would employ approximately 700 people during construction and 300 full-time workers during its estimated 16-year mine life.

Operating Mines and Selected Major Exploration Projects in British Columbia 2012

Jim Britton; Robin Chu; Dave Grieve; Paul Jago; Jeff Kyba; Bruce Madu; and Bruce Northcote

Open File 2013 - 1

Coal

10	⊗	Mine
6	◎	Proposed Mine
13	◑	Significant Project

Metal

11	⊗	Mine
3	⊗	Mine Development
18	○	Proposed Mine
76	◑	Significant Project

Infrastructure

- Rail Line
- Major Roads
- Ports

Metal Mine Commodity Codes

Ag - Silver
Au - Gold
Cu - Copper
Mo - Molybdenum
Zn - Zinc

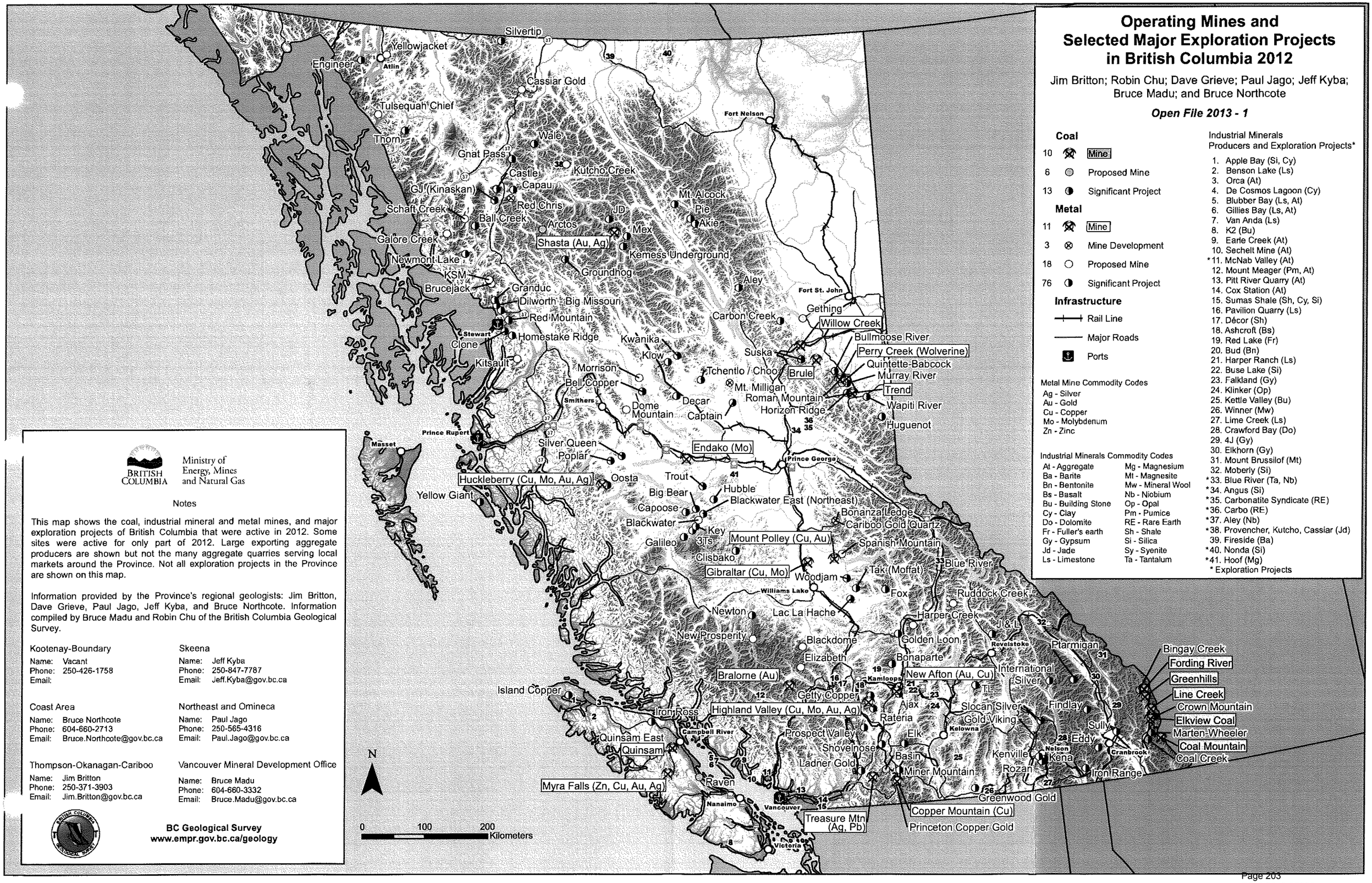
Industrial Minerals Commodity Codes

At - Aggregate	Mg - Magnesium
Ba - Barite	Mt - Magnesite
Bn - Bentonite	Mw - Mineral Wool
Bs - Basalt	Nb - Niobium
Bu - Building Stone	Op - Opal
Cy - Clay	Pm - Pumice
Do - Dolomite	RE - Rare Earth
Fr - Fuller's earth	Sh - Shale
Gy - Gypsum	Si - Silica
Jd - Jade	Sy - Syenite
Ls - Limestone	Ta - Tantalum

Industrial Minerals
Producers and Exploration Projects*

1. Apple Bay (Si, Cy)
2. Benson Lake (Ls)
3. Orca (At)
4. De Cosmos Lagoon (Cy)
5. Blubber Bay (Ls, At)
6. Gillies Bay (Ls, At)
7. Van Anda (Ls)
8. K2 (Bu)
9. Earle Creek (At)
10. Sechelt Mine (At)
*11. McNab Valley (At)
12. Mount Meager (Pm, At)
13. Pitt River Quarry (At)
14. Cox Station (At)
15. Sumas Shale (Sh, Cy, Si)
16. Pavilion Quarry (Ls)
17. Décor (Sh)
18. Ashcroft (Bs)
19. Red Lake (Fr)
20. Bud (Bn)
21. Harper Ranch (Ls)
22. Buse Lake (Si)
23. Falkland (Gy)
24. Klinker (Op)
25. Kettle Valley (Bu)
26. Winner (Mw)
27. Lime Creek (Ls)
28. Crawford Bay (Do)
29. 4J (Gy)
30. Elkhorn (Gy)
31. Mount Brussilof (Mt)
32. Moberly (Si)
*33. Blue River (Ta, Nb)
*34. Angus (Si)
*35. Carbonatite Syndicate (RE)
*36. Carbo (RE)
*37. Aley (Nb)
*38. Provencher, Kutcho, Cassiar (Jd)
39. Fireside (Ba)
*40. Nonda (Si)
*41. Hoof (Mg)

* Exploration Projects



BRITISH COLUMBIA
Ministry of Energy, Mines and Natural Gas

Notes

This map shows the coal, industrial mineral and metal mines, and major exploration projects of British Columbia that were active in 2012. Some sites were active for only part of 2012. Large exporting aggregate producers are shown but not the many aggregate quarries serving local markets around the Province. Not all exploration projects in the Province are shown on this map.

Information provided by the Province's regional geologists: Jim Britton, Dave Grieve, Paul Jago, Jeff Kyba, and Bruce Northcote. Information compiled by Bruce Madu and Robin Chu of the British Columbia Geological Survey.

Kootenay-Boundary
Name: Vacant
Phone: 250-426-1758
Email:

Skeena
Name: Jeff Kyba
Phone: 250-847-7787
Email: Jeff.Kyba@gov.bc.ca

Coast Area
Name: Bruce Northcote
Phone: 604-660-2713
Email: Bruce.Northcote@gov.bc.ca

Northeast and Omineca
Name: Paul Jago
Phone: 250-565-4316
Email: Paul.Jago@gov.bc.ca

Thompson-Okanagan-Cariboo
Name: Jim Britton
Phone: 250-371-3903
Email: Jim.Britton@gov.bc.ca

Vancouver Mineral Development Office
Name: Bruce Madu
Phone: 604-660-3332
Email: Bruce.Madu@gov.bc.ca

BC Geological Survey
www.empr.gov.bc.ca/geology

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Health and Safety at BC Mines

KEY MESSAGES:

- Mining is one of the safest heavy industries in BC.
- This record is a result of the co-operative efforts of mine employees, mine management, unions and regulators.
- MEM's 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 British Columbia.
- While the industry and the Province are justifiably proud of the safety record of BC mining, MEM recognizes the need for due diligence and continuous improvement.

BACKGROUND:

- BC 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 five to eight inspectors conducting a comprehensive 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.
- The number of mine visits conducted annually by inspectors has nearly doubled since 2005:

Year	Number of Mine Visits
2005	695
2006	777
2007	986
2008	1,015
2009	1,035
2010	1,058
2011	795
2012	1,161

Contact: David Morel
Cell Phone: s.17
Date: June 19, 2013

Estimate Note: 7

- There were no mining-related fatalities in BC 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 BC. MEM undertook an investigation. The fatality happened in early November, which is not typically a time of year when avalanches occur in the area. MEM is taking steps to engage in discussions with site operators to further increase their awareness of avalanche dangers.
- In 2011 (latest figures available from WorkSafeBC), larger BC mines experienced an estimated injury rate of approximately 1.6 injury claims per 100 person years worked.
- The injury rate at BC mines continued to compare favourably against the estimated injury rates of other heavy industries in 2011:

Industry	Injury Rate
Mining (metal and coal mines)	1.6
Forestry	5
General Construction	5
Heavy Construction	5
Road Construction	3
Wood and Paper	3

- MEM organizes the annual BC Provincial Mine Rescue & First Aid Competition, 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 58th 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 51 years. The awards are handed out to mining operations that have had zero fatalities and the lowest injury rates of their respective operation categories in the past year. The Chief Inspector of Mines also honours individuals or small groups for outstanding achievement in health and safety.

MINISTRY OF ENERGY AND MINES
MINES AND MIENRAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Southeast BC Coal Mines

KEY MESSAGES:

- Teck operates five coal mines in southeast BC which directly employ close to 3,700 people.
- In order to sustain production and related jobs, Teck plans to expand all five of its coal mines in southeast BC over the next few years.
- These expansions will need environmental assessments in some cases and in most cases permits or amendments under the *Mines Act* and *Environmental Management Act.*
- Our regulatory processes ensure that all projects are fully evaluated for effects and will ensure that water quality is appropriately managed in the Elk Valley watershed.

BACKGROUND:

- There are currently five operating coal mines in the Elk Valley. These open-pit mines are all owned by Teck Coal Limited, a fully owned subsidiary of Vancouver-based Teck Resources Limited, Canada's largest diversified resource company. These mines directly employ close to 3,700 people full time.

Operation	Community	Est. FTEs	Type of Coal
Coal Mountain	Sparwood	310	Metallurgical, Thermal
Elkview	Sparwood	1,040	Metallurgical
Fording River	Elkford	1,195	Metallurgical
Greenhills	Elkford	620	Metallurgical, Thermal
Line Creek	Sparwood	515	Metallurgical, Thermal

- The Elk Valley in southeast BC has over one hundred years of coal mining history.
- Selenium and other contaminants are released from mine waste rock through exposure to surface water.

s.13, s.16

Contact: David Morel
Cell Phone: s.17
Date: June 21, 2013

Estimate Note: 8

s.13, s.16

- Teck released a draft Valley-Wide Selenium Management Action Plan in February 2013 that includes investments of up to $600 million by Teck over the next five years for installation of water diversion and water treatment facilities, research and development to improve selenium management and ongoing aquatic monitoring.
- The April 2013 Ministerial Order, issued under section 89 of the *Environmental Management Act*, covers the Elk Valley watershed, including Fording River and Lake Koocanusa, and requires Teck to develop an area-based management plan, in consultation with communities of interest. It establishes a process for Teck to take immediate steps to stabilize and reverse water quality concentrations for selenium, cadmium, nitrate and sulphate.
- The order will result in a plan to identify long-term concentration targets, considering:
  - current contaminant concentrations;
  - current and emerging economically achievable treatment technologies;
  - sustained balance of environmental, economic and social costs and benefits; and
  - current and emerging science regarding the fate and effects of contaminants.
- The order defines specific environmental objectives and outcomes such as protection of aquatic ecosystems, protection of human health and protection of groundwater.
- The order also establishes a long-term selenium concentration target for Lake Koocanusa.
- Teck is responsible for completing and submitting the plan to the minister within 12 months of the Terms of Reference being approved. Teck will develop the area-based management plan in collaboration with stakeholders, First Nations and various levels of government.
- Teck's Line Creek Operations Phase II expansion project is currently under review in the BC environmental assessment (EA) process. s.13, s.21

s.13, s.21

- The Environmental Assessment Office expects to refer the proposed project to the Minister of Environment and the Minister of Energy and Mines for an EA certificate decision in July 2013, in advance of an approved Elk Valley Area-Based Management Plan.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Mineral Tax Revenue Forecast (2013/2014)

KEY MESSAGES:

- Mineral tax revenue growth has been strongly supported by provincial policies that encourage investments in exploration, mine expansions, mine life extensions and new mine developments.

s.13, s.17

- The Ministry of Finance has lowered its previous mineral tax revenue projection due to continuing low commodity prices coupled with significant investments by industry that can be deducted from tax payments.

BACKGROUND:

- The mineral tax is a profit-based tax payable by the mines and quarries operating in BC. The tax was enacted in 1990.
- There are two tiers of mineral tax:
    1. The lower tier is called the net current proceeds tax and is calculated at two 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 per cent of profits over the life of the mine (i.e. cumulative revenue minus cumulative operating and capital costs minus other tax-related deductions). The higher net revenue tax is only paid after recovery of all operating and capital costs and other deductions.
- BC mineral tax revenues from coal and metal mines grew from $44 million in 2001 to over $350 million in 2010 and 2011.

s.13, s.17

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

s.13, s.17

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

Estimate Note: 9

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATE BRIEFING NOTE 2013/14

ISSUE: Revenue Sharing with First Nations

KEY MESSAGES:

- BC is committed to sharing incremental mineral tax revenue generated by new mines and mine expansions with First Nations.
- Economic and Community Development Agreements (ECDAs) are revenue sharing agreements that support the Province's commitment to closing the socio-economic gap between Aboriginal and non-Aboriginal citizens.
- ECDAs are also a critical component of meeting the Province's commitments under the BC Jobs Plan.
- BC is the first province in Canada to share provincial mineral tax revenue with First Nations.
- These agreements provide First Nations with direct benefits from mine development in their traditional territories and provide financial capacity to help them meet the social and economic goals of their communities.
- Mineral tax revenue sharing is supported by First Nations and the BC mining industry.
- ECDAs create a level of partnership and facilitate economic development that is collaborative and supported by local First Nations and industry.

BACKGROUND:

- In 2008, BC became the first province in Canada to introduce a policy to share with First Nations mineral tax revenue from new and expanded mine projects.
- The Ministry of Aboriginal Relations and Reconciliation leads the negotiation of ECDAs with First Nations to share mineral tax from mine developments in their traditional territories.
- Under these agreements, First Nations receive a percentage of up to 37.5 per cent of incremental mineral tax revenue. The actual revenue share percentage tabled with First Nations is dependent on considerations that are project specific. Project size and value, potential impact and number of First Nations and their populations are factors taken into consideration in determining the actual percentage tabled.
- Recently concluded ECDAs as well as those under current negotiations have tabled a revenue share of 35 percent or less to manage for the reclamation tax credit.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

- The signed Ktunaxa (*Tun-ah-hah*) ECDA and the Treaty 8 Coal ECDAs currently being negotiated incorporate tiered fiscal management mechanisms to manage for exceptional revenue potential scenarios that can be caused by significant increases in commodity prices or multiple large scale mines in one region. The tier mechanisms are structured in a way that still allows First Nations to receive a substantive base amount to incent their agreement and allow proponents to develop future projects.
- Several ECDAs have already been signed for new mines and mine expansions. These are for New Afton, Mt. Milligan, Elk Valley Coal, Mount Polley, Copper Mountain and Highland Valley Copper.

s.13, s.16, s.17

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

Estimate Note: 10

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATE BRIEFING NOTE 2013/14

ISSUE: Financial Securities for Mines

KEY MESSAGES:

- Ministry of Energy and Mines reclamation security policies seek to provide reasonable assurance that the costs of mine reclamation work will not fall to the Province.
- The current total reclamation security is approximately $707 million. Acceptable or "hard" security includes cash, Canadian government bonds, irrevocable letters of credit and Qualified Environmental Trusts.
- The Ministry ensures it holds appropriate security by requiring security at the time of mine permitting and regularly reviewing the amount as conditions change throughout the life of the mine.

BACKGROUND:

- Mineral markets are volatile and corporate failures and financial reorganizations are not unusual. Other jurisdictions have, or are incurring, significant reclamation costs due to corporate defaults on their mine reclamation obligations.
- The *Mines Act* is exempt from the *Bonding Act* and the Chief Inspector of Mines has considerable latitude in implementing the security policy which includes setting the amount and form of security. Security can be adjusted 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 which focused on review of reclamation policies, best practice and issues resulting in recommendations for the current policy position.
- The Chief Inspector sets the financial security requirements at the permit stage, regularly reviews during mine operations and can adjust as necessary as liability factors change.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Mine Development Projects in BC

KEY MESSAGES:

- Three metal mines are currently under construction in BC in addition, the Quintette coal mine project received a *Mines Act* permit amendment on June 20, 2013 allowing it to begin construction.
- There are 19 new mine and 2 expansion proposals active in the *Mines Act* permitting and/or the environmental assessment (EA) processes.
- Several other projects are close to entering the *Mines Act*/EA processes.
- This places BC in a strong position for new mine developments and associated economic growth.

BACKGROUND:

- At the Mount Milligan mine site northwest of Prince George, 1,000 jobs were created at the peak of construction in the summer of 2012, and once it is fully operational, the mine will provide 350 full-time jobs over its 22-year expected life. The estimated capital cost of this mine development is $1.5 billion.
- In northwestern BC, the Red Chris copper-gold mine is currently under construction. This mine is being developed at an estimated capital cost of $500 million, and if it reaches production, it will employ approximately 300 people full time over an expected 28-year mine life.
- The Bonanza Ledge gold mine, located about 60 kilometres east of Quesnel, is also under construction and will employ about 30 people on the mine site once it reaches production.
- The Quintette coal mine in northeastern BC previously operated from 1982–2000. Teck's proposal to re-open this mine received a *Mines Act* permit amendment on June 20, 2013. This permit amendment enables Teck to begin construction at Quintette.
- The following projects are currently in the *Mines Act* permitting process:

Project	Company	Commodity	Community	Est. FTEs	Status
Kitsault	Avanti	Mo/Ag/Pb/ Tungsten	Prince Rupert	300	• EA certificate issued Mar. 18/13 • Review of *Mines Act* and associated permit applications to commence shortly
Roman	Peace River Coal (Anglo American)	Met Coal	Tumbler Ridge	375	• EA certificate issued Dec. 13/12 • Application for Phase 1 construction work under review; Phase 2 applications pending

- The following projects are currently in the EA process:

Project	Company	Commodity	Community	Est. FTEs	Status
Ajax	KGHM Ajax Mining	Au/Cu	Kamloops	380	• In EA pre-application since Feb. 25/11 • Jun. 13/13: EAO approved AIRs • EAO and CEAA reviews are harmonized • EA application expected Sept. 2013
Arctos Anthracite	Arctos Anthracite Joint Venture	Met Coal	Iskut	500–550	• In EA pre-application since Apr. 18/13 • Substitution approved May 2013 • Prev. in EA pre-app as "Mount Klappan"
Bingay Main	Centermount Coal	Met Coal	Elkford	331	• In EA pre-application since Nov. 30/12 • CEAA commenced EA on Jan. 18/13 • Exploration and development program suspended Apr. 10/13 (announcement)
Blackwater	New Gold	Au/Ag/Pb/Zn	Vanderhoof	500	• Federal & provincial EA pre-application (CEAA accepted Project Description Nov. 5/12)
Brucejack	Pretium Resources	Au/Ag	Stewart	300	• In EA pre-application since Feb. 6/13 • Proponent plans to submit EA application by end of 2013
Carbon Creek	Cordero Resource Corp.	Met Coal	Hudson's Hope	876	• In EA pre-application since May 9/12 • Substitution approved Apr. 2013 • EA applications will be submitted once proponent secures adequate financing
Echo Hill	Hillsborough Resources	Thermal Coal	Tumbler Ridge	80	• In EA pre-application since Nov. 5/12 • Substitution approved May 2013
Fording River Swift River Expansion	Teck	Met/Thermal Coal	Elkford	1,195 jobs in 2012	• In EA pre-application since Sep. 6/11 • AIRs near finalization
Gething	Canadian Kailuan Dehua Mines	Metallurgical Coal	Hudson's Hope	400	• In EA pre-application since Nov. 10/06 • *Mines* Act permit application for 15,000-tonne bulk sample under review; decision expected by Jul. 2013
Harper Creek	Yellowhead Mining	Cu/Au/Ag	Vavenby	317	• In EA pre-application phase since Aug. 2/11 • May 2013: EAO decided not to accept EA application for review; proponent plans to re-submit
Kootenay West	CertainTeed Gypsum Canada	Gypsum	Canal Flats	17	• In EA pre-application since Mar. 1/13
KSM (Kerr-Sulphurets-Mitchell)	Seabridge Gold	Cu/Au/Ag	Stewart	1,040	• In EA pre-application since Apr. 25/08 • EAO expected to announce acceptance of EA application for 180-day review in mid-July 2013
Kutcho Creek	Capstone Mining	Cu/Zn/Ag/Au	Iskut	144	• Re-activated pre-application phase of EA in Dec. 2011 • EA application expected in mid-2013
Line Creek Operations Phase II Expansion	Teck	Met/Thermal Coal	Sparwood	515 jobs in 2012	• EAO review suspended Jul. 19/12 (day 94 of 180-day review) • *Mines Act* permit amendment application review suspended Jul. 2012 • EAO expects to refer project to ministers mid-July 2013
Murray River	HD Mining International	Met Coal	Tumbler Ridge	600	• In EA pre-application phase since Jun. 29/12 • Proponent plans to apply for EA and *Mines Act* permit through the Concurrent Approval Regulation of the EA Act (synchronous permitting) and would also like to apply for EA substitution • Draft AIRs submitted to EAO on May 15/13
Raven	Compliance Coal (Comox Joint Venture)	Met Coal	Courtenay	350	• In EA pre-application phase since Aug. 12/09 • May 2013: EAO decided not to accept EA application for review; proponent plans to re-submit
Schaft Creek	Copper Fox Metals	Cu/Au/Mo/Ag	Telegraph Creek	700	• In EA pre-application phase since Aug. 14/06 • Provincial & federal EA applications expected in 2013
Spanish Mountain	Spanish Mountain Gold	Au	Likely	175	• In EA pre-application phase since Aug. 2/11 • Federal & provincial EA applications expected in 2013
Sukunka	Xstrata	Met Coal	Tumbler Ridge	700	• In EA pre-application since Jan. 25/13 • Substitution approved Apr. 2013 • EA application/Environmental Impact Statement expected in Q3 2014

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

Estimate Note: 12

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Mine Expansions in BC

KEY MESSAGES:

- The BC Jobs Plan commits to eight new mines and nine expansions of existing mines by 2015.
- Since the Jobs Plan was released in September 2011, the Province has approved the expansions of six existing major mines.
- Seven currently operating major mines plan to expand their operations in the coming years.

BACKGROUND:

- A "mine expansion" can refer to an increase in production and/or extended mine life. These changes can require amending existing *Mines Act* and *Environmental Management Act* permits and can also trigger an environmental assessment (EA).
- Since the BC Jobs Plan was released, the following operating mines have received permit amendments allowing them to extend/expand operations: Highland Valley Copper, Huckleberry, Quinsam, Elkview, Endako and Gibraltar.
- The following currently operating mines are pursuing or plan to pursue expansion plans in the near future:

Project	Proponent	Community	Commodity	Status
Line Creek Operations – Phase II	Teck	Sparwood	Met Coal	EA application under review (timeline suspended)
Fording River Operations – Swift River Coal Project	Teck	Elkford	Met/Thermal Coal	EA pre-application
Greenhills Expansion	Teck	Elkford	Met/Thermal Coal	*Mines Act* permit amendment application pending
Mount Polley Expansion	Imperial Metals	Williams Lake	Copper, gold	*Mines Act* permit amendment application pending
Quinsam – 7 South Area 5	Quinsam Coal Corporation (Vitol Anker International B.V.)	Campbell River	Thermal Coal	*Mines Act* permit amendment application pending
Wolverine – EB Pit	Walter Energy Western Coal	Tumbler Ridge	Met Coal	*Mines Act* permit amendment application pending
Copper Mountain Expansion	Copper Mountain Mining Corporation (75%) & Mitsubishi Materials Corporation (25%)	Princeton	Copper, gold, silver	Exploration work is ongoing

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

Estimate Note: 13

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Ajax Copper-Gold Project

KEY MESSAGES:

- The Ajax project is a proposed 60,000 tonne-per-day copper-gold mine located near Kamloops.
- The project is currently in the pre-application stage of a co-ordinated provincial and federal environmental assessment (EA).
- While some are calling for a federal panel review, the federal environment minister has declined to do so.
- The provincial EA process will consider the potential environmental, social, economic, health and heritage impacts of the proposed project and provides opportunities for the public to be involved.

BACKGROUND:

- KGHM Ajax Mining Inc. is a joint-venture company owned 80 percent by KGHM Polska Miedz S.A. (KGHM) and 20 percent by Abacus Mining & Exploration Corp. Abacus is an exploration company headquartered in Vancouver, and Ajax is its only current project. KGHM is headquartered in Lubin, Poland, and through its subsidiary companies, owns a total of nine mines (three in Ontario). KGHM is involved in developing several new mine projects around the world; Ajax is its only property in British Columbia.
- The Ajax project is being developed at an estimated capital cost of $795 million.
- If approved, the mine would operate for approximately 23 years and employ about 580 people full time during construction and 380 during operations.
- Many Kamloops residents oppose the Ajax project and are concerned that the mine would be too close to residential areas (the proposed project is partially within Kamloops municipal boundary). Key issues identified by the public include water and air quality, dust, light impacts (i.e. disruption of darkness), noise and vibration, and socio-economic impacts (e.g., tourism, agriculture and ranching).
- The BC Environmental Assessment Office (EAO) approved the Application Information Requirements for the Ajax project in June 2013. The proponent plans to submit an EA application in September 2013 after conducting more public workshops.
- The Ajax project is located within Secwepemc (*She-whep-m*) territory. The Secwepemc Nation (also known as the Shuswap) comprises 17 different bands in south-central British Columbia. The Tk'emlúps (*t-kem-loops*) (Kamloops) and Skeetchestn (*Skeet-cha-sun*) Indian Bands, known collectively as the Stk'emlupsemc of the Secwepemc Nation (SSN) are in closest proximity to the proposed mine and are both participating in the EA. The Ashcroft Indian Band and Lower Nicola Indian

Band of the Nlaka'pamux (*Nick-kluck-mix*) Nation are also participating in the EA as members of the Working Group.

- First Nations consultation during the EA is being led by the EAO in co-ordination with MARR and FLNRO.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Arctos Anthracite (Mount Klappan) Coal Project

KEY MESSAGES:

- Arctos Anthracite is a proposed metallurgical coal mine in northwest BC that is currently in the pre-application stage of the environmental assessment (EA) process.
- The project was approved for substituting the provincial EA process for the federal process in May 2013.
- The project was previously known as the Mount Klappan Coal project.

BACKGROUND:

- The Arctos Anthracite Joint Venture is 80 percent owned by Fortune Coal Limited and 20 percent owned by POSCO Klappan Coal Limited. Fortune Coal plans to operate the mine if it is approved. Fortune Coal is a 100 percent-owned subsidiary of Fortune Minerals Limited, a public company based in London, Ontario. POSCO Klappan Coal is 100 percent owned by POSCO Canada Ltd. (POSCAN), a 100 percent-owned Canadian subsidiary of Korean steel producer POSCO.
- The Arctos Anthracite project is located in northwest BC, approximately 90 kilometres southeast of Iskut and 160 kilometres northeast of Stewart. The project is located in the Klappan area, a place of significance to the Tahltan people ("sacred headwaters").
- The Arctos coal deposit is part of the Groundhog coal field, one of the world's premier undeveloped anthracite coal deposits. Anthracite coal represents only one to two percent of the world coal reserves. It is a very high value coal (called PCI coal) used to manufacture steel.
- Platform 2013 contains a commitment to "work with communities, First Nations and industry to examine the feasibility of developing a provincially designated protected area in the Klappan".
- The federal Minister of Environment approved EA substitution for Arctos Anthracite on May 31, 2013.
- The Arctos Anthracite project was previously in the BC EA pre-application stage under the name Mount Klappan. The new project incorporates substantial design changes, including a different transportation mode (rail) and port (Ridley Terminals in Prince Rupert).
- The project is being developed at an estimated capital cost of $789 million.
- If approved, this 8,200 tonne-per-day metallurgical coal operation would employ approximately 500–550 people full time over an estimated mine life of 25 years.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

Estimate Note: 15

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Carbon Creek Coal Project

KEY MESSAGES:

- Cardero Resource Corp.'s proposed Carbon Creek coal project is located in northeast BC and is currently in the pre-application stage of the environmental assessment (EA) process.
- Carbon Creek was approved for substituting the provincial EA process for the federal process in April 2013.
- Cardero has indicated it will slow the pace of project development due to challenges related to access to financing and low coal prices.
- Cardero intends to continue with project development once financing has been secured.

BACKGROUND:

- Cardero Resource Corp.'s Carbon Creek project is a surface/underground metallurgical coal project located in northeastern BC, approximately 40 kilometres southwest of Hudson's Hope.
- Carbon Creek is one of four mining projects approved for substituting the provincial environmental assessment for the federal process under the recent MOU between BC and Canada. The federal Minister of Environment approved EA substitution for Carbon Creek on April 15, 2013.
- On June 12, 2013, Cardero Resources indicated to MEM staff that it will slow the pace of development and the EA process for Carbon Creek, citing financing issues and low coal prices
- Cardero has been unsuccessful in obtaining financing to progress the project through the feasibility study and into the detailed design and procurement phase.
- s.21
- Cardero intends to continue collecting baseline data but at a slower pace, and plans to submit the EA application in the future.
- The Carbon Creek project has an estimated capital cost of $475 million.
- If approved, this 11,000 tonne-per-day operation would employ about 875 people full time over an estimated mine life of 20 years.

Contact: David Morel
Cell Phone: s.17
Date: June 19, 2013

Estimate Note: 16

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Murray River Coal Project and Temporary Foreign Workers

KEY MESSAGES:

- HD Mining will be employing temporary foreign workers for a bulk sample program at its Murray River underground coal mine. The company plans to transition to Canadian workers if the mine goes ahead and as Canadians are recruited and trained.
- The employment of foreign workers is a federal matter which involves Service Canada and Immigration Canada.
- The ministry and other provincial agencies will ensure that operations at Murray River are undertaken safely and in accordance with all regulations.

BACKGROUND:

- HD Mining required trained underground coal miners to extract a 100,000-tonne bulk coal sample at Murray River to determine the viability of expanded operations at the site.
- The presence of methane gas and coal dust makes underground mining a potentially dangerous practice requiring highly trained miners with experience in those conditions.
- HD Mining found a lack of Canadians trained to work safely in underground longwall coal operations like the proposed Murray River mine.
- China has a large pool of trained coal miners because of the country's numerous coal mines and reliance on coal as a fuel.
- HD Mining sought and received approval from Service Canada and Immigration Canada to hire 201 foreign workers through the federal Temporary Foreign Worker Program for the Murray River bulk sample, contingent upon the company attempting to do the hiring in Canada at standard wages first.
- Two unions, the International Union of Operating Engineers, Local 115, and the Construction and Specialized Workers Union, appealed to the Federal Court to overturn the approval granted to HD Mining to hire Temporary Foreign Workers. The unions contended that HD Mining did not make a sufficient effort to hire Canadians, did not offer competitive wages and misled regulators.
- In May, the Federal Court of Canada ruled in favour of HD Mining on each of the above counts. The Court also noted that HD Mining will have to update its temporary worker submission if it has to employ them past the two-year bulk sampling period.

Contact: David Morel
Cell Phone: s.17
Date: June 21 2013

- HD Mining has stated it plans to start programs to train Canadians to take on jobs at the Murray River site should full production go ahead.
- Canadian Kailuan Dehua, which is affiliated with HD Mining, also plans to hire Temporary Foreign Workers for its proposed bulk sample program at the Gething project, also in northeast BC.
- The proponents claim that both the Murray River and Gething operations will transition to Canadian workers as they are recruited and trained.

Murray River Project

- The Murray River project is located in northeast BC, about 10 kilometres southwest of Tumbler Ridge.
- The proponent, HD Mining International Ltd. is 55 percent owned by Huiyong Holdings Ltd., 40 percent owned by Canadian Dehua International Mines Group Ltd., and 5 percent owned by another Chinese partner.
- The estimated capital cost of the Murray River project is $300 million.
- If it reaches production, Murray River would be a 16,500 tonne-per-day metallurgical coal operation that would employ approximately 600 people full time over an estimated 31-year mine life.
- The project entered the pre-application stage of the BC environmental assessment process on June 29, 2012.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Yellowhead Mining Inc.'s Harper Creek Project

KEY MESSAGES:

- Yellowhead submitted an environmental assessment (EA) application in April 2013. In May 2013, the Environmental Assessment Office concluded that the application did not satisfy the Application Information Requirements and decided to not accept it for review. Yellowhead has indicated it plans to re-submit an updated EA application.
- Harper Creek's proposed power demand would trigger large-scale transmission reinforcements in the North Thompson.
- BC Hydro requires upgrades to existing transmission lines needed by industrial users to be borne by the industrial users. This cost is then reimbursed over time from BC Hydro's revenue generated from user.

BACKGROUND:

- The Harper Creek project is located about 150 kilometres northeast of Kamloops by road. The closest community is Vavenby, which is about 10 kilometres northeast of the ore body. Other nearby communities include Clearwater and Barriere.
- Harper Creek has an estimated mine life of 28 years and a milling rate of 70,000 tonnes per day.
- The estimated capital cost of the project is $840 million.
- If approved, approximately 600 people would be employed at the peak of construction, and about 300 would be employed full time during operations.
- Prior to the Environmental Assessment Office's May 2013 decision not to accept the EA application for Harper Creek for review, Yellowhead intended to submit *Mines Act* and *Environmental Management Act* permit applications for co-ordinated authorizations by the fall of 2013 and with the aim of beginning construction by 2014.
- The estimated cost of transmission reinforcements are in excess of $100 million. The size of the proposed reinforcement triggers the need for BC Hydro to obtain a Certificate of Public Convenience and Necessity from the British Columbia Utilities Commission which could add schedule risks.
- BC Hydro's industrial tariff requires industrial proponents to cover the costs for System Impact Studies (SIS) for proposed interconnections to ensure ratepayers are not put at risk. The cost of the Harper Creek study is expected to exceed $5 million.
- BC Hydro's analysis deemed 100 percent of the reinforcements to the North Thompson Transmission Line would be triggered by the Harper Creek project, meaning that Yellowhead would need to bear all of the upfront costs associated with the new infrastructure.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

- If the Harper Creek Mine were to reach production, the industrial tariff would direct a portion of BC Hydro's revenue generated from Harper Creek back to Yellowhead over the first seven years of new operations. This would likely reduce Yellowhead's net contribution to zero; however, BC Hydro would still require security for $100 million+ to ensure ratepayers are protected from stranded assets.

s.21

- Yellowhead maintains that other proponents/users would also require additional power in the immediate future, so the cost burden associated with the North Thompson Transmission Line reinforcement project should be distributed. This claim is not supported by BC Hydro's updated 2012 Load Forecast, which does not show any significant load growth in the region aside from that needed for the proposed Harper Creek project.
- In the case of the Northwest transmission Line (NTL), BC Hydro's existing industrial tariff would have assigned too many upfront costs to industrial and/or clean energy proponents, making it to onerous to justify construction. As a result, the Provincial Government decided to apply a unique contribution policy to the NTL (including Federal Green Infrastructure Funding of $130 million) given that one of the main purposes was to extend the provincial grid to stimulate economic development opportunities in northwestern BC.
- Industrial customers and/or clean energy producers are required to make a one-time contribution to the outstanding capital cost of the NTL based on their pro-rated use of the line. This is not subject to the revenue offset provisions of BC Hydro's standard industrial tariff (i.e., customers do not receive a refund based on electricity consumption). By contrast, Yellowhead would likely receive most, if not all, of its initial contribution back after seven years of operation at Harper Creek.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Kitsault Molybdenum Project

KEY MESSAGES:

- Avanti Mining Inc.'s Kitsault project received an environmental assessment (EA) certificate in March 2013.
- The Nisga'a Nation has filed a Notice of Disagreement with BC and Canada under the Nisga'a Final Agreement concerning the Kitsault approval. BC is currently engaged in the dispute resolution process.
- The next phase of development for the Kitsault project involves permitting under the *Mines Act* and *Environmental Management Act* and associated authorizations.

BACKGROUND:

- The Kitsault project is located in northwestern BC within the traditional territory of the Nisga'a Nation in the Nass Wildlife Area, about 140 kilometres north of Prince Rupert and near the head of Alice Arm.
- Kitsault is a brownfield project that involves re-opening an open-pit molybdenum mine which operated in the early 1970s and again in the early 1980s.
- Kitsault was the first project to trigger a requirement under the Nisga'a Final Agreement (NFA) for the federal and provincial governments to complete assessments over and above the normal requirements of the EA process. The NFA is the only treaty in BC that requires the Environmental Assessment Office to go beyond its standard process.
- The provincial EA certificate issued for Kitsault on March 18, 2013 includes 34 conditions, among them that Avanti complete management and mitigation plans in consultation with the Nisga'a Lisims Government.
- On February 4, 2013, the Ministry of Aboriginal Relations and Reconciliation tabled an Economic and Community Development (mineral tax revenue sharing) proposal with the Nisga'a Lisims Government that includes a post-EA consultation process.
- The Nisga'a Nation has filed a Notice of Disagreement with BC and Canada under the NFA concerning Kitsault's EA. The Province is satisfied that it can engage, in good faith, in the dispute resolution stages and meaningfully address any outstanding issues through the subsequent processes required for permitting and in accordance with conditions of the EA certificate. The Nisga'a have requested that all parties move to stage 2 of the dispute resolution process.
- A federal EA decision on the Kitsault project is pending.
- Bundled applications for authorizations, including *Mines Act* and *Environmental Management Act* permit applications, are under review by the Kitsault Mine Review Committee (as of June 21, 2013).

Contact: David Morel
Cell Phone s.17
Date: June 28, 2013

- The applications are being managed through the co-ordinated authorizations process.
- Kitsault is being developed at an estimated capital cost of $939 million.
- If permitted, Kitsault will employ approximately 700 people during a two-year construction period construction and 300 full-time workers during operations.
- If it reaches production, the Kitsault mine will produce an estimated 40,000 to 50,000 tonnes of ore per day for an expected mine life of 16 years.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: KSM (Kerr-Sulphurets-Mitchell) Project

KEY MESSAGES:

- Seabridge Gold Inc.'s KSM (Kerr-Sulphurets-Mitchell) copper-gold-silver mine project is located in northwest BC, approximately 65 kilometres northwest of Stewart.
- The project is larger than any other proposed mine in British Columbia and, if approved, would result in significant economic benefits for the northwest.
- The proposed project has potential long-term environmental liabilities that will be reviewed in the environmental assessment and permitting processes.

BACKGROUND:

- Seabridge Gold Inc. is proposing to develop the 130,000 tonne-per-day KSM copper-gold-silver mine project, located in northwest BC, approximately 65 kilometres northwest of Stewart.
- If approved, KSM would connect to the Northwest Transmission Line and involve the development of four distinct deposits (Kerr, Sulphurets, Mitchell and Iron Cap).
- The federal and provincial EAs will be harmonized.
- Seabridge submitted its EA application and Environmental Impact Statement earlier in 2013 and has been working with the BC Environmental Assessment Office (EAO) to provide supplementary information as required.
- The EAO is expected to accept the EA application for 180-day review in mid-July.
- Seabridge has applied for concurrent review for the KSM project under the Concurrent Approval Regulation of the *Environmental Assessment Act* (*EMA*).
- Phase 1 applications for *Mines Act* and *EMA* permits and associated authorizations were submitted on May 28, 2013 for limited site construction.
- The KSM Mine Review Committee process will be underway at the same time the EA review is underway.
- If KSM proceeds through EA and permitting, it would likely be developed by a larger mining company.
- Seabridge spent approximately $20 million on exploration for KSM in 2012.
- The estimated capital cost of KSM is $5.3 billion.
- If approved KSM would employ approximately 650 people full time over an estimated mine life of 55 years

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

Estimate Note: 20

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: New Prosperity Environmental Assessment

KEY MESSAGES:

- The New Prosperity project is subject to both a federal panel review under the *Canadian Environmental Assessment Act* and an amendment of its BC environmental assessment (EA) certificate.
- Public hearings for the New Prosperity federal panel review are scheduled to begin on July 22, 2013 in Williams Lake.
- Provincial staff will participate in the federal panel hearings by providing written submissions and answering any questions the panel has.

BACKGROUND:

- The original Prosperity copper-gold project was subject to both provincial and federal EA.
    - The Provincial Government issued an EA certificate on January 24, 2010, based on the finding that the socio-economic benefits of the project would outweigh any adverse environmental effects.
    - The Federal Government rejected the project on November 2, 2010, because of significant environmental concerns.
- On September 27, 2012 Taseko Mines Limited submitted a revised Environmental Impact Statement (EIS) for its New Prosperity copper-gold project. The revised EIS aims to address the significant adverse effects found by the previous federal review.
- As part of the federal panel process, Taseko submitted supplemental information for review on March 1, 2013. The panel determined that this information was not sufficient to schedule public hearings and asked Taseko to submit additional information.
- Taseko responded with further supplemental information on June 6, 2013. The federal panel held a 10-day public comment period on the responses provided by Taseko. The Environmental Assessment Office (EAO) submitted comments from staff from the Ministry of Energy and Mines and the Ministry of Environment on behalf of the Province.
- On June 20, 2013 the panel announced that it will hold public hearings starting July 22 and closing the week of August 19. The panel has also provided a list of outstanding issues to be addressed by Taseko in advance of the hearing. Taseko will provide further information by July 17 on issues, including the effectiveness of water treatment to protect Fish Lake.
- Over the 30-day hearing period, the panel will hold general hearing sessions, topic-specific hearing sessions, community hearing sessions and closing remarks.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

- The notice states that community hearing sessions will be held in selected Aboriginal communities to allow community members to express to the Panel their views and present information and issues of importance to them in an informal setting. These sessions are expected to take place in Xeni Gwet'in (*Honey-wuh-teen*), Tsi Del Del (*Tsigh-dell-dell*) (Alexis Creek Band), Yunesit'in (*You-neh-she-teen*) (Stone Band), Tl'esqox (*Kleh-sko*) (Toosey Band), Tl'etinqox (*Kleh-deen-ko*) (Anaham Band), Stswecem'c Xgat'tem First Nation (Canoe Creek Band) and Esketemc (*Es-ket-em*) (Alkali Lake Band), starting August 6, 2013.
- Provincial agencies are participating in the federal panel review to share expertise and address areas of provincial management and regulatory responsibility. Provincial staff will participate through written submissions to the Panel and by being available to answer questions by email during the public hearing process. The panel does not require in person attendance at the hearings.
- New Prosperity is located approximately 125 kilometres southwest of Williams Lake.
- If approved, the project would be developed at an estimated capital cost of $1 billion. Once fully operational, would employ approximately 500–550 people full time.
- First Nations have wanted the EAO's review to include reconsideration of the original provincial EA certificate. The EAO has responded that the scope of the provincial assessment is limited to the changes to the project proposed by Taseko.
- The changes to the proposed project involve: moving the tailings and waste rock storage facilities so that Fish Lake would no longer need to be drained; changing water management plans and structures; and changing fish compensation plans (i.e., Taseko is no longer proposing to develop a new lake). Little Fish Lake would still be affected. The transmission line, access road, open pit and other mine infrastructure plans remain unchanged from the original proposal.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Quintette Coal Project

KEY MESSAGES:

- Teck Coal Limited received a *Mines Act* permit amendment on June 20, 2013 allowing it to begin construction on its Quintette project.
- Teck's proposal to re-open the Quintette mine did not require an environmental assessment (EA).

BACKGROUND:

- Teck Coal Limited (a wholly owned subsidiary of Teck Resources Limited) plans to re-open the Quintette coal mine, located in northeastern BC approximately 20 kilometres south of Tumbler Ridge.
- The project involves reopening the existing Windy Pit and developing the Window Pit on Mount Babcock.
- Teck's proposal to re-open Quintette does not meet the thresholds of the *Environmental Assessment Act* (*EAA*). However, Treaty 8 First Nations were concerned about the potential effects on the Quintette caribou herd, and cumulative effects on the First Nations' ability to practice their treaty rights, so a joint request by First Nations under section 6 of *EAA* was submitted to the Minister of Environment on May 12, 2012, asking for the project to undergo an EA review.
    - The Environmental Assessment Office responded to this request on March 12, 2013, stating that the Minister of Environment had decided not to designate the Quintette project as a reviewable project under the *EAA*.
    - The Minister was satisfied that the Quintette Mine Development Review Committee's (QMDRC's) review would adequately assess and mitigate adverse effects of the project.
- Teck submitted a joint application package that included applications to amend the existing *Mines Act* permit, *Environmental Management Act* permit and new applications for permits under the *Coal Act, Forest Act, Land Act* and *Water Act*.
- The QMDRC conducted a co-ordinated technical review of the joint application package under the one-process framework.
- The QMDRC's technical review of the *Mines Act, Land Act, Forest Act* and *Coal Act* applications is now complete. Technical reviews of the applications for authorizations under the *Environmental Management Act, Water Act* and *Fisheries Act* is ongoing.
- The QMDRC delivered a Summary Report to support decision making to all Statutory Decision makers on May 30th, 2013.
- Teck received a *Mines Act* permit amendment for Quintette on June 20, 2013; subsequent decisions on authorizations under the *Forest Act* and *Lands Act* will immediately follow.

Contact: David Morel
Cell Phone: s.17
Date: June 19, 2013

- The Province is satisfied that the obligations for a meaningful consultation process for the *Mines Act, Forest Act, Lands Act* and *Coal Act* have been met. The Province is of the opinion that any potential impacts to Treaty rights have been addressed by Teck or accommodated by the Province.
- If approved, the Quintette mine would be re-developed at an estimated capital cost of $860 million and employ approximately 500 people full time over a 12-year mine life.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Raven Coal Project

KEY MESSAGES:

- The Raven project is a proposed underground coal mine located on Vancouver Island, near the communities of Courtenay and Fanny Bay.
- The project is subject to a co-ordinated provincial and federal environmental assessment (EA) review process.
- Federal and provincial EA applications were submitted for Raven in April 2013. On May 17, 2013, the BC Environmental Assessment Office (EAO) announced that it could not accept the application due to deficiencies.
- Compliance Coal Corporation intends to address the information deficiencies and submit a revised EA application for review.

BACKGROUND:

- Compliance Coal Corporation's Raven Coal Project is a joint venture partnership (Comox Joint Venture) between Compliance Energy Corporation, ITOCHU Corporation and LG International Corporation.
- The EA Application Information Requirements were issued for the project in June 2012. The document specified the information that must be contained in the EA application in order for it to be considered complete and acceptable for detailed review.
- Compliance Coal submitted the EA application for Raven in April 2013. The EAO extended the 30-day screening period by 13 days due to the complexity of the 12,000 page application and the large volume of comments received from the EAO's working group.
- Deficiencies identified in the Raven EA application included a lack of consultation with First Nations, insufficient information around potential local drinking water and air quality impacts, and failure to explain how potential effects of waste and tailings would be mitigated over the long term. Plans for mine decommissioning and site remediation were also incomplete.
- The EAO summarized the results of the screening review into a 114-page table. The proponent has stated that it plans to review the EAO's comments and provide clarification or additional information and then resubmit a revised EA application.
- The project is being developed at an estimated capital cost of $241 million.
- If approved, the Raven project would employ approximately 350 people full time over a 16-year mine life.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

- The project would involve mining approximately 2,500–5,000 tonnes of high-quality metallurgical coal per day for export to Japan and South Korea. It is estimated that almost 90 percent of this coal would be suitable for steelmaking.
- Local governments and concerned members of nearby communities have been opposing the Raven project due to potential impacts to aquifers used for potable water and impacts to fin fish, shellfish and other fisheries and aquaculture in Baynes Sound, as well as truck transportation impacts along the route to Port Alberni.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Red Chris Copper-Gold Project

KEY MESSAGES:

- Imperial Metals Corporation's Red Chris copper-gold mine, located in northwest BC near Iskut, is currently under construction.
- Operations are expected to begin in May 2014.
- The mine will connect to the Northwest Transmission Line.

BACKGROUND:

- Red Chris received an environmental assessment certificate in 2005 and *Mines Act* and *Environmental Management Act* (*EMA*) permits in May 2012 that allowed construction to commence.
- The proponent is currently working on an application to amend its *EMA* permit for construction of the north dam.
- South dam construction will require further amendments to the *Mines Act* and *EMA* permits, and applications for this are expected in late 2013. Operations can proceed without the south dam until the end of 2014.
- The proponent formed a utility company under the name Highway 37 Power Corporation to construct a 287 kV transmission line to link the Red Chris line at Tatogga to the Northwest Transmission Line (NTL) at Bob Quinn Lake.
    - An application for this extension of the NTL has been submitted to the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) and is currently under review.
    - FLNRO expects to permit the extension in July if no issues are identified.
    - Construction of the extension is expected to be completed in early May 2014.
- The Red Chris mine is being developed at an estimated capital cost of $470 million.
- The project is expected to employ 500 people at the peak of construction and 300 people full time during its anticipated 28-year mine life.
- Red Chris will be a 30,000 tonne-per-day operation.
- The Province and Tahltan Nation are negotiating an Economic and Community Development Agreement to share mineral tax revenue from the Red Chris mine.

Contact: David Morel
Cell Phone: s.17
Date: June 21, 2013

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: The Roman Coal Project

KEY MESSAGES:

- Peace River Coal Ltd. (PRC) is the proponent of the Roman coal project, which is located in northeast BC adjacent to the existing Trend mine.
- The Roman project received a BC environmental assessment (EA) certificate in December 2012.
- PRC continues to work on its Roman mine proposal to ensure that concerns about caribou are appropriately mitigated and support the Province's direction on Peace Northern Caribou.

BACKGROUND:

- The Roman coal project site is located on Crown land, adjacent to the existing Trend mine, approximately 30 kilometres southwest of Tumbler Ridge.
  - PRC also operates the Trend mine, which employed about 340 people full time in 2012.
- PRC, the proponent of the Roman project, is owned by Anglo American plc, one of the world's largest mining companies.
- Anglo has operations in Africa, Europe, North America, South America, Australia and Asia and coal is of significant importance in its North American interests.
- The Roman project received a BC EA certificate in December 2012.
- Because operations at the Roman and Trend mines would be integrated, PRC needs to amend its *Mines Act*, *Environmental Management Act* (*EMA*) and ancillary (e.g., *Land Act, Water Act,* etc.) permits for Trend before it can construct or begin operations at Roman.
- PRC is bundling multiple applications for authorizations to enable a co-ordinated review through the Roman Mine Review Committee (RMRC).
- The proponent has submitted applications to amend its *Mines Act* permit and associated authorizations so that it can begin Phase 1 construction work this summer.
  - The RMRC review of these applications is in progress, and provincial staff await the proponent's input on a number of matters.
- PRC plans to submit applications for major amendments to its *Mines Act* and *EMA* permits for Trend sometime in 2013.
  - These permit amendments would enable the proponent to begin Phase 2 development of the Roman project.
- The Roman project is located within core habitat of the Quintette caribou herd.
- The Quintette herd is listed on Schedule 1 of the federal *Species at Risk Act* as threatened, and is blue-listed ("at risk") provincially.

Contact: David Morel
Cell Phone: s.17
Date: June 21, 2013

- The Saulteau (*Soe-toe*) First Nations, West Moberly First Nations, Halfway River First Nation and McLeod Lake Indian Band have all indicated that they historically used the proposed project area to hunt caribou and expressed concern regarding the potential impact of the project on caribou and caribou habitat.
- Since the First Coal court decision, it has become increasingly difficult to move coal projects forward and fulfill consultation and accommodation obligations with Treaty 8 First Nations. In First Coal, the Court found that the Province failed to consult adequately and to accommodate the West Moberly First Nation's treaty hunting rights with respect to an exploration permit decision.
- Roman's EA certificate includes 25 legally binding conditions.
    - One of the conditions requires PRC to develop and implement a Caribou Protection Plan and states that if the Roman project receives a *Mines Act* permit, the proponent must contribute $2.566 million to a trustee or government representative (to be established by the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) for caribou management, within 30 days of permit issuance.
    - In addition, PRC must secure 1,852 hectares of caribou habitat prior to activity taking place on the project site, and the selected area must be approved by the trustee or government representative established by FLNRO.
    - FLNRO is currently reviewing PRC's proposed habitat options for adequacy with respect to the Province's direction on Peace Northern Caribou.
- s.16, s.17
- If approved, Roman would have an annual production capacity of two to four million tonnes of metallurgical coal.
- The estimated capital cost of this project is $340 million.
- In addition to the jobs at the existing Trend mine, Roman would result in 375 full-time jobs over an anticipated 10-year mine life.
- The proponent aims to begin production at Roman in 2014.

Contact: David Morel
Cell Phone: s.17
Date: June 21, 2013

Estimate Note: 25

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Gething Coal Project

KEY MESSAGES:

- Canadian Kailuan Dehua Co. Ltd.'s Gething project is a proposed metallurgical coal mine in northeast B.C.
- The Ministry of Energy and Mines is currently reviewing a *Mines Act* permit application for a 15,000-tonne bulk sample program.
- A decision on the bulk sample application is expected by early July 2013.

BACKGROUND:

- The Gething project is located in northeast B.C., approximately 25 kilometres south of Hudson's Hope.
- The proponent, Canadian Kailuan Dehua Mines Co. Ltd., is 51 percent owned by Canada Zhonghe Investment Ltd. (a wholly owned subsidiary of China's Kailuan Group), 25 percent owned by Shougang International (Canada) Investment Ltd. (a wholly owned subsidiary of China's Shougang Group), and 24 percent owned by Canadian Dehua International Mines Group Ltd
- The project entered the pre-application stage of the B.C. environmental assessment process in November 2006.
- The Ministry of Energy and Mines is currently reviewing a *Mines Act* permit application for a 15,000-tonne bulk sample program.
- First Nations requested that the project be reviewed by the Environmental Assessment Office or a Mine Review Committee at the bulk sample phase.
- The co-ordinated consultation for the bulk sample application is considered complete
- The statutory decision maker (SDM), the Senior Inspector of Mines, is finalizing his review of the project, including considering additional potential permit conditions. The SDM is also preparing a written rationale for his decision.
- A decision on the bulk sample application is expected by early July 2013.
- The estimated capital cost of the Gething project is $1 billion.
- If it reaches production, Gething would be a 8,200 tonne-per-day metallurgical coal operation that would employ approximately 400 people full time over an estimated 40-year mine life.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Morrison Copper-Gold Project Environmental Assessment

KEY MESSAGES:

- I cannot comment on matters related to the proposed Morrison mine project, as this is a matter that is currently before the courts.

BACKGROUND:

- On October 1, 2012, the Province announced that Pacific Booker Minerals Inc.'s application for a B.C. environmental assessment (EA) certificate for its proposed Morrison copper-gold mine had been rejected.
- In making their decision to refuse to issue an EA certificate, the Minister of Environment and Minister of Energy and Mines determined that the potential long-term risks of the project outweighed its potential benefits.
- On April 4, 2013, Pacific Booker filed a petition with the Supreme Court of British Columbia to have the ministers' decision set aside.
- Response briefs were filed by the Crown on June 4, 2013. The hearing is set for August 7–9, 2013.

Proposed Project and Environmental Assessment

- The Morrison project is located 65 kilometres northeast of Smithers and 35 kilometres north of the Village of Granisle, directly adjacent to Morrison Lake.
- 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.
- In addition to the technical conclusions presented in the Environmental Assessment Office's (EAO) Assessment Report, the EAO's Executive Director recommended that the ministers consider several factors in making a decision on whether to issue an EA certificate.
- On the advice of the EAO, the ministers determined that:
    - the Morrison project as proposed had the potential to impact a genetically unique sockeye salmon population that contributes to the Skeena River sockeye;
    - the potential for long-term liability for the Province and risk to the environment were not acceptable in this case; and
    - there was insufficient data about the behaviour of Morrison Lake, and the potential diminished long-term water quality in the lake was not an acceptable risk.

- The proposed project was subject to a co-ordinated federal-provincial EA. The Canadian Environmental Assessment Agency has indicated its report on the Morrison project is currently on hold.

Court Petition

- Pacific Booker's court petition alleges that at least one of the ministers did not read the final report made by the EAO or the final recommendations made by the EAO's Executive Director before denying the Morrison proposal an EA certificate.
- The court petition also alleges the Executive Director's final recommendations to the ministers "contained factual errors, misleading statements and assertions that, had they been raised in the environmental assessment process could have been explained or clarified".

Contact: David Morel
Cell Phone: s.17
Date: June 18, 2013

Estimate Note: 27

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Exploration in British Columbia

KEY MESSAGES:

- Exploration spending in BC hit a record-setting $680 million in 2012. This is a 47percent increase from 2011, when exploration expenditures were $463 million.
- 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.
- In 2012, exploration in BC employed approximately 2,700 people. Exploration activity also provides numerous spin-off benefits for local businesses (e.g., local contractors, caterers, etc.).
- Canada is number one in the world when it comes to generating investment in exploration. In 2011, approximately 18 percent of all exploration spending worldwide went into projects located in Canada. Australia was ranked second with approximately 13 percent of global exploration spending.
- In 2012, BC ranked second in Canada (after Ontario) for exploration spending, with approximately 19 percent of all investment in Canadian exploration projects occurring in the Province.
- BC is a significant jurisdiction for exploration on the world stage. The Province is attractive for investors because it has rich geology, abundant low-cost power, world-class infrastructure, a stable political climate and competitive taxation.
- Every year, the City of Vancouver welcomes thousands of people who come from countries around the globe to attend Mineral Exploration Roundup, the world's largest technical conference on mineral exploration.
- Ministry staff report highlights of exploration activity in summary documents prepared each year for the RoundUp Conference.

Contact: David Morel
Cell Phone: s.17
Date: June 18, 2013

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

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
- With contingency funding included, the BCGS's budget is roughly the same as its 2008 budget.

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 mining industry to guide government policy.
- BCGS is responsible for carrying out geological field surveys and publishing the resulting maps, data and reports, and for 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 2013, they were ranked number three.
- Staff from BCGS undertake technical marketing of BC's mineral resources and growth opportunities through the British Columbia 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.
- In its policy paper, the Association for Mineral Exploration British Columbia recommends that the Province restore the BCGS's budget to 2008 levels. With contingency funding, BCGS's 2013 budget is roughly the same as its 2008 budget.

Contact: David Morel
Cell Phone: s.17
Date: June 18, 2013

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Geoscience BC

KEY MESSAGES:

- Geoscience BC is an industry-led, industry-focused, not-for-profit, non-government organization with a mandate to collect, interpret and market geoscience data to help ensure that British Columbia's mineral exploration and mining and oil and gas industries remain innovative, competitive and sustainable.
- Geoscience BC awards grants to contractors and consultants to do geoscience projects that are intended to complement the applied geoscience activities of MEM's British Columbia Geological Survey and the Ministry of Natural Gas Development.
- Geoscience BC has received $48.7 million in grants from the BC government to fund minerals and oil and gas related geoscience since 2005.
- The Province is working with Geoscience BC to see how to implement the Platform 2013 commitment to establish long term and predictable funding.

BACKGROUND:

- 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 with industry, academia, governments, First Nations, and communities;
  - undertake community outreach and promote awareness of geoscience;
  - market material and work with the Province in trade shows and trade missions to attract more resource investment to BC.
- BC is the only jurisdiction in Canada that uses a non-governmental organization like Geoscience BC to assist in the delivery of public geoscience.

s.13

Contact: David Morel
Cell Phone: s.17
Date: June 19, 2013

s.13, s.17

Contact: David Morel
Cell Phone: s.17
Date: June 19, 2013

Estimate Note: 30

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

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.
- Mining exploration tax incentive programs have contributed to a strong recovery in exploration expenditures in BC.
- BC mineral exploration expenditures were a record $680 million in 2012.

BACKGROUND:

Provincial Exploration tax incentives

- The British Columbia Mining Flow Through Share Tax Credit (BC MFTS) provides a 20 percent tax credit and is completely harmonized with the Federal Mineral Exploration Tax Credit. The non-refundable federal and provincial tax credits are in addition to regular Flow through share tax deductions (see Federal Exploration incentives below) and can combine to make the after-tax cost of qualifying flow through share-financed grassroots exploration expenditures in British Columbia the third lowest in Canada. The programs have been well received by the industry, which often promotes them as "Super Flow-Through". The BC MFTS expires December 31, 2013.
- The British Columbia Mining Exploration Tax Credit (METC) is a refundable tax credit equal to 20 percent of non-flow-through funded, eligible British Columbia grassroots mineral exploration expenditures incurred after July 31, 1998, and before January 1, 2017. The 2007, Provincial budget enhanced the METC with a 10 percent increase, to 30 percent for eligible exploration in Mountain Pine Beetle affected areas.

Federal Exploration tax incentives

- Flow Through Shares (FTS) is a federal program that 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 Mineral Exploration Tax Credit is a non-refundable, 15 percent tax credit for grassroots exploration expenses pursuant to a Flow Through Share Agreement. The program has been extended until March 31, 2014 as part of the 2013 Federal Economic Action Plan.

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Mineral and Coal Tenure in BC

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 process 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 consultation on First Nations or other interests.
- As of December 31, 2012, the mineral titles registry comprised over 64,000 active mineral and placer tenures covering over 14 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 1,036 coal licences and 24 coal leases in BC. These coal tenures cover about 500,000 hectares of Crown and private land.

Contact: David Morel
Cell Phone: s.17
Date: June 18, 2013

Estimate Note: 32

- 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.*
- There are 255 applications for coal licences, of which 129 are considered part of a "backlog"; the backlog applications are those received prior to November 30, 2011.
- 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.

Pages 246 through 250 redacted for the following reasons:
- -
s.13, s.14, s.16, s.17
s.13, s.14, s.17
s.13, s.14, s.17, s.16

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: British Columbia's Mineral Exploration and Mining Strategy

KEY MESSAGES:

- British Columbia's Mineral Exploration and Mining Strategy was released during Mining Week in May 2012.
- This is one of the sector strategies under Canada Starts Here: The BC Jobs Plan and builds on the commitment to create eight new mines and nine expansions by 2015.
- This is the first comprehensive new strategy for BC's mineral exploration and mining industry since the 2005 British Columbia Mining Plan.

BACKGROUND:

- The British Columbia Mineral Exploration and Mining Strategy was released on May 16, 2012 as one of the sector strategies under Canada Starts Here: The BC Jobs Plan. The vision is:
  - Seizing global demand to benefit British Columbians.

- The strategy is built around six key components:
  - Enhance Our Competitive Edge
  - Streamline Regulatory Processes
  - Ensure the Health and Safety of Our Workers
  - Protect the Environment
  - Build Partnerships with First Nations
  - Develop a Skilled Workforce.

The Strategy builds on the BC Jobs Plan by expanding commitments to:

1. Create eight new mines and expand nine existing ones by 2015

- Since the Jobs Plan was released, one new mine is in operation (New Afton, near Kamloops), and five more are under construction or permitted:
  - Mt Milligan copper-gold mine, near Prince George, is expected to begin production in the second half of 2013;
  - Red Chris copper-gold mine, near Dease Lake, is now moving forward with construction;
  - Bonanza Ledge gold mine, near Barkerville, was permitted in December 2011;
  - Treasure Mountain silver mine, near Hope, was permitted in May 2012;
  - Quintette Coal mine, near Tumbler Ridge, was permitted in June 2013.

- The Province has also approved six major expansions of existing mines:
  - Highland Valley Copper Mine, near Ashcroft
  - Huckleberry Copper-Molybdenum Mine, near Houston
  - Quinsam Coal Mine, near Campbell River
  - Elkview Coal Mine, near Sparwood
  - Endako Molybdenum Mine, near Fraser Lake
  - Gibraltar Copper-Molybdenum Mine, near Williams Lake

2. ***Increase mineral exploration to ensure future mining activity***

- Exploration spending in BC was a record $680 million in 2012 – 19 percent of the Canadian total.
- The Province has undertaken a number of streamlining initiative including: Multi-year area-based permitting, introducing exemption regulations that will reduce the number of applications by up to 15 percent, and launching the online e-Application system.
- The average turnaround time for all Notices of Work (placer, aggregate and exploration) is 65 days as of June 1, 2013. This is a reduction from 110 days in 2011. Mineral and coal exploration permitting times are down to 68 days.

3. ***Ensure mine development improves the social and economic well-being of First Nations and respects cultural values***

- BC is committed to sharing incremental mineral tax revenue generated by new mines and mine expansions with First Nations.
- These agreements provide First Nations with direct benefits from mine development in their traditional territories and provide financial capacity to help them meet the social and economic goals of their communities.
- Several revenue sharing agreements have already been signed for new mines and mine expansions. These are for New Afton, Mt. Milligan, Mount Polley, Copper Mountain, Highland Valley Copper and Elk Valley Coal projects.

s.13, s.16, s.17

- The Province has also negotiated a number of Strategic Engagement Agreements with First Nations to decrease the volume of natural resource referrals to First Nations, streamline consultation and help to improve relationships.

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Efficiencies in Exploration Permitting

KEY MESSAGES:

- The Province reached the reduced backlog target in 2012 and is now focused on reducing the average turnaround time.
- The current average turnaround time for all Notices of Work (placer, aggregate and exploration) is 65 days as of June 1, 2013. This is a reduction from 110 days in 2011. Turnaround time for mineral and coal exploration Notices of Work is 68 days as of June 1, 2013.
- The Province is working on a number of initiatives to continue to streamline the exploration permitting process and ensure the 60-day target is met in 2013.

BACKGROUND:

- In the 2011 BC Jobs Plan, the Province committed to reducing the September 2011 backlog of Notices of Work by 80 percent by August 2012 and to reduce the average turnaround time for Notices of Work to 60 days by 2013 onward.
- The Mines and Mineral Resources Division (MMRD) is working with The Ministry of Forests, Lands and Natural Resource Operations (FLNRO), the Ministry of Aboriginal Relations and Reconciliation (MARR) and others on a number of initiatives to continue to streamline the exploration permitting process.

Multi Year Area Based Permitting

- MEM has historically issued permits for mineral and coal exploration projects on the basis of annual applications to perform specific activities on a site. Multi-year area-based (MYAB) permitting is the practice of authorizing exploration activities, typically for up to five years, within identified activity areas.
- An increased number of MYAB permits is expected to decrease the number of applications and amendments that need to be considered on an annual basis.

Virtual FrontCounterBC (e-Application System)

- On March 1, 2013, the Province moved from paper to electronic applications for all Notices of Work.
- The e-Application System is expected to significantly increase the quality of applications which will contribute to more efficient referrals and First Nations consultation.
- This system also allows clients to track progress on their applications on line.

Permit Regulation

- Effective September 1, 2013, amendments to *Mines Act* permits will not be required for some low-impact exploration activities (Induced polarization, exploration drill programs on operating, producing mine sites, extending the timing of proposed work for exploration). The regulation will help focus Ministry resources on higher-impact projects. Once in effect, these exemptions will reduce the number of these applications by up to 15 percent or about 80 amended permits per year.

Improvements to First Nations Consultation

- MARR negotiates Strategic Engagement Agreements with First Nations to decrease the volume of natural resource referrals to First Nations, streamline consultation and help to improve relationships.
- MARR negotiates Economic and Community Development Agreements with First Nations to share mineral tax revenue from new mines and expansions. These agreements also ensure timely First Nation review of related natural resource authorizations.
- MEM has negotiated term sheets for coal agreements with some Treaty 8 First Nations. In addition to provisions for revenue and land protections, the final agreements, once signed, will ensure timely First Nations review of applications for coal tenure and exploration.

Memorandum of Understanding and Cooperation with FLNRO

- FLNRO and MEM annually update the Memorandum of Understanding (MoU) which defines the operating relationship between both ministries. In 2013, revisions to the MoU focus on provision of geomatics services for Notices of Work, and better defined roles and responsibilities for First Nations consultation and other continuous improvement projects.
- In 2012, Operations Coordinators and administrative staff were moved from FLNRO to MEM to more directly support the Notice of Work application review process.

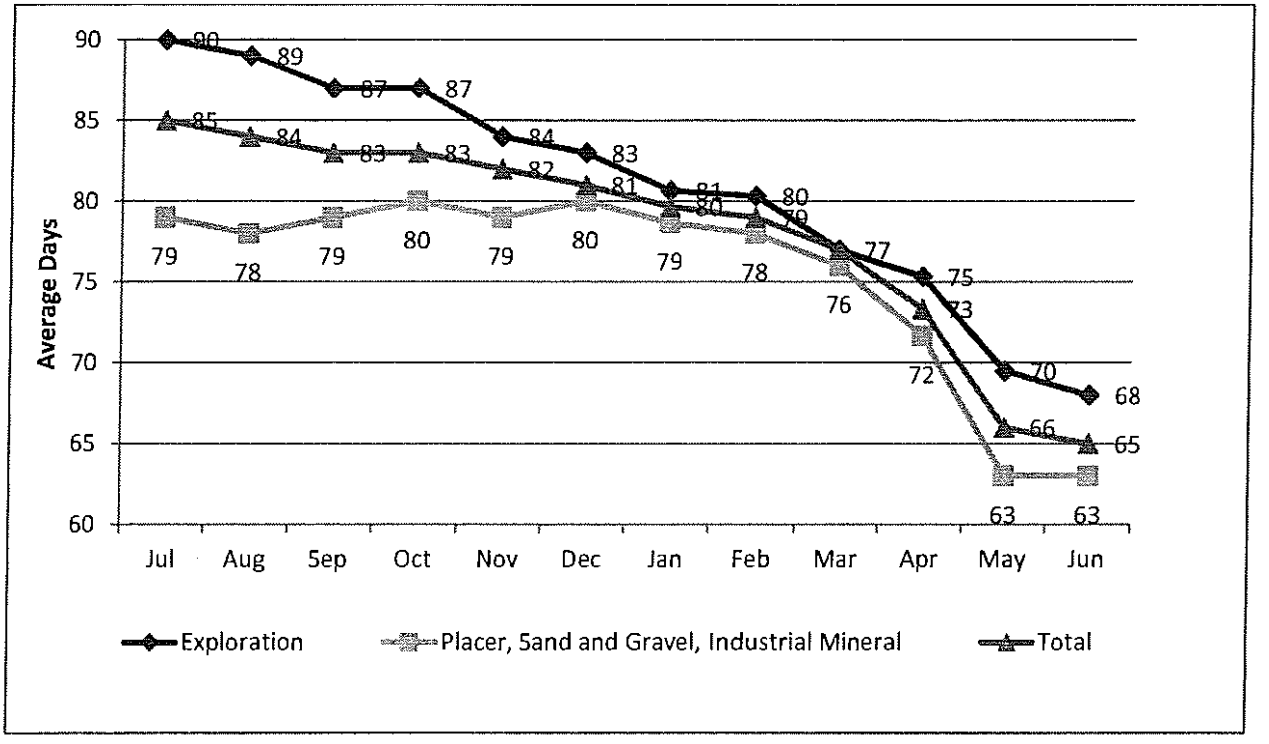
Business Process Improvements from Additions to Staffing

- In 2011, MMRD received access to $4.6 million in contingency funding to help achieve the BC Jobs Plan targets. In October of 2012, Treasury Board provided an additional $1.85 million for the first six months of 2013/2014.
- Contingency funding allows for additional permitting staff and contributes to the efficiency initiatives outlined above.

ATTACHMENT:

Appendix: Average Notice of Work Turnaround Time by Month

Appendix: Average Notice of Work Turnaround Time by Month



(Each monthly average is an average of the previous 12 months of permit decisions.)

BRITISH COLUMBIA | Environmental Assessment Office

Summary Issue Note
Advice to the Minister

Date: **June 10, 2013**

Subject/Issue: Substitution with the Canadian Environmental Assessment Agency

Recommended Response:

- Substitution means that where both federal and provincial environmental assessments are required, there would be one assessment process (the provincial one) and two decisions (federal and provincial).
- As of May 31, 2013, the federal Minister of the Environment has approved five substitution requests made by Environmental Assessment Office (EAO). These are for the environmental assessments (EA)s of: the proposed Carbon Creek Coal Mine Project, located near Hudson's Hope; the proposed Sukunka Coal Project, located near Chetwynd; the proposed Echo Hill Coal Mine Project, located near Tumbler Ridge; the proposed LNG Terminal Export Project, located in Prince Rupert; and the proposed Arctos Anthracite Project, located near Iskut.
- At the conclusion of a substituted EA, the respective federal and provincial ministers will reach separate decisions on the significance of the project's environmental effects and the adequacy of Aboriginal consultation based on the assessment report prepared by EAO.
- A key principle behind substitution is that it must support and encourage the rigour of federal and provincial EAs.
- Substitution does not change the fundamental purpose of EA, which is to examine proposed major projects for potentially adverse effects that may occur during the life cycle of that project and develop strategies to avoid or minimize those impacts.
- Substitution is enabled by both the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) and the BC *Environmental Assessment Act*, and the framework for substitution is described in the Memorandum of Understanding on the Substitution of Environmental Assessments (2013).

Key Issues:

Additional Substitution Requests:

- EAO is conducting ongoing analysis to identify future substitution requests, and anticipates requesting substitution regularly.
- The Canadian Environmental Assessment Agency (the Agency) is conducting 20-day public comment periods on each request for substitution, following which, the federal Minister of the Environment makes individual decisions on each request.

Responses to Substitution and EAO Outreach:

- Various environmental non-governmental organizations and First Nations are opposed to CEAA 2012 in general, and some groups are concerned about substitution and equivalency specifically.
- A number of proponents have requested that EAO seek substitution from the federal government. EAO has communicated that it will consider the views of proponents; however, decisions about whether to pursue substitution will be based on a range of factors. These may include likelihood of trans-boundry effects, proximity to federal lands, number of federal authorizations likely to be required post-EA, and the Aboriginal consultation context.
- During late March – April 2013, EAO conducted outreach with key stakeholders regarding a range of issues, including the substitution MOU. These stakeholders included the BC Business Council, Union of BC Municipalities, West Coast Environmental Law and the Canadian Association of Petroleum Producers.
- EAO is arranging meetings with a number of First Nations with an interest in substitution, including First Nations in close proximity to projects where substitution has been approved.

Meeting the Conditions for Substitution:

- CEAA 2012 contains a number of conditions that must be met in order for a jurisdiction to pursue substitution. These conditions include:
    - Consideration of specific environmental factors (e.g. impacts to fish and fish habitat, migratory birds, aquatic species);
    - Provision of an opportunity for public participation;
    - Provision of public access to records; and
    - Provision of an assessment report to the Agency at the conclusion of a substituted EA.
- In addition, the federal Minister of the Environment has established additional conditions for substitution, including the invitation of federal technical experts to participate in substituted EAs, the provision of Aboriginal capacity funding, and meeting federal 365-day timelines.
- The MOU includes a number of specific EAO commitments that demonstrate how British Columbia meets these conditions for substitution.

Key Details about the MOU:

- The MOU sets an administrative framework that addresses how the substituted

process will unfold – before, during and after a substituted EA.

- The MOU is signed by the President of the Agency and the Associate Deputy Minister of EAO.
- The focus of the MOU is on substitution, both on a project basis and for classes of projects, and states that the Parties will explore equivalency at a later date.
- Aboriginal consultation is largely dealt with in an annex, which sets out the procedural delegation of Aboriginal consultation to BC for purposes of substitution.
- The Agency has agreed to continue to provide funding for Aboriginal groups participating in substituted EAs. The details of the funding mechanism are being determined, but it has been agreed that EAO will administer the distribution of federal funding on behalf of the Agency.
- The MOU creates the role of an Agency Laision to work with EAO Project Leads managing substituted EAs to ensure the federal government is aware of key issues with respect to the EA and Aboriginal consultation.
- The Agency commits to timelines in considering substitution requests from British Columbia.
- A joint implementation steering committee will develop operational procedures, monitor implementation and address key issues.

Contact:

Paul Craven
Executive Director, Federalism and Canadian Intergovernmental Policy
250 387-6758

Alternate Contact:

Natasha Horsman
Policy & Legislation Advisor

250 356-5305

MINISTRY OF ENERGY AND MINES
MINES AND MINERAL RESOURCES DIVISION
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Northeast Coal Strategy and Treaty 8 First Nations

KEY MESSAGES:

- The Province is currently negotiating Regional Coal Agreements with Treaty 8 First Nations in BC's Northeast coal belt for consultation certainty on proposed coal development.
- The agreements provide support for First Nations participation in consultation with the Province, coal mineral tax revenue-sharing opportunities for new mines, and potential land protections from coal development to address the exercise of Treaty rights in areas.
- The agreements will directly support the BC Jobs Plan targets for mine development and expansion in this critical resource area.

BACKGROUND:

- The Northeast (NE) coal belt has significant untapped potential that could provide long-term economic benefits to British Columbia. Current NE mining operations include the Trend, Brule and Wolverine mines, which collectively employ more than 900 people and provided the Province with approximately $7 million in mineral tax in fiscal year 2011/12.
- There are more than 12 additional significant coal projects in the NE with the potential to create thousands of direct jobs and millions in increased government revenue.

s.13, s.14, s.16, s.17

Contact: David Morel
Cell Phone: s.17
Date: June 20, 2013

Page 260 redacted for the following reason:
- - - - - - - - - - - - - - - - - - - -
s.13, s.14, s.16, s.17

MINISTRY OF ENERGY AND MINES
CORPORATE INIATIVES BRANCH
ESTIMATES BRIEFING NOTE 2013/14

ISSUE: Dominion Coal Blocks

KEY MESSAGES:

- The Federal Government owns the coal and surface rights in the two Dominion Coal Blocks which are located in the East Kootenay region.
- The Province owns the rights to all other minerals, including oil and gas.
- The Dominion Coal Blocks lie within the traditional territory of the Ktunaxa (Tun-ah-hah) Nation.
- The Ministry of Energy and Mines (Ministry) are in discussions with Natural Resources Canada (NRCan) to resolve issues related to the ownership and management of the Dominion Coal Blocks and their resources.

BACKGROUND:

- The Dominion Coal Blocks (DCB) are two parcels of land located in the East Kootenays in which the land surface and coal are owned by the Federal Government. In 1899, the DCB were carved out of two large properties held by the BC Southern Railway Company. The DCB were created through operation of the federal *Crows 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 (the Province). The federal Act required the transfer in order to prevent the Canadian Pacific Railway and its affiliates from acquiring a monopoly over coal.
- The Province owns all other minerals and the petroleum and natural gas in the DCB, but is unable to issue resource tenures or development approvals due to the complications of federal ownership of the land surface. The provincial Chief Gold Commissioner has established provincial mineral and placer reserves over the DCB. Similarly, the petroleum and natural gas rights in the DCB are withheld from posting through a no disposition order.
- 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 DCB 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. Although better data on the

coal quality and location are required, the coal resources in DCB Parcel 73 are believed to be economic and surface mineable with a low strip ratio.

- The DCB lie within the traditional territory asserted by the Ktunaxa.
- 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.

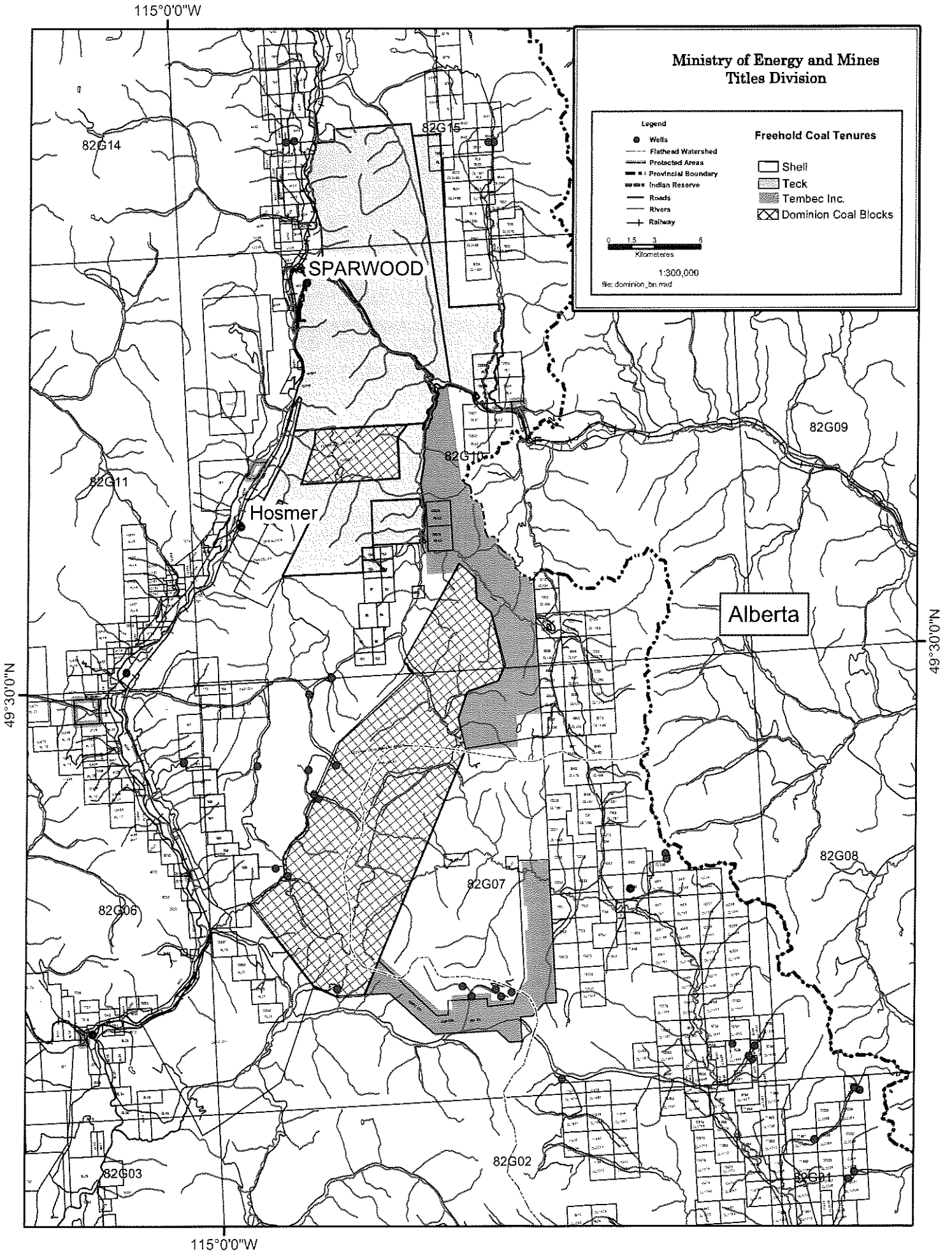
s.13, s.16, s.17

- If the federal sale and transfer are pursued, the federal interests in the DCB would be terminated. Dependent upon the outcome of the consultations with the Ktunaxa, NRCan may announce the proposed sale and transfer of the DCB later this summer.
- Coal companies, s.13, s.17 have expressed interest in the past in developing the coal resources of the DCB.
- Being large areas of relatively undeveloped federal Crown land, both DCB are also of interest to the environmental community for protection or management as wildlife corridors.

s.13, s.16, s.17

ATTACHMENT:

Dominion Coal Blocks map


115°0'0"W
Ministry of Energy and Mines
Titles Division
Legend
Wells
Flathead Watershed
Protected Areas
Provincial Boundary
Indian Reserve
Roads
Rivers
Railway
Freehold Coal Tenures
Shell
Teck
Tembec Inc.
Dominion Coal Blocks
0 1.5 3 6
Kilometeres
1:300,000
file: dominion_bn.mxd
82G14
82G15
SPARWOOD
82G09
82G10
82G11
Hosmer
Alberta
49°30'0"N
82G08
82G07
82G06
82G03
82G02
82G01
115°0'0"W